# A survey of chemical contaminants in wild meat harvested from the traditional territories of

## Wabauskang First Nation
## (Wabauskang),
## Asubpeechoseewagong Netum Anishinabek
## (Grassy Narrows),
## and
## Wabaseemong Independent Nation
## (Whitedog)

Submitted by

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## EXECUTIVE SUMMARY

The hunters, trappers, and fishers of Wabauskang First Nation, Asubpeechoseewagong Netum Anishinabek (Grassy Narrows), and Wabaseemong Independent Nation (Whitedog) collected wild meat samples during the fall, winter, and spring of 2008-2009. The samples were screened for metals (including heavy metals), and/or 17 dioxins and furans, and/or 33 organochlorinated compounds (OCs). The study was undertaken out of the concern for safety of eating wild foods and the overall health of the food webs.

Mercury was screened for in the flesh tissue of sixty-four herbivores (mostly deer, moose, beaver, and partridge) and the concentrations ranged from <0.005 – 0.072 µg/g ), which places all of them well below the 0.2 $\mu$g/g guideline Health Canada has for fish flesh that is eaten frequently. On the other hand, 34 of the 37 flesh sampled from carnivores had levels above the 0.20 µg/g guideline, and 19 were above Health Canada's 0.5 µg/g standard for commercial fish/fish products. Most of the carnivores sampled were otter, northern pike, and pickerel and all the fish tissue levels were <0.9 µg/g, which falls within the range for mercury in the top predators of some other Canadian lakes and rivers. Future monitoring efforts for mercury in the flesh of wild foods need only include carnivores and top predators.

Mercury was screened for in the liver tissue of 19 herbivores and the concentrations were less than 0.12 µg/g ; the livers from only two carnivores were screened for mercury and both were >0.2 µg/g . The kidney tissue from 18 herbivores was screened for mercury, 14 of these were above 0.2 µg/g . The 16 heart samples and the five tongue samples screened for mercury had concentrations <0.005 µg/g . Within the same deer, the organs can be ranked from highest to lowest mercury concentration as follows: kidney > liver > flesh > heart. Future monitoring efforts for mercury in the organs need only include the kidneys of herbivores and carnivores and the livers of carnivores.

Cadmium was screened for in herbivores only, and was detectable in 8% of the flesh samples, 100% of the kidney samples and 93% of the liver samples. Cadmium is known to accumulate preferentially in these two organs and the levels among them ranged from <0.01 – 18 µg/g . Health Canada does not have a standard or guideline for cadmium concentrations in market or wild foods. Future monitoring efforts for cadmium in the organs need only include the kidneys and livers.

Arsenic was screened for in 48 samples of tissue from herbivores (mostly flesh, liver, and kidney) and all were ≤ 0.5 µg/g . Health Canada's guideline for arsenic in commercial fish/fish products is 3.5 µg/g . Future monitoring of contaminants in wild foods need not include arsenic unless there is a known or suspected local source.

OCs were screened for in sixty wild food samples (from 41 herbivores and 19 carnivores) and all of the concentrations were below the detection limit, which was typically 0.02 µg/g . Two of the OCs in the scan for which there are Health Canada comparators are total PCBs and DDT and metabolites, and their levels in the tissues in this study are about 60 to 100 times less than allowable limits set or being reviewing by Health Canada as standards in commercial fish/fish products. Future monitoring efforts for

contaminants in wild foods need not include all OCs and should focus only on those for which there is a known or suspected local source.

Dioxins and furans were screened for in the flesh of eight otters, five northern pike and five pickerel (=walleye) and among these, most of the compounds were not detectable (<0.1 - < 15 pg/g, depending on the compound). The Toxic Equivalencies (TEQs) estimated from the analytical results gave total TEQs that fell within the range reported for market foods. The tissue with the highest level of 2,3,7,8-TCDD (a compound under review by Health Canada for maximum allowable standard in commercial fish/fish products) was 20 times less than the standard being reviewed. The samples could be ranked for concentrations of TEQs (from higher to lower) as follows: northern pike > pickerel > otter. Future monitoring efforts for dioxins and furans in wild foods should focus on top predatory fish.

In general the wild food in the territories and traditional territories of Wabauskang, Grassy Narrows and Whitedog First Nations have very low levels of the chemical contaminants screened for in this study. Mercury is higher than 0.2µg/g in specific animals and/or specific tissues. Frequent consumers of wild foods who are concerned about exposure to mercury (through food) need to be aware that deer kidneys, pickerel and northern pike flesh, and the flesh and organs of any top predator of aquatic food chains have levels that warrant consumption moderation and/or safe-limit advisories. Future screening for chemicals needs to focus on specific combinations of wild meats and contaminants and needs to include other chemicals. The tissue of animals or fish identified as not well or sick should also be screened for the presence/absence of cancers, diseases or parasites.

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## PROJECT BACKGROUND

In 2008 Health Canada (First Nations and Inuit Health Branch, National First Nations Environmental Contaminants Program) funded a contaminants project entitled *"Assessing environmental contamination and associated impacts among the people of Asubpeechoseewagong Netum Anishinabek (Grassy Narrows), Wabaseemong Independent Nation (Whitedog) and Wabauskang First Nation 2008-2009.*" This project has three main components, all of which built on previous work. The components are: A) Traditional Foods B) Sediment & Crayfish and C) Anishinabek Knowledge. The Traditional Foods component continues the survey of metal and organic contaminants in traditional foods consumed by the people of Asubpeechoseewagong Netum Anishinabek (Grassy Narrows), Wabaseemong Independent Nation (Whitedog) and Wabauskang First Nation (Wabauskang). The Sediment & Crayfish component continues the assessment of ecosystem contamination. The Anishinabek Knowledge component focuses on (from an Anishinabek perspective) defining contamination, conceptualizing how contaminants affect land, food, and people, and the utility of food consumption guidelines given the strong relationships among land, food and culture.

This document reports on the Traditional Foods component of the larger study.

## REGIONAL ENVIRONMENTAL CONCERNS

The people of Wabauskang, Grassy Narrows, and Whitedog have for several decades and with justification been concerned about alterations to their traditional territories and negative impacts that these may have. In the 1950s, damns built on the English and Winnipeg Rivers by the Hydro-Electric Power Commission of Ontario (now Ontario Power Generation) changed water levels, flooding and flow patterns, and sedimentation patterns. We now know that the creation of reservoirs also results in elevated levels of mercury in fish by altering the natural mercury cycle (Grondin et al, 1995; Mailman et al, 2006). In the 1960s the English-Wabigoon River system was contaminated directly with 10 000 kg of industrial mercury that was discharged from a chlor-alkali plant into the Wabigoon River (Armstrong and Hamilton 1973 cited in Armstrong and Scott 1979). People from all three communities got sick from eating mercury-contaminated fish in the 1960 and 1970s, and sickness among people continues today. Mercury levels in sediment, crayfish, and fish are still considered high in some basins along the river system (Kinghorn et al, 2007; Lockhart et al, 2000; Sellers 2008).

More recently, there has been clear-cut logging and urbanization upstream of Grassy Narrows and Whitedog. Forest harvesting has been identified in other studies a source of mercury in downstream ecosystems (Porvari et al, 2003; Garcia and Carignan, 2005; Skyllberg et al, 2009) as have forest fires (Kelly et al, 2006). The city of Kenora is upstream of Whitedog and the city of Dryden is upstream of Grassy Narrows and it is widely known that cities are sources of contaminants. These land-use developments, along with the more recent knowledge of the ability of contaminants to be transported great distances between ecosystems through air currents, have added to the questions that the people in these communities have about the health of their people, the safety of eating wild foods, and the health of the rivers and lakes and all the beings that inhabit their traditional territories.

## COLLECTION OF WILD MEAT SAMPLES

During the 2008-2009, hunters and trappers from Wabauskang, Grassy Narrows, and Whitedog (Fig. 1) collected tissue samples of their kill and submitted them to the community coordinator for each community. The community coordinator froze the samples. Using laboratory protocol, the coordinator distributed the samples among glass jars. The samples were shipped overnight, ensuring that they remained frozen when the reached the lab. Maxxam Analytics (Burlington, Ontario) completed all the analyses on the tissues. The three main categories of contaminants that the tissues were screened for are metals, organochlorinated industrial compounds, and dioxins and furans.

## GOVERNMENT OF CANADA GUIDELINES AND THIS REPORT

Health Canada's Food Directorate has developed Canadian standards (maximum allowable levels) of contaminants in commercially produced and marketed foods (www.hc-sc.gc.ca/fn-an/securit/chem-chim ) and in fish and fish products (www.inspection.gc.ca/english/fssa/fssae.shtml) to protect people in Canada from exposure of contaminants through market foods. These standards are enforceable by the Canadian Food Inspection Agency. Health Canada does not have similar standards for contaminants in non-market or wild foods. Where appropriate, however, the Health Canada standards are used as a reference in the discussion that follows. This is because exposure of a contaminant through consumption of animal protein exists regardless of the nature of the protein, and consumption guidelines are ultimately determined by what is regarded as a safe amount of contaminant consumed rather than the specific type of protein in which it is found.

Environment Canada has developed tissue residue guidelines to protect mammals and birds from harmful exposure to dioxins, furan, and mercury (Environment Canada, Canadian Environmental Quality Guidelines www.ec.gc.ca/ceqg-rcque/English) through their foods. These guidelines can be used for agencies and organizations to determine if animals other than humans are threatened from exposure to contaminants in food webs. Where appropriate these guidelines are used in this report.

## RESULTS AND DISCUSSION

### *Metals in herbivores vs. carnivores – all samples combined*

Metals that are commonly identified as potentially harmful at high concentrations in food are mercury, cadmium, lead, arsenic, aluminum, nickel, zinc, and copper. All of these are naturally occurring and residues of each can be found in most tissues of market and wild foods. It is widely known, however, that several of these metals can be elevated above natural levels because of pollution associated with human and industrial activities. The results for these eight metals were combined for all three communities and are presented in Tables 1-8.

#### Mercury

*Flesh of herbivores and carnivores*: One hundred and one flesh samples were analyzed for mercury content. Only twelve of the 64 samples (18%) collected from herbivores had detectable mercury

(>=0.005 µg/g) but none of these were at or above 0.2 µg/g (ppm), which is the Health Canada guideline for mercury in fish tissue consumed by frequent consumers of fish. Thirty-six of the 37 samples (98%) collected from carnivores had detectable mercury. Thirty-three of the 37 samples (94%) were above 0.2 µg/g and 19 of the 37 were at or above 0.5 µg/g, which is the Health Canada standard (maximum allowable) for commercial fish and fish products (Table 1). This difference between herbivores and carnivores is not unexpected because carnivores are at higher trophic (feeding) levels and mercury biomagnifies in food chains. This means that animals (invertebrates, birds, fish, mammals) at lower trophic levels will have lower concentrations of a contaminant in the same tissue when compared to animals at higher trophic levels.

*Kidney and liver of herbivores*: About one half of the kidneys of 18 herbivores that were tested had mercury levels at or above 0.2 µg/g. Five kidneys had mercury above 0.5 µg/g. None of the 19 livers sampled from herbivores had mercury above 0.2 µg/g and all were less than 0.12 µg/g (Table 1). The one kidney and two liver samples from carnivores had mercury above 0.5 µg/g (Table 1).

*Heart and tongue of herbivores*: The mercury levels in the 16 heart samples were low, with only three of the 16 samples from herbivores having detectable mercury. None of the 16 samples were at or above 0.2 µg/g (Table 1). None of the five tongue samples analyzed had detectable mercury.

**Arsenic in herbivores**

Arsenic was tested in the flesh and organs of herbivores only. None of the 48 samples analyzed for arsenic had levels that were above 3.5 µg/g, which is the Health Canada standard for arsenic in fish and fish products (www.inspection.gc.ca/english/fssa/fssae.shtml). Virtually all of the samples (47 out of 48) were below 0.1 µg/g (Table 2).

**Lead in herbivores**

Lead was tested in the flesh and organs of herbivores only. Only three of the 47 samples analyzed for lead had levels that were above0.5 µg/g, which is the Health Canada standard for lead in fish and fish products (www.inspection.gc.ca/english/fssa/fssae.shtml). Most of the samples (40 out of 47) were below the 0.03 µg/g (Table 3), which is consistent with the average values reported in diet study conducted by Health Canada from 1993-1999 (Health Canada, 2009).

**Cadmium in herbivores**

Cadmium was screened for in the flesh and organs of herbivores only. It was detected in all of the 22 kidney samples and in 26 of the 28 liver samples. Cadmium was detected in only 8% of the 17 flesh samples and 24% of the heart samples (Table 4). It is not uncommon for cadmium to be readily detectable in kidneys and livers of wild and domestic mammals, and for it the levels to be higher when compared to flesh (Elinder 1985; Health Canada; 2009; this study). The range of values reported for livers in this study (<0.01 µg/g – 18 µg/g) includes the average value reported for commercial organ meats in Health Canada's Total Diet Study (Health Canada, 2009). Like copper, zinc, aluminum and

nickel, cadmium is considered a trace element required for cell function and growth. Unlike for mercury or arsenic, Health Canada does not have a guideline for cadmium in commercial foods and/or commercial fish/fish foods.

**Aluminum in herbivores**

Aluminum is a required trace element for cell function and growth. In this study it was screened for in the flesh and organs of herbivores only. Aluminum was detected in most (39 out of 48) samples and in all different tissue types and most samples were less than 3.0 µg/g (Table 5). The average concentrations of aluminum in commercial organ meats, potato chips, and canned mushrooms are 1.2, 3.5, and 12.7 µg/g, respectively (Health Canada, 2009). The highest concentration of aluminum in this study (13 µg/g) was from a liver of a moose and all the concentrations in this study fall within the range measured on 125 wild meat samples in a study conducted in Manitoba by Hollow Water First Nation (Sellers and Scott 2006).

**Nickel in herbivores**

Nickel was screened for in the flesh and organs of herbivores only. Only two of the 47 samples analyzed for nickel had levels that were detectable (>0.05 µg/g) with the highest of these being only twice that (0.12 µg/g) in a liver sample (Table 6).

**Zinc and Copper in herbivores**

Zinc and copper were screened for in the flesh and organs of herbivores only. Both metals were readily detected in all 48 samples (Tables 7 and 8). Like aluminum, zinc and copper are trace elements required for cell function and growth and its presence at comparatively high concentrations in wild foods was not unexpected. The highest zinc concentration measured (51 µg/g) was in a liver sample, which is similar to the average measured in commercial organ meats (49 µg/g; Health Canada 2009). The highest copper concentration measured in this study (140 µg/g) was from the liver of a moose. Moose livers also had the highest concentration in a study conducted in Manitoba conducted by Hollow Water First Nation (Sellers and Scott 2006) but in that study the concentrations were about one third as much. The average for commercial organ meats is 33 µg/g (Health Canada, 2009).

## *Metals in herbivores vs. carnivores – sorted by community*

**Flesh samples**

The data for the metals listed above are sorted by community, tissue, and animal type and are presented for Wabauskang in Table 9, Grassy Narrows in Table 10, and Whitedog in Table 11. Data on the remaining metals (that are part of a standard metal scan conducted by Maxxam Analytics) are presented in Appendix C for Wabauskang's samples and Appendix D for Grassy Narrows' samples (a

complete metal scan was not requested on Whitedog's samples). Graphical presentations of the mercury and cadmium data are in Figures 2- 8.
Fourteen flesh samples submitted by Wabauskang were tested for mercury. Eleven of these were flesh samples from herbivores (which included 4 deer and 2 moose) and had very low concentrations (<0.005 – 0.009 µg/g) of mercury (Fig. 2). The ling fish is a carnivore, and the concentration of mercury in the one sample was measurable at 0.16 µg/g but below 0.2 µg/g, which is the guideline set by Health Canada for fish flesh eaten by frequent consumers of fish. Flesh from the two duck samples were higher and near 0.5 µg/g. It was not reported what kind of duck these samples came from, but the elevated mercury suggests either an older and /or carnivorous duck. Ducks are migratory and feed in other regions and as such, contaminants in their flesh also reflect non-local sources.

Twenty-five flesh samples submitted by Grassy Narrows were tested for mercury. Seventeen of these were flesh from herbivores (which included 13 partridges) and had very low concentrations (≤ 0.005 µg/g) of mercury (Fig. 3). The highest concentrations were measured in otter, which are top predators in the aquatic food chain. Six of the seven otters had flesh samples that exceeds the 0.5 µg/g Health Canada guideline for commercial fish food, and ranged from 0.85 to 1.7 µg/g). The spread in the range may reflect the age of the otters sampled because mercury bioaccumulates and one expects to find more mercury in older flesh when other factors are normalized. Nonetheless this range of mercury concentration is consistent with flesh from others previously collected from Grassy Narrow territory (total = 18), which were typically less than 2.0 µg/g (Sellers, 2004, 2005), and with those of flesh collected from 4 otter (0.7 – 1.3 µg/g) in a wild foods study conducted by Hollow Water First Nation in Manitoba (Sellers and Scott 2006).

Sixty-five flesh samples were submitted by Whitedog were tested for mercury. Thirty-six of these were from herbivores (which included 5 beaver, 16 deer, and 5 moose) and the mercury in the flesh of most of these was less than 0.005 µg/g (Fig. 4). The 28 carnivores sampled (which included 5 martens and 2 minks, 10 pickerel (walleye) and 10 northern pike) are top predators and almost all of them had mercury concentrations above 0.2 µg/g but below 0.5 µg/g. All the fish flesh samples were below 0.9 µg/g.

The concentration of mercury in the flesh of 25 top predator fish collected by Grassy Narrows in an earlier study ranged from 0.2 – 1.23 µg/g (Sellers 2005) and in that study and this one the range is similar to the range of mercury in lake trout sampled from 34 lakes across northern Canada (0.13 to 1.3 µg/g; (http://www.hc-sc.gc.ca/sr-sr/finance/tsri-irst/proj/persist-org/tsri-236-eng.php) . On the other hand, concentration of mercury in pickerel flesh in a wild foods study conducted by Hollow Water First Nation in Manitoba was lower than those from either Grassy Narrows or Whitedog, and ranged from 0.12 – 0.30 µg/g (Sellers and Scott, 2006). One might expect to find higher mercury concentrations in the flesh of fish take from the English-Wabigoon River system (Fig. 1) because of the discharge from a chlor-alkali plant into the Wabigoon River that occurred in Dryden Ontario in the 1960s and 1970s.

The highest mercury concentration among the flesh samples for the entire study was in one of the two mink and was 4.4 µg/g (Fig. 4).

**Liver samples**

The liver samples tested for cadmium and mercury were largely collected from deer and moose. The mercury in the 17 of the 21 liver samples was typically less than 0.02 µg/g (Fig. 5). The outliers were from the liver of otter collected from the territory of Grassy Narrows, which had values around 2.3 µg/g. The cadmium concentrations in all but one of the 30 liver samples were less than 1.7 µg/g. The outlier was a beaver liver collected from territory of Grassy Narrows, which had a value of 6.9 µg/g (Fig. 6).

**Kidney samples**

Twenty-three of the 24 kidney samples tested for cadmium were from herbivores (mostly collected by Whitedog) and included 12 deer, 7 moose, and 3 beaver. Sixteen of the 17 kidney samples tested for mercury levers were from herbivores and were typically below 0.5 µg/g (Fig. 7). The kidney sample with the highest concentration of mercury (1.7 µg/g) was from one of the otters harvested in Grassy Narrows' territory. The highest concentrations of cadmium in kidney samples were among moose and deer, and the concentration for most samples ranged between 2.0 and 16.0 µg/g. Cadmium was relatively low (0.11 µg/g) in the kidney from one otter sample collected from Grassy Narrows (Fig. 8).

## *Mercury and cadmium among the different tissues of moose and deer*

While mercury in the flesh of herbivores is typically non-detectable and well below the Health Canada guidelines for fish and fish products (Figs. 2-4), it can be elevated in the kidneys of the same animals. In this study, flesh, heart, kidney, and liver samples taken from nine deer and moose (harvested from the territory of Whitedog) were analysed. These data show that mercury (Fig. 9) and cadmium (Fig. 10) tends to accumulate in the liver and kidneys more than in flesh or heart tissue. These data strongly suggest that mercury accumulates much more in the kidneys of deer than it does in moose (Fig. 9). Seven of deer kidneys in this study had mercury levels above Health Canada's 0.2 µg/g guideline (for fish flesh eaten by frequent consumers of fish) and 4 of these had levels greater than 0.5 µg/g (Fig. 9). The kidneys and livers of both moose had low levels of mercury (<0.04 µg/g), which is the same that was observed for two moose that were included in the wild meats contaminants study conducted by Hollow Water First Nation in Manitoba (Sellers and Scott 2006).

Like mercury, cadmium is most elevated in the kidneys of animals (Table 4, Fig. 10). Unlike for mercury, there was no discernable difference between moose and deer kidneys in levels of cadmium (Fig. 10). Hollow Water First Nation tested two moose kidneys for cadmium in a wild foods study and found levels to be 1.3 and 21.4 µg/g (Sellers and Scott 2006), which includes the range reported here.

A pattern worth mentioning when comparing Figures 9 and 10 is that those deer with the highest levels of mercury in their kidneys and livers also had the highest levels of cadmium and those with the lowest mercury also had the lowest cadmium. This pattern likely reflects the difference in the ages of the deer harvested as older organisms tend to have contaminant levels than younger ones (Eisler 1985) simply because they have had more time to accumulate mercury in their tissues.

## *Organochlorinated industrial compounds*

Organochlorinated compounds (OCs) travel as global pollutants through the atmosphere and in this way they can contaminate remote (example arctic) food webs that are far away from the source. Like mercury and other contaminants, highest levels are often found in carnivores and top predators of aquatic food webs. A total of 60 samples (which included 19 flesh, 3 heart, 5 kidney, 28 liver) were screened for 33 different OCs and 19 of the 60 samples tested for OCs came from top predators of aquatic food chains.

Of the 1980 possible detections (sample size multiplied by the number of OCs) there were none (Table 12). The minimum detection limit was typically 0.02 µg/g (Appendices E-G). Health Canada has a standard for the maximum allowable concentration of DDT (and metabolites) of 5.0 µg/g in commercial fish and fish products (www.inspection.gc.ca/english/fssa/fssae.shtml). The tissues sampled in this study show concentrations of less than 0.05 µg/g, which is 100 times lower than the allowable limit. Health Canada is currently reviewing a standard of 2.0 µg/g for maximum allowable total PCBS in fish and fish products (www.inspection.gc.ca/english/fssa/fssae.shtml). Virtually all of the samples had <0.03 µg/g total PCBs. The exceptions were one otter flesh sample, one northern pike flesh sample, and the moose fat sample, for which the concentration ranged from was 0.06 to <0.8 µg/g (Appendices E – G). This is similar to the range of total PCBs 0.0014 to 1.0 µg/g measured in lake trout from 34 lakes across northern Canada (http://www.hc-sc.gc.ca/sr-sr/finance/tsri-irst/proj/persist-org/tsri-236-eng.php).

## *Dioxins and Furans*

Eighteen top predators (8 otter, 5 northern pike, and 5 pickerel (=walleye)) of the aquatic food web were screened for 7 chlorinated dioxin compounds and 10 chlorinated furan compounds. Of these, the World Health Organization considers two dioxins to be the most toxic. These are 2,3,7,8 TCDD and 1,2,3,7,8,PeCDD (http://www.who.int/ipcs/assessment/tef_update/en/print.html). In this study, the flesh of 8 otters was typically less than 0.2 pg/g for both compounds and the fish ranged from <0.141 to 0.977 pg/g (Appendices H and I). Health Canada is currently reviewing a standard of 20 pg/g for the maximum allowable amount of 2,3,7,8 TCDD in fish and fish products (www.inspection.gc.ca/english/fssa/fssae.shtml) and the values in this study are at least 20 times lower than that.

Another guideline used is the total Toxic Equivalencies (TEQ). This is a guideline that is derived from the summation of the TEQs (which are in turn derived from Toxic Equivalency Factors), which is calculated for each of the dioxins, furans, and dioxin-like compounds. Health Canada tested several market foods from several Canadian cities for total TEQs as part of its Canadian Total Diet Study (Health Canada, 2009). In this study, the TEQs were calculated from the value of the lower detection limit, which means the TEQs are estimated rather than calculated, and these estimates at the upper range of possible values. The TEQS for northern pike and walleye harvested from Whitedog ranged from 0.541 to 3.24 pg/g (Appendix I). All of these are higher than the total TEQs for commercial organ meats, wieners and sausages, fish (fresh water and canned), ground beef, processed cheese and french fries that sampled from Whitehorse and Winnipeg, and for which the range is 0.108 to 0.416 pg/g (Health Canada, 2009).

Environment Canada has total TEQ guidelines to ensure the protection of wildlife that eats aquatic biota. One guideline is for mammals and the other is for birds. To protect mammals, the guideline is 0.71 pg/g in their food; to protect birds, the guideline is 4.75 pg/g in their food. Otters in this study had total TEQs that ranged from 0.342-0.637 pg/g (Appendices H and I). According to these guidelines, these otters would have been safe to eat by any mammal or bird. The fish in these studies had total TEQs that ranged from 0.541 to 3.24 (Appendix I). According to these guidelines, these fish would have been safe to eat by birds, but only 3 of the pickerel would have been safe to eat by mammals.

## CONCLUSIONS AND RECOMMENDATIONS

In general the wild food in the territories and traditional territories of Wabauskang, Grassy Narrows and Whitedog First Nations have low levels of the chemical contaminants screened for in this study. There were levels for mercury in the flesh of carnivores and top predators, and in the kidneys of deer that often exceeded Health Canada's 0.2 µg/g standard for commercial fish/fish products.

Frequent consumers of wild foods who are concerned about exposure to mercury (through food) need to be aware that deer kidneys, pickerel and northern pike flesh, and the flesh and organs of any top predator of aquatic food chains have levels that warrant consumption moderation and/or safe-limit advisories. If exposure to cadmium is a concern then deer and moose kidneys should be avoided.

Future screening for chemicals needs to focus on specific combinations of wild meats and contaminants, such as dioxins, furans, and mercury in flesh of predatory fish, mercury and OCs in the flesh of migratory, carnivorous birds, and mercury in deer kidneys. It also needs to go beyond the suite of contaminants screened for in this study. The tissue of animals or fish identified as not well or sick should also be screened for the presence/absence of cancers, diseases or parasites.

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## TABLES

Table 1. **Mercury** concentration (u/g/g) among different tissues in all herbivores and all carnivores. RDL = reportable detection limit = 0.005 µg/g. " - " means tissue not tested.

| | flesh | | heart | | kidney | | liver | | tongue | |
|---|---|---|---|---|---|---|---|---|---|---|
| | herbivores | carnivores | herbivores | carnivores | herbivores | carnivores | herbivores | carnivores | herbivores | carnivores |
| total number samples tested | 64 | 37 | 16 | | 18 | 1 | 19 | 2 | 5 | |
| concentration range | < 0.005 - 0.072 | <0.005 - 4.4 | < 0.005 - 0.06 | - | <0.005 - 0.86 | 1.7 | <0.005 - 0.12 | 1.5 - 2.4 | <0.005 | - |
| number (% of total) above RDL | 12 (18%) | 36 (98%) | 3 (19%) | - | 17 (94%) | 1 (100%) | 17 (89%) | 2 (100%) | 0 (0%) | - |
| number (% of total) at or above 0.2 µg/g | 0 (0%) | 34 (92%) | 0 (0%) | - | 8 (44%) | 1 (100%) | 0 (0%) | 2 (100%) | 0 (0%) | - |
| number (% of total) at or above 0.5 µg/g | 0 (0%) | 19 (51) | 0 (0%) | - | 6 (33%) | 1 (100%) | 0 (0%) | 2 (100%) | 0 (0%) | - |

Table 2. **Arsenic** concentration (µg/g) among different tissues in all herbivores. RDL = reportable detection limit = 0.1 µg/g

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 17 | 2 | 10 | 17 | 2 |
| concentration range | <0.01 - 0.5 | <0.1 | <0.1 | <0.1 | <0.1 |
| number (% of total) above RDL | 1 | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| number (% of total) at or above 3.5 µg/g | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |

Table 3. **Lead** concentration (u/g/g) among different tissues in all herbivores. RDL = reportable detection limit = 0.03 µg/g

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 16 | 2 | 10 | 17 | 2 |
| concentration range | <0.03 - 3.5 | <0.03 - 0.61 | <0.03 - 0.85 | <0.03% | <0.03% |
| number (% of total) above RDL | 5 (31%) | 1 (50%) | 1 (10%) | 0 (0%) | 0 (0%) |
| number (% of total) at or above 0.5 µg/g | 1 (17%) | 1 (50%) | 1 (10%) | 0 (0%) | 0 (0%) |

Table 4. Cadmium concentration (u/g/g) among different tissues in all herbivores. RDL = reportable detection limit = 0.01 µg/g

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 25 | 17 | 22 | 28 | 4 |
| concentration range | <0.01 - 5.2 | <0.01 - 0.3 | 0.44 - 18 | <0.01 - 6.9 | <0.01 - 0.02 |
| number (% of total) above RDL | 2 (8%) | 4 (24%) | 22 (100%) | 26 (93%) | 1 (25%) |

Table 5. **Aluminum** concentration (u/g/g) among different tissues in all herbivores. RDL = reportable detection limit = 0.3 µg/g

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 17 | 2 | 10 | 17 | 2 |
| concentration range | <0.3 - 3.0 | 0.5 - 1.8 | <0.3 - 0.7 | <0.3 - 13 | 0.5 - 0.9 |
| number (% of total) above RDL | 16 (94%) | 2 (100%) | 7 (70%) | 12 (71%) | 2 (100%) |

Table 6. **Nickel** concentration (u/g/g) among different tissues in all herbivores. RDL = reportable detection limit = 0.05 µg/g

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 17 | 2 | 10 | 17 | 2 |
| concentration range | <0.05 | <0.05 - 0.05 | <0.05 - 0.12 | <0.05 - 0.07 | <0.05 |
| number (% of total) above RDL | 0 (0%) | 0 (0%) | 1 (10%) | 1 (6%) | 0 (0%) |

Table 7**. Zinc** concentration (u/g/g) among different tissues in all herbivores.

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 17 | 2 | 10 | 17 | 2 |
| concentration range | 4-37 | 19 - 30 | 25-36 | 14 - 51 | 23 - 26 |
| number (% of total) above RDL | 17 (100%) | 17 (100%) | 17 (100%) | 17 (100%) | 17 (100%) |

Table 8. **Copper** concentration (u/g/g) among different tissues in all herbivores.

| | flesh | heart | kidney | liver | tongue |
|---|---|---|---|---|---|
| total number samples tested | 17 | 2 | 10 | 17 | 2 |
| concentration range | 0.7 - 5.2 | 5.3 - 4.5 | 3.1 - 77 | 0.9 - 140 | 2.0 - 2.0 |
| number (% of total) above RDL | 17 (100%) | 17 (100%) | 17 (100%) | 17 (100%) | 17 (100%) |

Table 9. Concentration of those metals commonly identified as potentially toxic among wild meat samples collected from **Wabauskang** First Nation. Units are µg/g of tissue. "<" means less than the reportable detection limit, which is indicated by the value after this symbol. " - " means sample not analyzed for that metal.

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FLESH** | DUFL 1 MERCURY | ? | duck | 0.42 | <0.01 | 0.21 | <0.1 | 2.0 | <0.05 | 10 | 4.9 |
| | DUFL 1 PESTICIDE | ? | duck | 0.57 | <0.01 | 0.32 | <0.1 | <0.3 | <0.05 | 12 | 5.6 |
| | LIFI 2 MERCURY | carnivore | ling | 0.16 | - | - | - | - | - | - | - |
| | CG FLESH 2 MERCURY | herbivore | canada goose | 0.008 | <0.01 | <0.03 | 0.5 | 3.0 | 0.08 | 17 | 4.8 |
| | DEFL 1 MERCURY | herbivore | deer | 0.005 | <0.01 | - | - | - | - | - | - |
| | DEFI 6 MERCURY | herbivore | deer | <0.005 | - | - | - | - | - | - | - |
| | DEFL 2 MERCURY | herbivore | deer | <0.005 | - | - | - | - | - | - | - |
| | MOFL 2 MERCURY | herbivore | moose | <0.005 | - | - | - | - | - | - | - |
| | MOFL 1 PEST | herbivore | moose | <0.005 | - | - | - | - | - | - | - |
| | MUFL 1 MERCURY | herbivore | muskrat | 0.009 | - | - | - | - | - | - | - |
| | MUFL 2 MERCURY | herbivore | muskrat | 0.009 | - | - | - | - | - | - | - |
| | PAFL 3 MERCURY | herbivore | partridge | 0.005 | - | - | - | - | - | - | - |
| | PAFL 2 MERCURY | herbivore | partridge | <0.005 | <0.01 | <0.03 | <0.1 | 0.6 | <0.05 | 5 | 0.7 |
| | PAFL 4 MERCURY | herbivore | partrige | <0.005 | <0.01 | <0.03 | <0.1 | 0.4 | <0.05 | 5 | 0.7 |
| **KIDNEY** | DEKI 7 MERCURY | herbivore | deer | 0.049 | 4.2 | <0.03 | <0.1 | 0.5 | <0.05 | 26 | 3.4 |
| | DEKI 6 MERCURY | herbivore | deer | <0.005 | 0.44 | <0.03 | <0.1 | <0.3 | <0.05 | 29 | 77 |
| **LIVER** | BELI 1 PESTICIDE | herbivore | beaver | <0.005 | 0.14 | <0.03 | <0.1 | 0.4 | 0.07 | 32 | 4.2 |
| | DELI 2 PESTICIDE | herbivore | deer | 0.008 | 0.41 | <0.03 | <0.1 | 2.1 | <0.05 | 40 | 44 |
| | DELI 3 PESTICIDE | herbivore | deer | 0.008 | 0.16 | <0.03 | <0.1 | <0.3 | <0.05 | 34 | 69 |
| | DELI 5 MERCURY | herbivore | deer | 0.014 | 0.15 | <0.03 | <0.1 | <0.3 | <0.05 | 51 | 11 |
| | DELI 6 PESTICIDE | herbivore | deer | 0.12 | 0.73 | <0.03 | <0.1 | <0.3 | <0.05 | 28 | 4.1 |
| | MOLI 4 PESTICIDE | herbivore | moose | 0.006 | 1.5 | <0.03 | <0.1 | 13 | <0.05 | 21 | 100 |
| | MOLI 3 MERCURY | herbivore | moose | 0.007 | 1.6 | <0.03 | <0.1 | 0.3 | <0.05 | 24 | 100 |
| **LUNG** | DELU 5 PESTICIDE | herbivore | deer | <0.005 | <0.01 | <0.03 | <0.1 | 0.3 | <0.05 | 16 | 1.7 |
| **TONGUE** | MOTO 5 MERCURY | herbivore | moose | <0.005 | <0.01 | <0.03 | <0.1 | 0.9 | <0.05 | 26 | 2.0 |
| | MOTO 2 MERCURY | herbivore | moose | <0.005 | <0.01 | <0.03 | <0.1 | 0.5 | <0.05 | 23 | 2.0 |

Table 10. Concentration of those metals commonly identified as potentially toxic among wild meat samples collected from **Grassy Narrows** First Nation**.** Units are µg/g of tissue. "<" means less than the reportable detection limit, which is indicated by the value after this symbol. " - " means sample not analyzed for that metal.

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FLESH** | MALFL1 | carnivore | mallard | 0.15 | - | - | - | - | | | |
| | OTFL1 | carnivore | otter | 0.35 | - | - | - | - | - | - | - |
| | OTFL7 | carnivore | otter | 0.85 | - | - | - | - | - | - | - |
| | OTFL 12 | carnivore | otter | 0.88 | - | - | - | - | - | - | - |
| | OTFL10 | carnivore | otter | 1.0 | - | - | - | - | - | - | - |
| | OTFL 13 | carnivore | otter | 1.1 | - | - | - | - | - | - | - |
| | OTFL 11 | carnivore | otter | 1.7 | - | - | - | - | - | - | - |
| | OTFL 14 | carnivore | otter | 1.7 | - | - | - | - | - | - | - |
| | BEFL 1 | herbivore | beaver | <0.005 | <0.01 | <0.03 | <0.1 | 0.5 | <0.05 | 37 | 1.8 |
| | MUFL1 | herbivore | muskrat | <0.005 | - | - | - | - | - | - | - |
| | PAFL 6 | herbivore | partridge | 0.005 | - | - | - | - | - | - | - |
| | PAFL1 | herbivore | partridge | <0.005 | <0.01 | <0.03 | <0.1 | 0.3 | <0.05 | 5 | 0.8 |
| | PAFL4 | herbivore | partridge | <0.005 | <0.01 | 0.04 | <0.1 | 0.6 | <0.05 | 5 | 1.2 |
| | PAFL12 | herbivore | partridge | <0.005 | <0.01 | <0.03 | <0.1 | 1.0 | <0.05 | 5 | 0.8 |
| | PAFL7 | herbivore | partridge | <0.005 | 0.02 | <0.03 | <0.1 | 0.6 | <0.05 | 4 | 0.9 |
| | PAFL2 | herbivore | partridge | <0.005 | 0.01 | 0.06 | <0.1 | 0.6 | <0.05 | 5 | 1.1 |
| | PAFL9 | herbivore | partridge | <0.005 | <0.01 | 0.23 | <0.1 | 0.4 | <0.05 | 4 | 1.0 |
| | PAFL10 | herbivore | partridge | <0.005 | <0.01 | 0.06 | <0.1 | 0.3 | <0.05 | 4 | 0.8 |
| | PAFL13 | herbivore | partridge | <0.005 | <0.01 | <0.03 | <0.1 | 0.4 | <0.05 | 4 | 0.9 |
| | PAFL11 | herbivore | partridge | <0.005 | 0.03 | <0.03 | <0.1 | 0.5 | <0.05 | 5 | 0.8 |
| | PAFL8 | herbivore | partridge | <0.005 | <0.01 | <0.03 | <0.1 | 0.7 | <0.05 | 5 | 0.7 |
| | PAFL3 | herbivore | partridge | <0.005 | <0.01 | <0.03 | <0.1 | 0.5 | <0.05 | 5 | 0.9 |
| | PAFL 5 | herbivore | partridge | <0.005 | 0.02 | <0.03 | <0.1 | <0.3 | <0.05 | 5 | 0.9 |
| | RGFL2 | herbivore | ruffed grouse | <0.005 | - | - | - | - | - | - | - |
| | RGFL 3 | herbivore | ruffed grouse | <0.005 | <0.01 | 3.5 | <0.1 | 0.9 | <0.05 | 7 | 5.2 |
| **HEART** | BEHE 1 | herbivore | beaver | <0.005 | 0.01 | 0.61 | <0.1 | 0.5 | <0.05 | 19 | 4.5 |

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | DEHE4 | herbivore | deer | - | 5.2 | <0.03 | <0.1 | 1.8 | 0.05 | 30 | 5.3 |
| **KIDNEY** | OTKI5 | carnivore | otter | 1.7 | 0.11 | 0.04 | <0.1 | 1.7 | <0.05 | 19 | 4.6 |
| | BEKI8 | herbivore | beaver | 0.016 | 2.0 | <0.03 | <0.1 | 0.3 | <0.05 | 36 | 3.9 |
| | BEKI 1 | herbivore | beaver | 0.021 | 4.6 | 0.85 | <0.1 | 0.6 | <0.05 | 25 | 3.1 |
| | BEKI7 | herbivore | beaver | - | 0.74 | <0.03 | <0.1 | 0.5 | <0.05 | 19 | 3.6 |
| | DEKI2 | herbivore | deer | - | 2.0 | <0.03 | <0.1 | 0.7 | <0.05 | 27 | 3.7 |
| | DEKI 6 | herbivore | deer | - | 2.9 | <0.03 | <0.1 | 0.4 | <0.05 | 29 | 3.6 |
| | MOKI7 | herbivore | moose | - | 16 | <0.03 | <0.1 | <0.3 | 0.12 | 30 | 4.5 |
| | MOKI 1 | herbivore | moose | - | 8.2 | <0.03 | <0.1 | <0.3 | <0.05 | 26 | 4.7 |
| | MOKI 3 | herbivore | moose | - | 16 | <0.03 | <0.1 | 0.4 | <0.05 | 25 | 4.4 |
| **LIVER** | OTLI5 | carnivore | otter | 2.3 | 0.04 | 0.03 | <0.1 | 0.5 | <0.05 | 21 | 8.3 |
| | OTLI4 | carnivore | otter | 2.4 | 0.12 | <0.03 | <0.1 | <0.3 | <0.05 | 21 | 26 |
| | BELI15 | herbivore | beaver | 0.023 | 6.9 | <0.03 | <0.1 | 0.6 | <0.05 | 27 | 3.6 |
| | BELI8 | herbivore | beaver | - | 0.31 | <0.03 | <0.1 | 0.6 | <0.05 | 46 | 3.6 |
| | DELI2 | herbivore | deer | - | 0.38 | <0.03 | <0.1 | <0.3 | <0.05 | 48 | 54 |
| | DELI5 | herbivore | deer | - | 0.30 | <0.03 | <0.1 | 1.0 | <0.05 | 40 | 21 |
| | DELI4 | herbivore | deer | - | 0.54 | <0.03 | <0.1 | 0.9 | <0.05 | 42 | 110 |
| | DELI 6 | herbivore | deer | - | <0.01 | <0.03 | <0.1 | 0.4 | <0.05 | 14 | 0.9 |
| | MOLI7 | herbivore | moose | - | 1.7 | <0.03 | <0.1 | 0.9 | <0.05 | 23 | 41 |
| | MOLI4 | herbivore | moose | - | 0.99 | <0.03 | <0.1 | 0.4 | <0.05 | 46 | 52 |
| | MOLI 1 | herbivore | moose | - | 1.3 | <0.03 | <0.1 | 1.2 | <0.05 | 24 | 52 |
| | MOLI 3 | herbivore | moose | - | 1.5 | <0.03 | <0.1 | <0.3 | <0.05 | 20 | 140 |

Table 11. Concentration of those metals commonly identified as potentially toxic among wild meat samples collected from **Whitedog** Independent Nation. Units are µg/g of tissue. "<" means less than the reportable detection limit, which is indicated by the value after this symbol. " - " means sample not analyzed for that metal.

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium |
|---|---|---|---|---|---|
| **FLESH** | MA 1 FL | carnivore | mallard | 0.034 | - |
| | MAR 1 FL | carnivore | marten | 0.21 | - |
| | MAR 3 FL | carnivore | marten | 0.31 | - |
| | MAR 2 FL | carnivore | marten | 0.38 | - |
| | MAR4FL | carnivore | marten | <0.005 | - |
| | MI2FL | carnivore | mink | 0.49 | - |
| | MI1FL | carnivore | mink | 4.4 | - |
| | NP7FL | carnivore | northern pike | 0.26 | - |
| | NP2FL | carnivore | northern pike | 0.27 | - |
| | NP9FL | carnivore | northern pike | 0.35 | - |
| | NP8FL | carnivore | northern pike | 0.43 | - |
| | NP10FL | carnivore | northern pike | 0.43 | - |
| | NP5FL | carnivore | northern pike | 0.44 | - |
| | NP3FL | carnivore | northern pike | 0.50 | - |
| | NP4FL | carnivore | northern pike | 0.55 | - |
| | NP6FL | carnivore | northern pike | 0.57 | - |
| | NP1FL | carnivore | northern pike | 0.65 | - |
| | OT1FL | carnivore | otter | 2.6 | - |
| | PI 3 FL | carnivore | pickerel | 0.32 | - |
| | PI 8 FL | carnivore | pickerel | 0.33 | - |
| | PI 5 FL | carnivore | pickerel | 0.37 | - |
| | PI 7 FL | carnivore | pickerel | 0.40 | - |
| | PI 9 FL | carnivore | pickerel | 0.40 | - |
| | PI 4 FL | carnivore | pickerel | 0.47 | - |
| | PI 10 FL | carnivore | pickerel | 0.47 | - |
| | PI 1 FL | carnivore | pickerel | 0.48 | - |
| | PI 2 FL | carnivore | pickerel | 0.48 | - |

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium |
|---|---|---|---|---|---|
| | PI 6 FL | carnivore | pickerel | 0.89 | - |
| | BE1FL | herbivore | beaver | <0.005 | - |
| | BE2FL | herbivore | beaver | <0.005 | - |
| | BE3FL | herbivore | beaver | <0.005 | - |
| | BE4FL | herbivore | beaver | <0.005 | - |
| | BE5FL | herbivore | beaver | <0.005 | - |
| | DE 3 FL | herbivore | deer | 0.005 | <0.01 |
| | DE11FL | herbivore | deer | 0.011 | - |
| | DE9FL | herbivore | deer | 0.012 | - |
| | DE14FL | herbivore | deer | 0.072 | - |
| | DE8FL | herbivore | deer | <0.005 | - |
| | DE10FL | herbivore | deer | <0.005 | - |
| | DE12FL | herbivore | deer | <0.005 | - |
| | DE13FL | herbivore | deer | <0.005 | - |
| | DE15FL | herbivore | deer | <0.005 | - |
| | DE16FL | herbivore | deer | <0.005 | - |
| | DE 1 FL | herbivore | deer | <0.005 | <0.01 |
| | DE 2 FL | herbivore | deer | <0.005 | 0.01 |
| | DE 4 FL | herbivore | deer | <0.005 | <0.01 |
| | DE 5 FL | herbivore | deer | <0.005 | 0.01 |
| | DE 6 FL | herbivore | deer | <0.005 | <0.01 |
| | DE 7 FL | herbivore | deer | <0.005 | <0.01 |
| | MO4FL | herbivore | moose | 0.008 | - |
| | MO3FI | herbivore | moose | <0.005 | - |
| | MO5FL | herbivore | moose | <0.005 | - |
| | MO 1 FL | herbivore | moose | <0.005 | 0.01 |
| | MO 2 FL | herbivore | moose | <0.005 | - |
| | PA1FL | herbivore | partridge | <0.005 | - |
| | RAB 2 FL | herbivore | rabbit | 0.016 | - |
| | RAB4FL | herbivore | rabbit | <0.005 | - |
| | RAB 1 FL | herbivore | rabbit | <0.005 | - |
| | RAB 3 FL | herbivore | rabbit | <0.005 | - |
| | RG1FL | herbivore | ruffed grouse | <0.005 | - |

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium |
|---|---|---|---|---|---|
| | RG2FL | herbivore | ruffed grouse | <0.005 | - |
| | RG3FL | herbivore | ruffed grouse | <0.005 | - |
| | RG4FL | herbivore | ruffed grouse | <0.005 | - |
| | RG5F1 | herbivore | ruffed grouse | <0.005 | - |
| | RA1FL | omnivore | racoon | 0.57 | - |
| **HEART** | DE 1 HE | herbivore | deer | 0.005 | <0.01 |
| | DE 6 HE | herbivore | deer | 0.006 | 0.01 |
| | DE 7 HE | herbivore | deer | 0.006 | 0.02 |
| | DE?HE1 | herbivore | deer | <0.005 | <0.01 |
| | DE?HE2 | herbivore | deer | <0.005 | <0.01 |
| | DE?HE3 | herbivore | deer | <0.005 | <0.01 |
| | DE?HE4 | herbivore | deer | <0.005 | <0.01 |
| | DE?HE5 | herbivore | deer | <0.005 | <0.01 |
| | DE 2 HE | herbivore | deer | <0.005 | <0.01 |
| | DE 3 HE | herbivore | deer | <0.005 | <0.01 |
| | DE 4 HE | herbivore | deer | <0.005 | <0.01 |
| | DE 5 HE | herbivore | deer | <0.005 | 0.02 |
| | MO?HE1 | herbivore | moose | <0.005 | 0.02 |
| | MO 1 HE | herbivore | moose | <0.005 | <0.01 |
| | MO 2 HE | herbivore | moose | <0.005 | 0.01 |
| **KIDNEY** | DE?KI1 | herbivore | deer | 0.18 | 6.9 |
| | DE 1 KI | herbivore | deer | 0.24 | 2.4 |
| | DE 2 KI | herbivore | deer | 0.47 | 7.4 |
| | DE 5 KI | herbivore | deer | 0.50 | 11 |
| | DE 3 KI | herbivore | deer | 0.51 | 7.4 |
| | DE 7 KI | herbivore | deer | 0.55 | 12 |
| | DE 6 KI | herbivore | deer | 0.64 | 12 |
| | DE 4 KI | herbivore | deer | 0.86 | 18 |
| | MO?KI1 | herbivore | moose | 0.017 | 15 |
| | MO 1 KI | herbivore | moose | 0.017 | 8.9 |

| Tissue | Sample ID | Feeding Habit | Animal | Mercury | Cadmium |
|---|---|---|---|---|---|
| | MO 2 KI | herbivore | moose | 0.022 | 9.0 |
| | MO?KI2 | herbivore | moose | 0.11 | 2.1 |
| | | | | | |
| **LIVER** | DE 1 LI | herbivore | deer | 0.009 | 0.21 |
| | DE?LI1 | herbivore | deer | 0.011 | 0.34 |
| | DE 5 LI | herbivore | deer | 0.014 | 1.1 |
| | DE?LI2 | herbivore | deer | 0.016 | 0.79 |
| | DE 6 LI | herbivore | deer | 0.016 | 1.6 |
| | DE 7 LI | herbivore | deer | 0.017 | 1.6 |
| | DE 2 LI | herbivore | deer | 0.018 | 1.4 |
| | DE 3 LI | herbivore | deer | 0.018 | 1.5 |
| | DE 4 LI | herbivore | deer | 0.018 | 1.7 |
| | DE?LI3 | herbivore | deer | <0.005 | <0.01 |
| | MO?LI1 | herbivore | moose | 0.025 | 0.35 |
| | | | | | |
| **TONGUE** | DE?TO1 | herbivore | deer | <0.005 | <0.01 |
| | MO?TO1 | herbivore | moose | <0.005 | 0.02 |

Table12. The number of samples with detectable organochlorinated compounds out of the number of samples tested .

"—" means no samples.

| | | Community | | | |
|---|---|---|---|---|---|
| Tissue type | Animal type | Wabauskang | Grassy Narrows | Whitedog | Total |
| flesh | herbivores | -- | 0 out of 4 | 0 out of 1 | 5 |
| | carnivores | 0 out of 1 | 0 out of 5 | 0 out of 11 | 17 |
| Heart | herbivores | -- | 0 out of 2 | 0 out of 1 | 3 |
| | carnivores | -- | -- | -- | |
| kidney | herbivores | -- | 0 out of 4 | -- | 4 |
| | carnivores | -- | 0 out of 1 | -- | 1 |
| livers | herbivores | 0 out of 7 | 0 out of 9 | 0 out of 9 | 25 |
| | carnivores | -- | 0 out of 3 | -- | 3 |
| lung | herbivores | 0 out of 1 | -- | -- | 1 |
| fat | herbivores | -- | 0 out of 1 | -- | 1 |
| | Total | 9 | 29 | 22 | |

## FIGURES

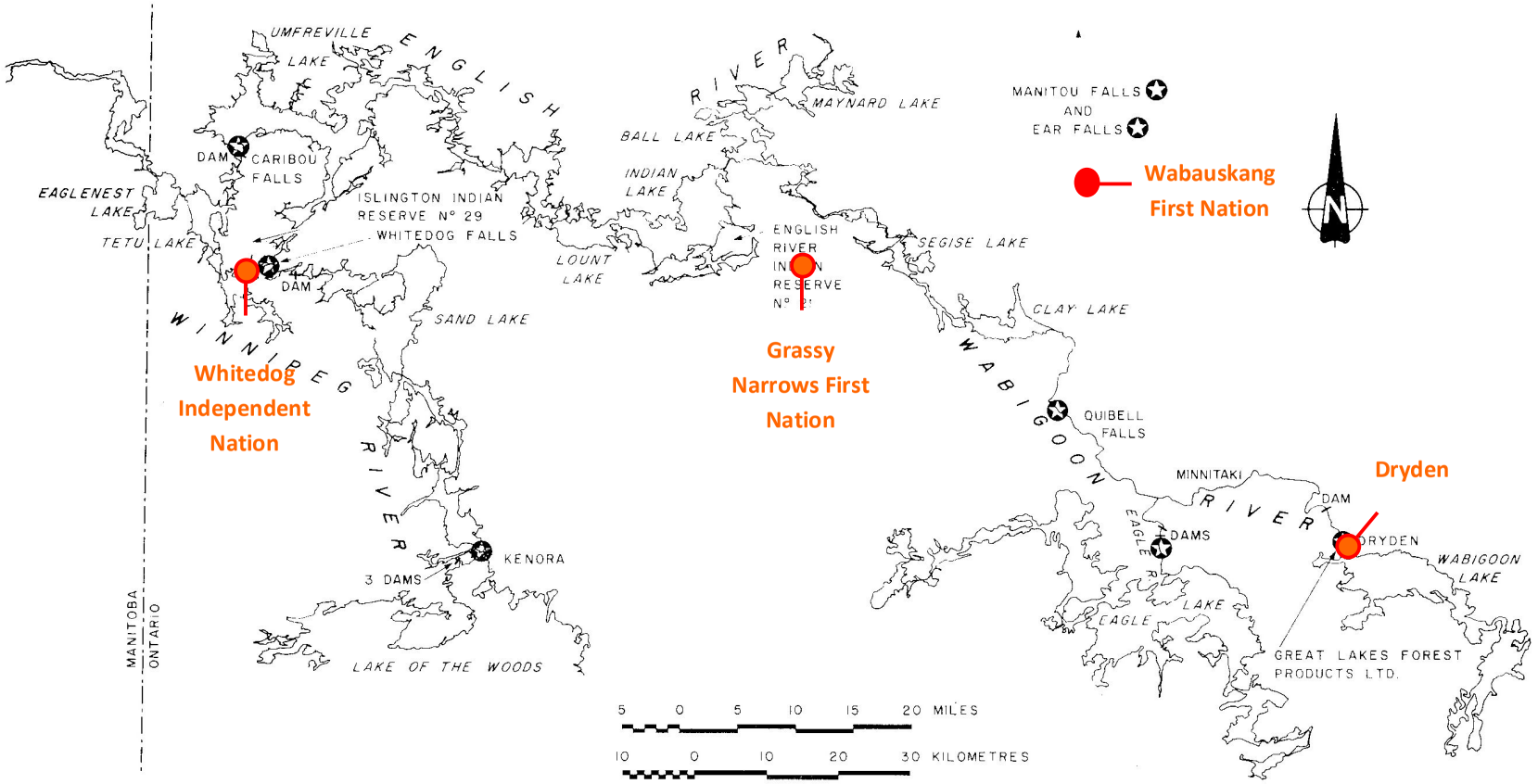


Fig 1. Map of Northwestern Ontario showing location of First Nation communities and study sites (adapted from Parks et al, 1984).

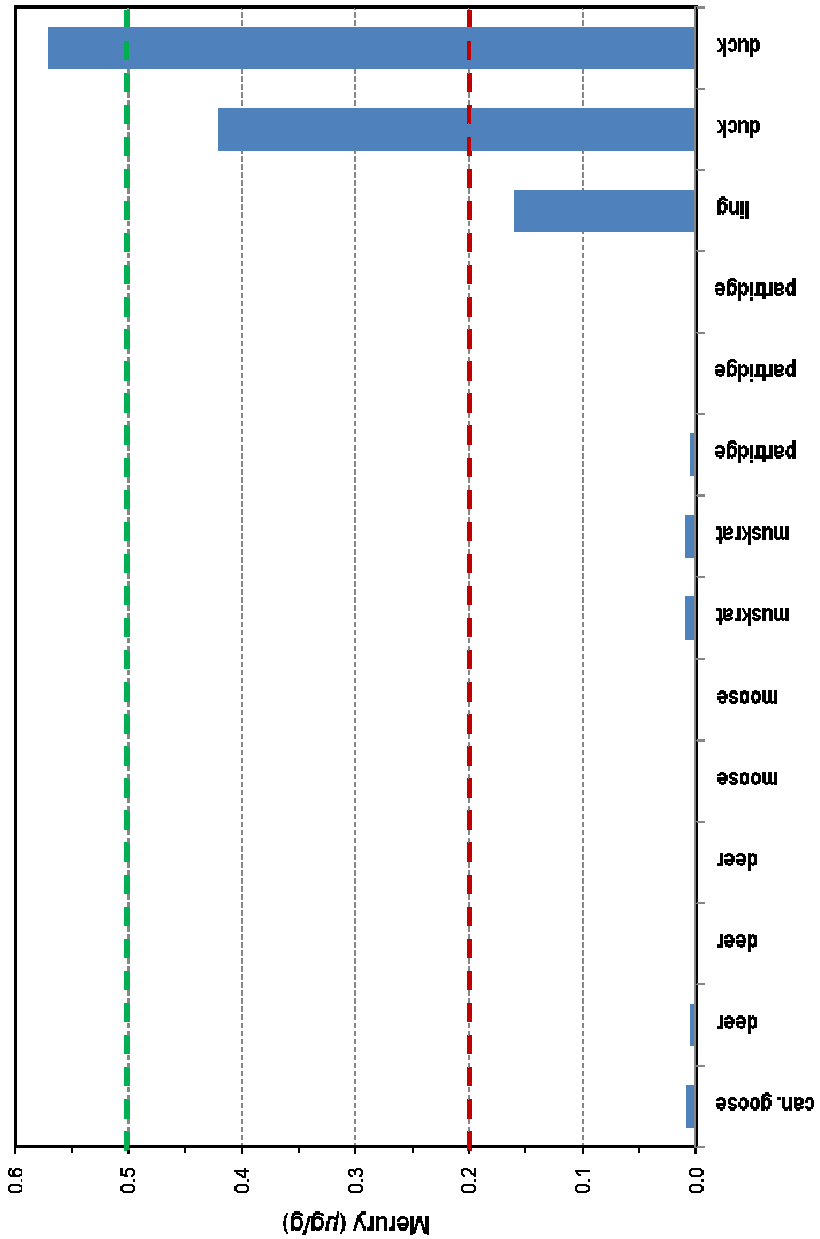


Fig. 2. **Mercury** concentration in **flesh** samples collected by hunters and trappers of **Wabauskang** First Nation. 0.2 µg/g is Health Canada's guideline for frequent consumers of fish flesh and 0.5 µg/g is Health Canada's guideline for commercial fish food.

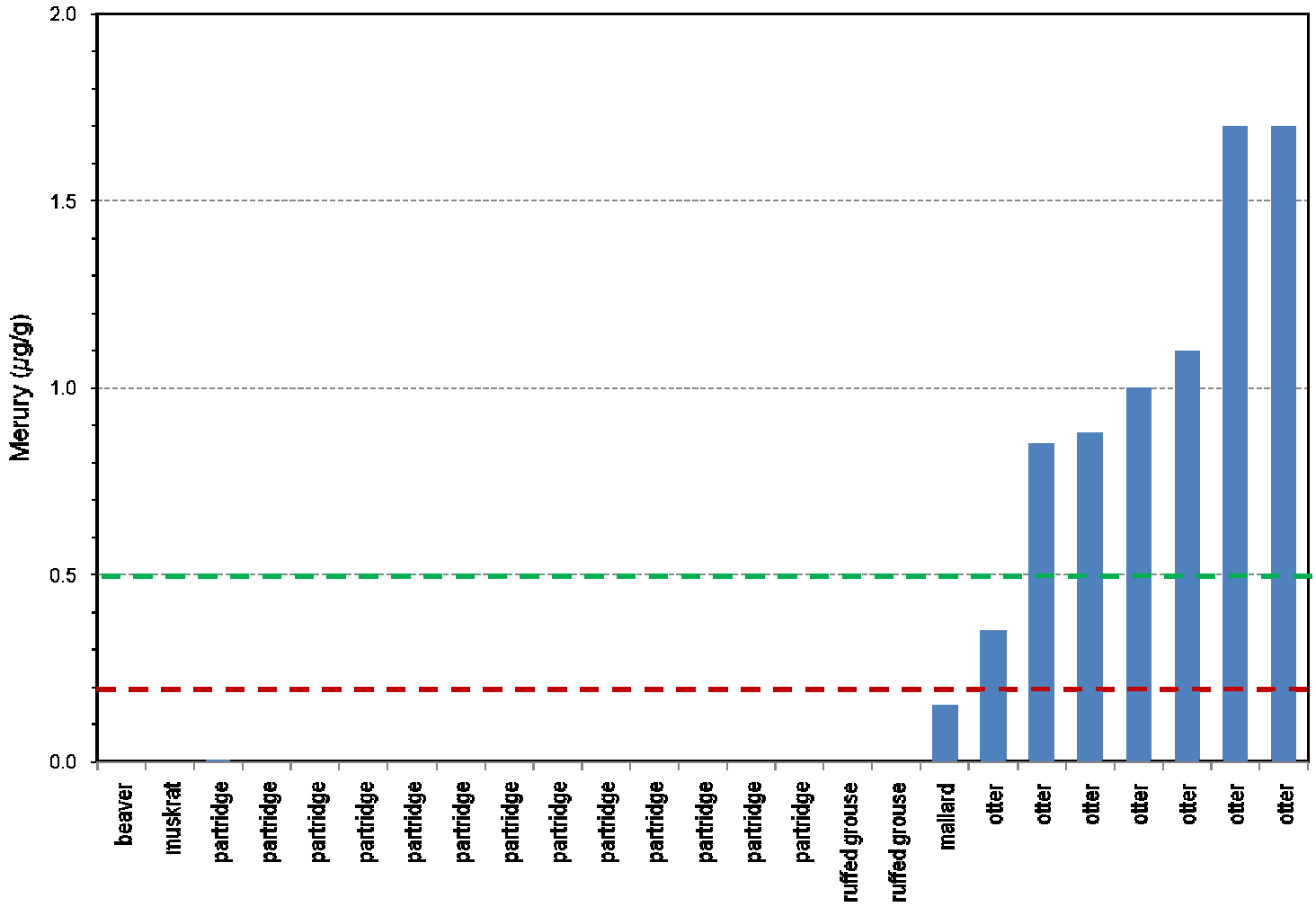


Fig. 3. **Mercury** concentration in **flesh** samples collected by hunters and trappers of **Grassy Narrows** First Nation. 0.2 µg/g is Health Canada's guideline for frequent consumers of fish flesh and 0.5 µg/g is Health Canada's guideline for commercial fish food.

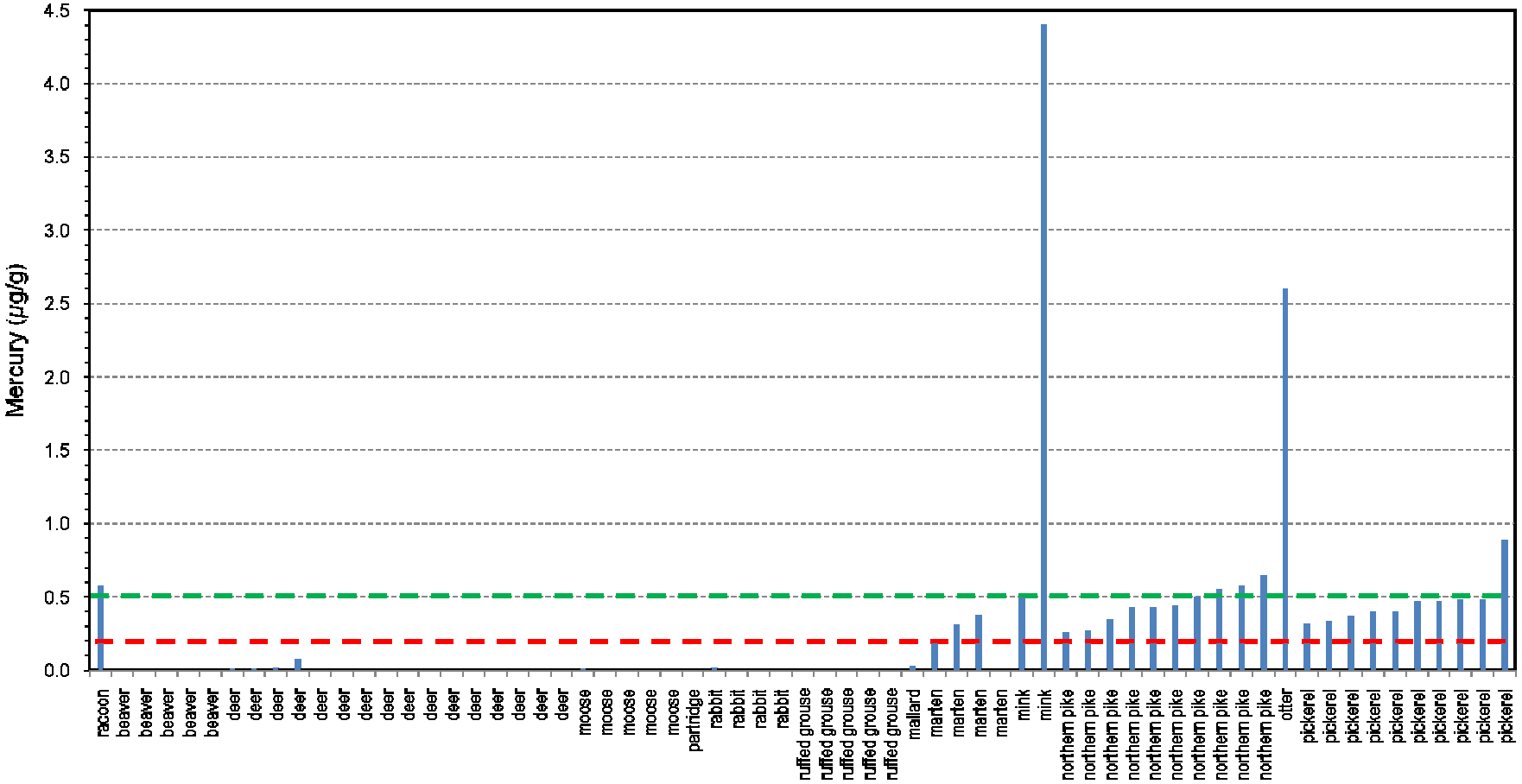


Fig. 4. **Mercury** concentration in **flesh** samples collected by hunters and trappers of **Whitedog** Indiependent Nation. 0.2 µg/g is Health Canada's guideline for frequent consumers of fish flesh and 0.5 µg/g is Health Canada's guideline for commercial fish food.

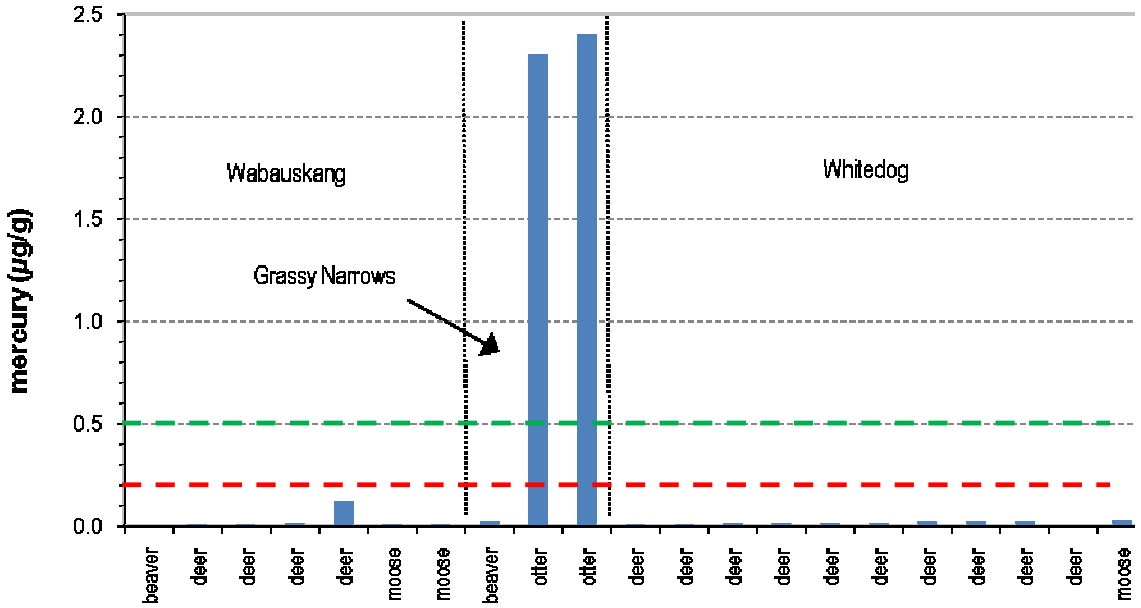


**Fig. 5. Mercury in all liver samples. 0.2 µg/g is Health Canada's guideline for frequent consumers of fish flesh and 0.5 µg/g is Health Canada's guideline for commercial fish food.**

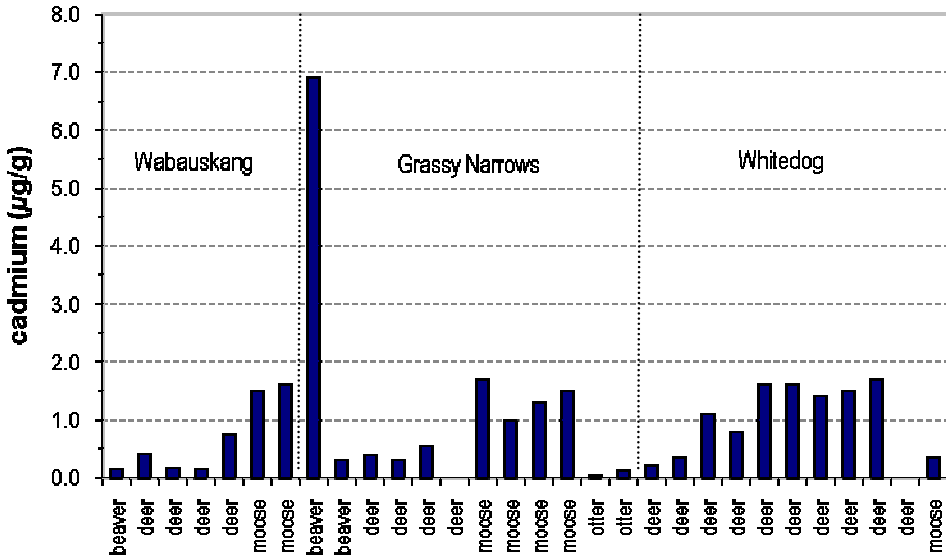


**Fig. 6. Cadmium in all liver samples.**

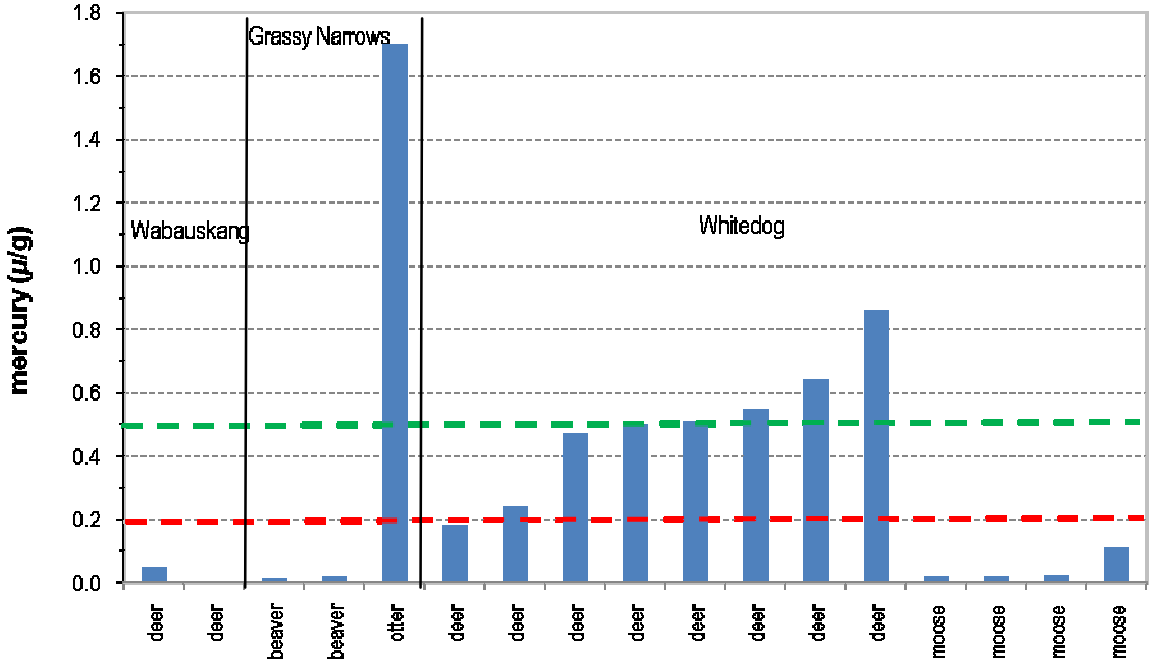


**Fig. 7. Mercury in all kidney samples. 0.2 µg/g is Health Canada's guideline for frequent consumers of fish flesh and 0.5 µg/g is Health Canada's guideline for commercial fish food.**

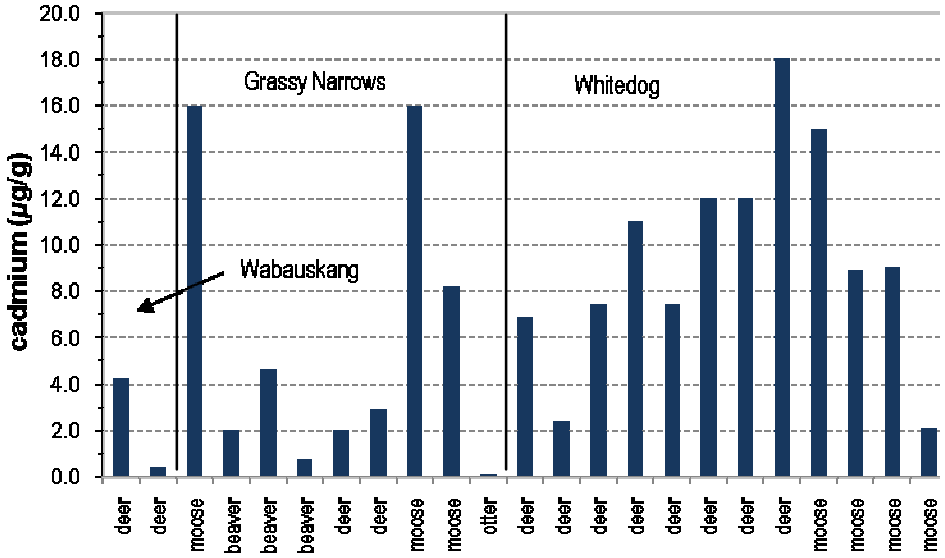


Fig. 8. Cadmium in all **kidney** samples.

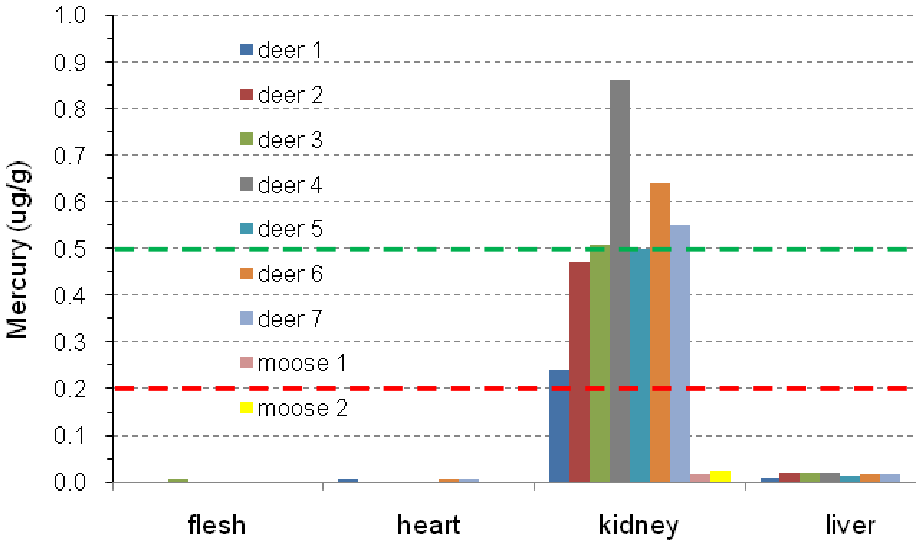


Fig. 9. Mercury among tissues of deer and moose collected by hunters from Whitedog Independent Nation.

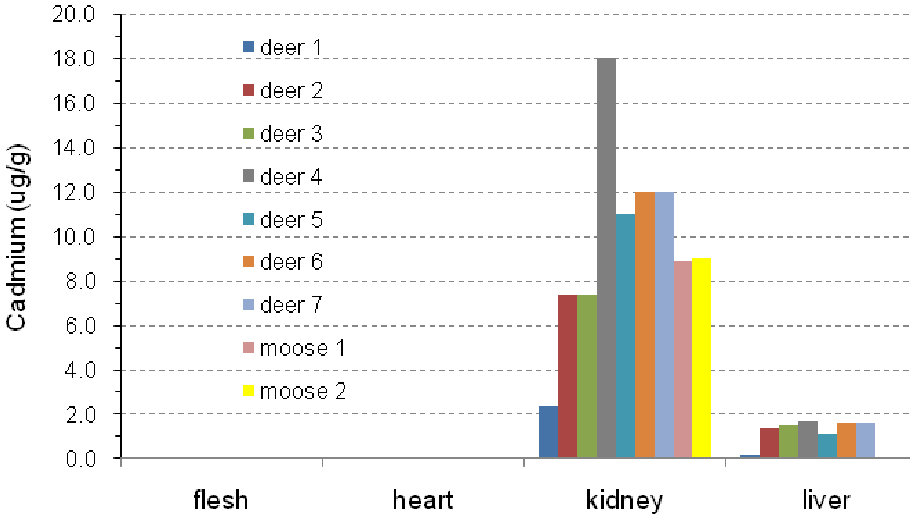


Fig. 10. Cadmium among tissue of deer and moose collected by hunters from Whitedog Independent Nation.

## APPENDICES

Appendix A. Percentage fat in those samples analyzed for lipids.

| Community | Maxxam Job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Fat (gravimetric) |
|---|---|---|---|---|---|---|---|
| | | | | | | | % |
| Wabauskang | A8F0749 | BJ0440 | 15 | BELI 1 PESTICIDE | beaver | liver | 4.4 |
| Wabauskang | A8F0749 | BJ0444 | 18 | BELI 1 MERCURY | beaver | liver | 6.6 |
| Wabauskang | A8F0749 | BJ0433 | 7 | DELI 5 MERCURY | deer | liver | 0.10 |
| Wabauskang | A8F0749 | BJ0454 | 28 | DELI 2 PESTICIDE | deer | liver | 0.10 |
| Wabauskang | A8F0749 | BJ0459 | 34 | DELI 3 PESTICIDE | deer | liver | 0.10 |
| Wabauskang | A8F0749 | BJ0456 | 31 | DELI 2 MERCURY | deer | liver | 0.20 |
| Wabauskang | A8F0749 | BJ0437 | 12 | DELI 6 MERCURY | deer | liver | 0.30 |
| Wabauskang | A8F0749 | BJ0434 | 9 | DELI 5 PESTICIDE | deer | liver | 0.40 |
| Wabauskang | A8F0749 | BJ0428 | 1 | DELI 6 PESTICIDE | deer | liver | 3.1 |
| Wabauskang | A8F0749 | BJ0461 | 36 | DELU 5 PESTICIDE | deer | lung | 0.20 |
| Wabauskang | A8F0749 | BJ0430 | 4 | LIFI 2 MERCURY | ling | flesh | <0.1 |
| Wabauskang | A8F0749 | BJ0450 | 25 | MOLI 3 MERCURY | moose | liver | 0.20 |
| Wabauskang | A8F0749 | BJ0447 | 22 | MOLI 4 PESTICIDE | moose | liver | 0.70 |
| Wabauskang | A8F0749 | BJ0448 | 23 | MOLI 4 MERCURY | moose | liver | 0.80 |
| | | | | | | | |
| Grassy Narrows | A935224 | CB4542 | 19 | BEFL 1 | beaver | flesh | 0 |
| Grassy Narrows | A935224 | CB4544 | 21 | BEHE 1 | beaver | heart | 0.20 |
| Gassy Narrows | A930175 | BZ1090 | 26 | BEKI8 | beaver | kidney | 0.10 |
| Grassy Narrows | A935224 | CB4543 | 20 | BEKI 1 | beaver | kidney | 0.10 |
| Gassy Narrows | A930175 | BZ1088 | 24 | BEKI7 | beaver | kidney | 0.60 |
| Gassy Narrows | A930175 | BZ1087 | 23 | BELI8 | beaver | liver | 0.10 |
| Grassy Narrows | A935224 | CB4536 | 13 | DEKI 6 | deer | kidney | 1.7 |
| Gassy Narrows | A930175 | BZ1083 | 19 | DELI4 | deer | liver | 0 |
| Grassy Narrows | A935224 | CB4537 | 14 | DELI 6 | deer | liver | 0 |
| Gassy Narrows | A930175 | BZ1080 | 16 | DELI5 | deer | liver | 0.10 |
| Gassy Narrows | A930175 | BZ1078 | 14 | DELI2 | deer | liver | 0.20 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Grassy Narrows | A935224 | CB4524 | 1 | MOKI 1 | moose | kidney | 0 |
| Grassy Narrows | A935224 | CB4530 | 7 | MOKI 3 | moose | kidney | 3.2 |
| Gassy Narrows | A930175 | BZ1092 | 28 | MOLI7 | moose | liver | 0.10 |
| Gassy Narrows | A930175 | BZ1094 | 30 | MOLI4 | moose | liver | 0.30 |
| Grassy Narrows | A935224 | CB4528 | 5 | MOLI 3 | moose | liver | 0.50 |
| Grassy Narrows | A935224 | CB4525 | 2 | MOLI 1 | moose | liver | 1.3 |
| Gassy Narrows | A930175 | BZ1104 | 40 | OTFL7 | otter | flesh | 1.3 |
| Gassy Narrows | A930175 | BZ1102 | 38 | OTFL1 | otter | flesh | 1.8 |
| Grassy Narrows | A935224 | CB4531 | 8 | OTFL 11 | otter | flesh | 3.9 |
| Gassy Narrows | A930175 | BZ1103 | 39 | OTFL10 | otter | flesh | 4.5 |
| Grassy Narrows | A935224 | CB4534 | 11 | OTFL 14 | otter | flesh | 5.6 |
| Grassy Narrows | A935224 | CB4532 | 9 | OTFL 12 | otter | flesh | 6.3 |
| Grassy Narrows | A935224 | CB4533 | 10 | OTFL 13 | otter | flesh | 11 |
| Gassy Narrows | A930175 | BZ1105 | 41 | OTKI5 | otter | kidney | 0 |
| Gassy Narrows | A930175 | BZ1106 | 42 | OTLI5 | otter | liver | 0.10 |
| Gassy Narrows | A930175 | BZ1107 | 43 | OTLI4 | otter | liver | 0.40 |
| Grassy Narrows | A935224 | CB4541 | 18 | RGFL 3 | roughed grouse | flesh | 0 |
| Whitedog | A968627 | CS3605 | 1 | DE 1 FL | deer | flesh | 0.30 |
| Whitedog | A968627 | CS3606 | 2 | DE 1 HE | deer | heart | 0.20 |
| Whitedog | A968627 | CS3608 | 4 | DE 1 KI | deer | kidney | 0.10 |
| Whitedog | A968627 | CS3607 | 3 | DE 1 LI | deer | liver | 0.10 |
| Whitedog | A968627 | CS3611 | 7 | DE 2 LI | deer | liver | 0.10 |
| Whitedog | A968627 | CS3615 | 11 | DE 3 LI | deer | liver | 0.10 |
| Whitedog | A968627 | CS3619 | 15 | DE 4 LI | deer | liver | 0.10 |
| Whitedog | A968627 | CS3627 | 23 | DE 6 LI | deer | liver | 0.10 |
| Whitedog | A968698 | CS4000 | 14 | DE?LI2 | deer | liver | 0.30 |
| Whitedog | A968627 | CS3631 | 27 | DE 7 LI | deer | liver | 0.50 |
| Whitedog | A968698 | CS4003 | 17 | DE?LI3 | deer | liver | 0.50 |
| Whitedog | A968698 | CS3996 | 10 | DE?LI1 | deer | liver | 0.60 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Whitedog | A968698 | CS3992 | 6 | MO?LI1 | moose | liver | 0.50 |
| Whitedog | A968698 | CS4033 | 47 | NP3FL | northern pike | flesh | 0.60 |
| Whitedog | A968698 | CS4034 | 48 | NP4FL | northern pike | flesh | 0.60 |
| Whitedog | A968698 | CS4032 | 46 | NP2FL | northern pike | flesh | 0.80 |
| Whitedog | A968698 | CS4035 | 49 | NP5FL | northern pike | flesh | 1.8 |
| Whitedog | A968698 | CS4031 | 45 | NP1FL | northern pike | flesh | 2.1 |
| Whitedog | A968698 | CS4030 | 44 | OT1FL | otter | flesh | 2.9 |
| Whitedog | A968698 | CS4044 | 58 | PI 4 FL | pickerel | flesh | 0.70 |
| Whitedog | A968698 | CS4043 | 57 | PI 3 FL | pickerel | flesh | 0.80 |
| Whitedog | A968698 | CS4041 | 55 | PI 1 FL | pickerel | flesh | 0.90 |
| Whitedog | A968698 | CS4042 | 56 | PI 2 FL | pickerel | flesh | 0.90 |
| Whitedog | A968698 | CS4045 | 59 | PI 5 FL | pickerel | flesh | 0.90 |

Appendix B. Concentration of those metals commonly identified as potentially toxic in wild meat samples. Units are μg/g of tissue. "<" means less than reportable detection limit, which is indicated by value after this symbol. "-"means not analyzed for that metal.

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| Wabauskang | A8F0749 | BJ0443 | 18 | BELI 1 PESTICIDE | beaver | liver | <0.005 | 0.14 | <0.03 | <0.1 | 0.4 | 0.07 | 32 | 4.2 |
| Wabauskang | A8F0749 | BJ0465 | 40 | CG FLESH 2 MERCURY | canada goose | flesh | 0.008 | <0.01 | <0.03 | 0.5 | 3.0 | 0.08 | 17 | 4.8 |
| Wabauskang | A8F0749 | BJ0441 | 16 | DEFI 6 MERCURY | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0455 | 29 | DEFL 2 MERCURY | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0457 | 32 | DEFL 1 MERCURY | deer | flesh | 0.005 | <0.01 | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0442 | 17 | DEKI 6 MERCURY | deer | kidney | <0.005 | 0.44 | <0.03 | <0.1 | <0.3 | <0.05 | 29 | 77 |
| Wabauskang | A8F0749 | BJ0463 | 38 | DEKI 7 MERCURY | deer | kidney | 0.049 | 4.2 | <0.03 | <0.1 | 0.5 | <0.05 | 26 | 3.4 |
| Wabauskang | A8F0749 | BJ0428 | 1 | DELI 6 PESTICIDE | deer | liver | 0.12 | 0.73 | <0.03 | <0.1 | <0.3 | <0.05 | 28 | 4.1 |
| Wabauskang | A8F0749 | BJ0433 | 7 | DELI 5 MERCURY | deer | liver | 0.014 | 0.15 | <0.03 | <0.1 | <0.3 | <0.05 | 51 | 11 |
| Wabauskang | A8F0749 | BJ0454 | 28 | DELI 2 PESTICIDE | deer | liver | 0.008 | 0.41 | <0.03 | <0.1 | 2.1 | <0.05 | 40 | 44 |
| Wabauskang | A8F0749 | BJ0459 | 34 | DELI 3 PESTICIDE | deer | liver | 0.008 | 0.16 | <0.03 | <0.1 | <0.3 | <0.05 | 34 | 69 |
| Wabauskang | A8F0749 | BJ0461 | 36 | DELU 5 PESTICIDE | deer | lung | <0.005 | <0.01 | <0.03 | <0.1 | 0.3 | <0.05 | 16 | 1.7 |
| Wabauskang | A8F0749 | BJ0429 | 3 | DUFL 1 MERCURY | duck | flesh | 0.42 | <0.01 | 0.21 | <0.1 | 2.0 | <0.05 | 10 | 4.9 |
| Wabauskang | A8F0749 | BJ0436 | 11 | DUFL 1 PESTICIDE | duck | flesh | 0.57 | <0.01 | 0.32 | <0.1 | <0.3 | <0.05 | 12 | 5.6 |
| Wabauskang | A8F0749 | BJ0430 | 4 | LIFI 2 MERCURY | ling | flesh | 0.16 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0449 | 24 | MOFL 2 MERCURY | moose | flesh | <0.005 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0469 | 30 | MOFL 1 PEST | moose | flesh | <0.005 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0447 | 22 | MOLI 4 PESTICIDE | moose | liver | 0.006 | 1.5 | <0.03 | <0.1 | 13 | <0.05 | 21 | 100 |
| Wabauskang | A8F0749 | BJ0450 | 25 | MOLI 3 MERCURY | moose | liver | 0.007 | 1.6 | <0.03 | <0.1 | 0.3 | <0.05 | 24 | 100 |
| Wabauskang | A8F0749 | BJ0453 | 27 | MOTO 5 MERCURY | moose | tongue | <0.005 | <0.01 | <0.03 | <0.1 | 0.9 | <0.05 | 26 | 2.0 |
| Wabauskang | A8F0749 | BJ0458 | 33 | MOTO 2 MERCURY | moose | tongue | <0.005 | <0.01 | <0.03 | <0.1 | 0.5 | <0.05 | 23 | 2.0 |
| Wabauskang | A8F0749 | BJ0438 | 13 | MUFL 1 MERCURY | muskrat | flesh | 0.009 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0439 | 14 | MUFL 2 MERCURY | muskrat | flesh | 0.009 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0431 | 5 | PAFL 2 MERCURY | partride | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.6 | <0.05 | 5 | 0.7 |

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wabauskang | A8F0749 | BJ0435 | 10 | PAFL 3 MERCURY | partridge | flesh | 0.005 | - | - | - | - | - | - | - |
| Wabauskang | A8F0749 | BJ0432 | 6 | PAFL 4 MERCURY | partrige | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.4 | <0.05 | 5 | 0.7 |
| Grassy Narrows | A935224 | CB4542 | 19 | BEFL 1 | beaver | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.5 | <0.05 | 37 | 1.8 |
| Grassy Narrows | A935224 | CB4544 | 21 | BEHE 1 | beaver | heart | <0.005 | 0.01 | 0.61 | <0.1 | 0.5 | <0.05 | 19 | 4.5 |
| | | | | | | | | | | | | | | |
| Grassy Narrows | A930175 | BZ1088 | 24 | BEKI7 | beaver | kidney | - | 0.74 | <0.03 | <0.1 | 0.5 | <0.05 | 19 | 3.6 |
| Grassy Narrows | A930175 | BZ1090 | 26 | BEKI8 | beaver | kidney | 0.016 | 2.0 | <0.03 | <0.1 | 0.3 | <0.05 | 36 | 3.9 |
| Grassy Narrows | A935224 | CB4543 | 20 | BEKI 1 | beaver | kidney | 0.021 | 4.6 | 0.85 | <0.1 | 0.6 | <0.05 | 25 | 3.1 |
| Grassy Narrows | A930175 | BZ1087 | 23 | BELI8 | beaver | liver | - | 0.31 | <0.03 | <0.1 | 0.6 | <0.05 | 46 | 3.6 |
| Grassy Narrows | A930175 | BZ1089 | 25 | BELI15 | beaver | liver | 0.023 | 6.9 | <0.03 | <0.1 | 0.6 | <0.05 | 27 | 3.6 |
| Grassy Narrows | A930175 | BZ1085 | 21 | DEHE4 | deer | heart | - | 5.2 | <0.03 | <0.1 | 1.8 | 0.05 | 30 | 5.3 |
| Grassy Narrows | A930175 | BZ1084 | 20 | DEKI2 | deer | kidney | - | 2.0 | <0.03 | <0.1 | 0.7 | <0.05 | 27 | 3.7 |
| Grassy Narrows | A935224 | CB4536 | 13 | DEKI 6 | deer | kidney | - | 2.9 | <0.03 | <0.1 | 0.4 | <0.05 | 29 | 3.6 |
| Grassy Narrows | A930175 | BZ1078 | 14 | DELI2 | deer | liver | - | 0.38 | <0.03 | <0.1 | <0.3 | <0.05 | 48 | 54 |
| Grassy Narrows | A930175 | BZ1080 | 16 | DELI5 | deer | liver | - | 0.30 | <0.03 | <0.1 | 1.0 | <0.05 | 40 | 21 |
| Grassy Narrows | A930175 | BZ1083 | 19 | DELI4 | deer | liver | - | 0.54 | <0.03 | <0.1 | 0.9 | <0.05 | 42 | 110 |
| Grassy Narrows | A935224 | CB4537 | 14 | DELI 6 | deer | liver | - | <0.01 | <0.03 | <0.1 | 0.4 | <0.05 | 14 | 0.9 |
| Grassy Narrows | A930175 | BZ1096 | 32 | MALFL1 | mallard | flesh | 0.15 | - | - | - | - | | | |
| Grassy Narrows | A930175 | BZ1098 | 34 | MOKI7 | moose | kidney | - | 16 | <0.03 | <0.1 | <0.3 | 0.12 | 30 | 4.5 |
| Grassy Narrows | A935224 | CB4524 | 1 | MOKI 1 | moose | kidney | - | 8.2 | <0.03 | <0.1 | <0.3 | <0.05 | 26 | 4.7 |
| Grassy Narrows | A935224 | CB4530 | 7 | MOKI 3 | moose | kidney | - | 16 | <0.03 | <0.1 | 0.4 | <0.05 | 25 | 4.4 |
| Grassy Narrows | A930175 | BZ1092 | 28 | MOLI7 | moose | liver | - | 1.7 | <0.03 | <0.1 | 0.9 | <0.05 | 23 | 41 |
| Grassy Narrows | A930175 | BZ1094 | 30 | MOLI4 | moose | liver | - | 0.99 | <0.03 | <0.1 | 0.4 | <0.05 | 46 | 52 |
| Grassy Narrows | A935224 | CB4525 | 2 | MOLI 1 | moose | liver | - | 1.3 | <0.03 | <0.1 | 1.2 | <0.05 | 24 | 52 |
| Grassy Narrows | A935224 | CB4528 | 5 | MOLI 3 | moose | liver | - | 1.5 | <0.03 | <0.1 | <0.3 | <0.05 | 20 | 140 |
| Grassy Narrows | A930175 | BZ1095 | 31 | MUFL1 | muskrat | flesh | <0.005 | - | - | - | - | - | - | - |
| Grassy Narrows | A930175 | BZ1102 | 38 | OTFL1 | otter | flesh | 0.35 | - | - | - | - | - | - | - |
| Grassy Narrows | A930175 | BZ1103 | 39 | OTFL10 | otter | flesh | 1.0 | - | - | - | - | - | - | - |
| Grassy Narrows | A930175 | BZ1104 | 40 | OTFL7 | otter | flesh | 0.85 | - | - | - | - | - | - | - |
| Grassy Narrows | A935224 | CB4531 | 8 | OTFL 11 | otter | flesh | 1.7 | | | | | | | |

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grassy Narrows | A935224 | CB4532 | 9 | OTFL 12 | otter | flesh | 0.88 | - | - | - | - | - | - | - |
| Grassy Narrows | A935224 | CB4533 | 10 | OTFL 13 | otter | flesh | 1.1 | - | - | - | - | - | - | - |
| Grassy Narrows | A935224 | CB4534 | 11 | OTFL 14 | otter | flesh | 1.7 | - | - | - | - | - | - | - |
| Grassy Narrows | A930175 | BZ1105 | 41 | OTKI5 | otter | kidney | 1.7 | 0.11 | 0.04 | <0.1 | 1.7 | <0.05 | 19 | 4.6 |
| Grassy Narrows | A930175 | BZ1106 | 42 | OTLI5 | otter | liver | 2.3 | 0.04 | 0.03 | <0.1 | 0.5 | <0.05 | 21 | 8.3 |
| Grassy Narrows | A930175 | BZ1107 | 43 | OTLI4 | otter | liver | 2.4 | 0.12 | <0.03 | <0.1 | <0.3 | <0.05 | 21 | 26 |
| | | | | | | | | | | | | | | |
| Grassy Narrows | A930175 | BZ1065 | 1 | PAFL1 | partridge | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.3 | <0.05 | 5 | 0.8 |
| Grassy Narrows | A930175 | BZ1066 | 2 | PAFL4 | partridge | flesh | <0.005 | <0.01 | 0.04 | <0.1 | 0.6 | <0.05 | 5 | 1.2 |
| Grassy Narrows | A930175 | BZ1067 | 3 | PAFL12 | partridge | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 1.0 | <0.05 | 5 | 0.8 |
| Grassy Narrows | A930175 | BZ1068 | 4 | PAFL7 | partridge | flesh | <0.005 | 0.02 | <0.03 | <0.1 | 0.6 | <0.05 | 4 | 0.9 |
| Grassy Narrows | A930175 | BZ1069 | 5 | PAFL2 | partridge | flesh | <0.005 | 0.01 | 0.06 | <0.1 | 0.6 | <0.05 | 5 | 1.1 |
| Grassy Narrows | A930175 | BZ1070 | 6 | PAFL9 | partridge | flesh | <0.005 | <0.01 | 0.23 | <0.1 | 0.4 | <0.05 | 4 | 1.0 |
| Grassy Narrows | A930175 | BZ1071 | 7 | PAFL10 | partridge | flesh | <0.005 | <0.01 | 0.06 | <0.1 | 0.3 | <0.05 | 4 | 0.8 |
| Grassy Narrows | A930175 | BZ1072 | 8 | PAFL13 | partridge | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.4 | <0.05 | 4 | 0.9 |
| Grassy Narrows | A930175 | BZ1073 | 9 | PAFL11 | partridge | flesh | <0.005 | 0.03 | <0.03 | <0.1 | 0.5 | <0.05 | 5 | 0.8 |
| Grassy Narrows | A930175 | BZ1074 | 10 | PAFL8 | partridge | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.7 | <0.05 | 5 | 0.7 |
| Grassy Narrows | A930175 | BZ1075 | 11 | PAFL3 | partridge | flesh | <0.005 | <0.01 | <0.03 | <0.1 | 0.5 | <0.05 | 5 | 0.9 |
| Grassy Narrows | A935224 | CB4539 | 16 | PAFL 5 | partridge | flesh | <0.005 | 0.02 | <0.03 | <0.1 | <0.3 | <0.05 | 5 | 0.9 |
| Grassy Narrows | A935224 | CB4540 | 17 | PAFL 6 | partridge | flesh | 0.005 | - | - | - | - | - | - | - |
| Grassy Narrows | A930175 | BZ1097 | 33 | RGFL2 | roughed grouse | flesh | <0.005 | - | - | - | - | - | - | - |
| Grassy Narrows | A935224 | CB4541 | 18 | RGFL 3 | roughed grouse | flesh | <0.005 | <0.01 | 3.5 | <0.1 | 0.9 | <0.05 | 7 | 5.2 |
| | | | | | | | | | | | | | | |
| Whitedog | A968698 | CS4014 | 28 | BE1FL | beaver | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4015 | 29 | BE2FL | beaver | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4016 | 30 | BE3FL | beaver | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4017 | 31 | BE4FL | beaver | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4018 | 32 | BE5FL | beaver | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS3997 | 11 | DE8FL | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS3998 | 12 | DE9FL | deer | flesh | 0.012 | | | | | | | |

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whitedog | A968698 | CS4002 | 16 | DE10FL | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4004 | 18 | DE11FL | deer | flesh | 0.011 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4006 | 20 | DE12FL | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4007 | 21 | DE13FL | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4008 | 22 | DE14FL | deer | flesh | 0.072 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4011 | 25 | DE15FL | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4013 | 27 | DE16FL | deer | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3605 | 1 | DE 1 FL | deer | flesh | <0.005 | <0.01 | - | - | - | - | - | - |
| | | | | | | | | | | | | | | |
| Whitedog | A968627 | CS3609 | 5 | DE 2 FL | deer | flesh | <0.005 | 0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3613 | 9 | DE 3 FL | deer | flesh | 0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3617 | 13 | DE 4 FL | deer | flesh | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3621 | 17 | DE 5 FL | deer | flesh | <0.005 | 0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3625 | 21 | DE 6 FL | deer | flesh | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3629 | 25 | DE 7 FL | deer | flesh | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3995 | 9 | DE?HE1 | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3999 | 13 | DE?HE2 | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4005 | 19 | DE?HE3 | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4009 | 23 | DE?HE4 | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4012 | 26 | DE?HE5 | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3606 | 2 | DE 1 HE | deer | heart | 0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3610 | 6 | DE 2 HE | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3614 | 10 | DE 3 HE | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3618 | 14 | DE 4 HE | deer | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3622 | 18 | DE 5 HE | deer | heart | <0.005 | 0.02 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3626 | 22 | DE 6 HE | deer | heart | 0.006 | 0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3630 | 26 | DE 7 HE | deer | heart | 0.006 | 0.02 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4001 | 15 | DE?KI1 | deer | kidney | 0.18 | 6.9 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3608 | 4 | DE 1 KI | deer | kidney | 0.24 | 2.4 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3612 | 8 | DE 2 KI | deer | kidney | 0.47 | 7.4 | | | | | | |

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whitedog | A968627 | CS3616 | 12 | DE 3 KI | deer | kidney | 0.51 | 7.4 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3620 | 16 | DE 4 KI | deer | kidney | 0.86 | 18 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3624 | 20 | DE 5 KI | deer | kidney | 0.50 | 11 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3628 | 24 | DE 6 KI | deer | kidney | 0.64 | 12 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3632 | 28 | DE 7 KI | deer | kidney | 0.55 | 12 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3996 | 10 | DE?LI1 | deer | liver | 0.011 | 0.34 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4000 | 14 | DE?LI2 | deer | liver | 0.016 | 0.79 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4003 | 17 | DE?LI3 | deer | liver | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3607 | 3 | DE 1 LI | deer | liver | 0.009 | 0.21 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3611 | 7 | DE 2 LI | deer | liver | 0.018 | 1.4 | - | - | - | - | - | - |
| | | | | | | | | | | | | | | |
| Whitedog | A968627 | CS3615 | 11 | DE 3 LI | deer | liver | 0.018 | 1.5 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3619 | 15 | DE 4 LI | deer | liver | 0.018 | 1.7 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3623 | 19 | DE 5 LI | deer | liver | 0.014 | 1.1 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3627 | 23 | DE 6 LI | deer | liver | 0.016 | 1.6 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3631 | 27 | DE 7 LI | deer | liver | 0.017 | 1.6 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4010 | 24 | DE?TO1 | deer | tongue | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3645 | 41 | MA 1 FL | mallard | flesh | 0.034 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4019 | 33 | MAR4FL | marten | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3642 | 38 | MAR 1 FL | marten | flesh | 0.21 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3643 | 39 | MAR 2 FL | marten | flesh | 0.38 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3644 | 40 | MAR 3 FL | marten | flesh | 0.31 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4026 | 40 | MI1FL | mink | flesh | 4.4 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4027 | 41 | MI2FL | mink | flesh | 0.49 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS3987 | 1 | MO3FI | moose | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS3989 | 3 | MO4FL | moose | flesh | 0.008 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS3991 | 5 | MO5FL | moose | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3633 | 29 | MO 1 FL | moose | flesh | <0.005 | 0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3636 | 32 | MO 2 FL | moose | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS3988 | 2 | MO2HE1 | moose | heart | <0.005 | 0.02 | | | | | | |

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whitedog | A968627 | CS3634 | 30 | MO 1 HE | moose | heart | <0.005 | <0.01 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3637 | 33 | MO 2 HE | moose | heart | <0.005 | 0.01 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3990 | 4 | MO?KI2 | moose | kidney | 0.11 | 2.1 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3994 | 8 | MO?KI1 | moose | kidney | 0.017 | 15 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3635 | 31 | MO 1 KI | moose | kidney | 0.017 | 8.9 | - | - | - | - | - | - |
| Whitedog | A968627 | CS3638 | 34 | MO 2 KI | moose | kidney | 0.022 | 9.0 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3992 | 6 | MO?LI1 | moose | liver | 0.025 | 0.35 | - | - | - | - | - | - |
| Whitedog | A968698 | CS3993 | 7 | MO?TO1 | moose | tongue | <0.005 | 0.02 | - | - | - | - | - | - |
| Whitedog | A968698 | CS4031 | 45 | NP1FL | northern pike | flesh | 0.65 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4032 | 46 | NP2FL | northern pike | flesh | 0.27 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4033 | 47 | NP3FL | northern pike | flesh | 0.50 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4034 | 48 | NP4FL | northern pike | flesh | 0.55 | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | |
| Whitedog | A968698 | CS4035 | 49 | NP5FL | northern pike | flesh | 0.44 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4036 | 50 | NP6FL | northern pike | flesh | 0.57 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4037 | 51 | NP7FL | northern pike | flesh | 0.26 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4038 | 52 | NP8FL | northern pike | flesh | 0.43 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4039 | 53 | NP9FL | northern pike | flesh | 0.35 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4040 | 54 | NP10FL | northern pike | flesh | 0.43 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4030 | 44 | OT1FL | otter | flesh | 2.6 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4028 | 42 | PA1FL | partridge | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4041 | 55 | PI 1 FL | pickerel | flesh | 0.48 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4042 | 56 | PI 2 FL | pickerel | flesh | 0.48 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4043 | 57 | PI 3 FL | pickerel | flesh | 0.32 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4044 | 58 | PI 4 FL | pickerel | flesh | 0.47 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4045 | 59 | PI 5 FL | pickerel | flesh | 0.37 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4046 | 60 | PI 6 FL | pickerel | flesh | 0.89 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4047 | 61 | PI 7 FL | pickerel | flesh | 0.40 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4048 | 62 | PI 8 FL | pickerel | flesh | 0.33 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4049 | 63 | PI 9 FL | pickerel | flesh | 0.40 | | | | | | | |

| Community | Maxxam job # | Maxxam ID | Project sample # | Sample ID | Animal | Tissue | Mercury | Cadmium | Lead | Arsenic | Aluminum | Nickel | Zinc | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whitedog | A968698 | CS4050 | 64 | PI 10 FL | pickerel | flesh | 0.47 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4029 | 43 | RAB4FL | rabbit | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3639 | 35 | RAB 1 FL | rabbit | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3640 | 36 | RAB 2 FL | rabbit | flesh | 0.016 | - | - | - | - | - | - | - |
| Whitedog | A968627 | CS3641 | 37 | RAB 3 FL | rabbit | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4020 | 34 | RA1FL | racoon | flesh | 0.57 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4021 | 35 | RG1FL | ruffed grouse | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4022 | 36 | RG2FL | ruffed grouse | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4023 | 37 | RG3FL | ruffed grouse | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4024 | 38 | RG4FL | ruffed grouse | flesh | <0.005 | - | - | - | - | - | - | - |
| Whitedog | A968698 | CS4025 | 39 | RG5F1 | ruffed grouse | flesh | <0.005 | - | - | - | - | - | - | - |

Appendix C. Concentration of **other metals** in wild meat samples collected by the community of **Wabauskang First Nation.** Units are $\mu$g/g of tissue. "<" means less than reportable detection limit, which is indicated by value after this symbol.

| Maxxam job | Maxxam | Project | Sample ID | Animal | Tissue | Antimony | Barium | Beryllium | Bismuth | Boron | Calcium | Chromium | Cobalt | Iron | Magnesium | Manganese | Molybdenum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | |
| A8F0749 | BJ0443 | 18 | BELI 1 PESTICIDE | beaver | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | 0.033 | 120 | 150 | 3.3 | 0.29 |
| A8F0749 | BJ0465 | 40 | CG FLESH 2 MERCURY | canada | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 95 | <0.3 | 0.009 | 51 | 290 | 0.5 | <0.05 |
| A8F0749 | BJ0442 | 17 | DEKI 6 MERCURY | deer | kidney | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 67 | <0.3 | 0.063 | 130 | 140 | 3.1 | 0.60 |
| A8F0749 | BJ0463 | 38 | DEKI 7 MERCURY | deer | kidney | <0.05 | <0.3 | <0.05 | <0.05 | 0.5 | 68 | <0.3 | 0.091 | 38 | 140 | 1.7 | 0.12 |
| A8F0749 | BJ0428 | 1 | DELI 6 PESTICIDE | deer | liver | <0.05 | 0.3 | <0.05 | <0.05 | <0.5 | 91 | <0.3 | 0.043 | 56 | 150 | 1.4 | 0.33 |
| A8F0749 | BJ0433 | 7 | DELI 5 MERCURY | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 97 | <0.3 | 0.059 | 120 | 150 | 3.3 | 0.54 |
| A8F0749 | BJ0454 | 28 | DELI 2 PESTICIDE | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 54 | <0.3 | 0.072 | 84 | 180 | 3.4 | 0.41 |
| A8F0749 | BJ0459 | 34 | DELI 3 PESTICIDE | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | 0.069 | 170 | 150 | 3.3 | 0.71 |
| A8F0749 | BJ0461 | 36 | DELU 5 PESTICIDE | deer | lung | <0.05 | <0.3 | <0.05 | <0.05 | 0.6 | 120 | <0.3 | 0.007 | 150 | 150 | 0.3 | 0.06 |
| A8F0749 | BJ0429 | 3 | DUFL 1 MERCURY | duck | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 55 | <0.3 | 0.008 | 65 | 210 | 0.4 | <0.05 |
| A8F0749 | BJ0436 | 11 | DUFL 1 PESTICIDE | duck | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 52 | <0.3 | 0.009 | 75 | 250 | 0.5 | <0.05 |
| A8F0749 | BJ0447 | 22 | MOLI 4 PESTICIDE | moose | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 58 | <0.3 | 0.11 | 110 | 150 | 3.9 | 1.2 |
| A8F0749 | BJ0450 | 25 | MOLI 3 MERCURY | moose | liver | <0.05 | <0.3 | <0.05 | <0.05 | 0.5 | 56 | <0.3 | 0.12 | 100 | 180 | 4.2 | 1.3 |
| A8F0749 | BJ0453 | 27 | MOTO 5 MERCURY | moose | tongue | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 89 | <0.3 | 0.005 | 26 | 170 | 0.3 | <0.05 |
| A8F0749 | BJ0458 | 33 | MOTO 2 MERCURY | moose | tongue | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 86 | <0.3 | <0.00 | 47 | 170 | 0.3 | <0.05 |
| A8F0749 | BJ0431 | 5 | PAFL 2 MERCURY | partride | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | <0.00 | 6 | 310 | <0.3 | <0.05 |
| A8F0749 | BJ0432 | 6 | PAFL 4 MERCURY | partrige | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 120 | <0.3 | <0.00 | 5 | 290 | <0.3 | <0.05 |

Appendix C continued.

| Maxxam job | Maxxam ID | Project sample | Sample ID | Animal | Tissue | Phosphorus | Potassium | Selenium | Silver | Sodium | Strontium | Thallium | Tin | Titanium | Uranium | Vanadium |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | |
| A8F0749 | BJ0443 | 18 | BELI 1 PESTICIDE | beaver | liver | 2800 | 2800 | <0.2 | <0.05 | 890 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0465 | 40 | CG FLESH 2 | canada | flesh | 2900 | 3900 | <0.2 | <0.05 | 660 | <0.5 | 0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0442 | 17 | DEKI 6 MERCURY | deer | kidney | 3000 | 2300 | 0.2 | <0.05 | 950 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0463 | 38 | DEKI 7 MERCURY | deer | kidney | 2200 | 2500 | 1.0 | <0.05 | 1300 | <0.5 | 0.016 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0428 | 1 | DELI 6 PESTICIDE | deer | liver | 2400 | 2200 | 0.9 | <0.05 | 1500 | <0.5 | 0.007 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0433 | 7 | DELI 5 MERCURY | deer | liver | 3200 | 1800 | 0.3 | 0.07 | 1500 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0454 | 28 | DELI 2 PESTICIDE | deer | liver | 3600 | 2900 | 0.2 | <0.05 | 720 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0459 | 34 | DELI 3 PESTICIDE | deer | liver | 3100 | 2700 | 0.2 | <0.05 | 850 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0461 | 36 | DELU 5 PESTICIDE | deer | lung | 2700 | 2900 | <0.2 | <0.05 | 1500 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0429 | 3 | DUFL 1 MERCURY | duck | flesh | 2100 | 2600 | 0.2 | <0.05 | 590 | <0.5 | 0.004 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0436 | 11 | DUFL 1 PESTICIDE | duck | flesh | 2600 | 3000 | 0.2 | <0.05 | 540 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0447 | 22 | MOLI 4 PESTICIDE | moose | liver | 3600 | 2700 | <0.2 | <0.05 | 790 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0450 | 25 | MOLI 3 MERCURY | moose | liver | 4000 | 3300 | <0.2 | <0.05 | 700 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0453 | 27 | MOTO 5 MERCURY | moose | tongue | 1700 | 2700 | <0.2 | <0.05 | 1200 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0458 | 33 | MOTO 2 MERCURY | moose | tongue | 1700 | 2700 | <0.2 | <0.05 | 1200 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0431 | 5 | PAFL 2 MERCURY | partride | flesh | 2500 | 3300 | <0.2 | <0.05 | 590 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |
| A8F0749 | BJ0432 | 6 | PAFL 4 MERCURY | partrige | flesh | 2300 | 3000 | <0.2 | <0.05 | 550 | <0.5 | <0.003 | <0.3 | <0.5 | <0.005 | <0.05 |

Appendix D. Concentration of **other metals** in wild meat samples collected by the community of **Grassy Narrows First Nation.** Units are $\mu$g/g of tissue. "<" means less than reportable detection limit, which is indicated by value after this symbol.

| Maxxam job | Maxxam | Project sample | Sample ID | Animal | Tissue | Antimony | Barium | Beryllium | Bismuth | Boron | Calcium | Chromium | Cobalt | Iron | Magnesium | Manganese | Molybdenum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | |
| A935224 | CB4542 | 19 | BEFL 1 | beaver | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 63 | <0.3 | <0.005 | 60 | 250 | <0.3 | <0.05 |
| A935224 | CB4544 | 21 | BEHE 1 | beaver | heart | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 94 | <0.3 | 0.024 | 96 | 170 | 0.4 | <0.05 |
| A935224 | CB4543 | 20 | BEKI 1 | beaver | kidney | <0.05 | 0.9 | <0.05 | <0.05 | <0.5 | 160 | <0.3 | 0.081 | 51 | 160 | 1.8 | 0.11 |
| A930175 | BZ1088 | 24 | BEKI7 | beaver | kidney | <0.05 | 0.5 | <0.05 | <0.05 | 0.5 | 130 | <0.3 | 0.12 | 53 | 150 | 1.3 | 0.15 |
| A930175 | BZ1090 | 26 | BEKI8 | beaver | kidney | <0.05 | 0.7 | <0.05 | <0.05 | 0.5 | 120 | <0.3 | 0.044 | 52 | 160 | 2.6 | 0.10 |
| A930175 | BZ1087 | 23 | BELI8 | beaver | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 72 | <0.3 | 0.062 | 220 | 180 | 3.0 | 0.27 |
| A930175 | BZ1089 | 25 | BELI15 | beaver | liver | <0.05 | 1.3 | <0.05 | <0.05 | <0.5 | 150 | <0.3 | 0.089 | 76 | 170 | 4.5 | 0.15 |
| A930175 | BZ1085 | 21 | DEHE4 | deer | heart | <0.05 | 0.4 | <0.05 | <0.05 | <0.5 | 89 | <0.3 | 0.045 | 66 | 180 | 1.9 | 0.37 |
| A935224 | CB4536 | 13 | DEKI 6 | deer | kidney | <0.05 | 0.4 | <0.05 | <0.05 | <0.5 | 96 | <0.3 | 0.058 | 73 | 180 | 1.2 | 0.32 |
| A930175 | BZ1084 | 20 | DEKI2 | deer | kidney | <0.05 | 0.4 | <0.05 | <0.05 | <0.5 | 86 | <0.3 | 0.019 | 20 | 140 | 1.6 | 0.25 |
| A935224 | CB4537 | 14 | DELI 6 | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | <0.005 | 900 | <100 | <0.3 | <0.05 |
| A930175 | BZ1078 | 14 | DELI2 | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 53 | <0.3 | 0.054 | 98 | 190 | 5.2 | 0.84 |
| A930175 | BZ1080 | 16 | DELI5 | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | 0.5 | 58 | <0.3 | 0.077 | 73 | 190 | 4.1 | 0.72 |
| A930175 | BZ1083 | 19 | DELI4 | deer | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 66 | <0.3 | 0.093 | 120 | 170 | 4.6 | 0.78 |
| A935224 | CB4524 | 1 | MOKI 1 | moose | kidney | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 110 | <0.3 | 0.040 | 38 | 160 | 2.9 | 0.49 |
| A935224 | CB4530 | 7 | MOKI 3 | moose | kidney | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 110 | <0.3 | 0.037 | 130 | 140 | 3.0 | 0.30 |
| A930175 | BZ1098 | 34 | MOKI7 | moose | kidney | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 120 | <0.3 | 0.048 | 77 | 160 | 3.8 | 0.47 |
| A935224 | CB4525 | 2 | MOLI 1 | moose | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 63 | <0.3 | 0.11 | 100 | 170 | 3.8 | 1.2 |
| A935224 | CB4528 | 5 | MOLI 3 | moose | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 69 | <0.3 | 0.11 | 190 | 130 | 2.9 | 1.1 |
| A930175 | BZ1092 | 28 | MOLI7 | moose | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 75 | <0.3 | 0.11 | 220 | 160 | 3.6 | 1.5 |
| A930175 | BZ1094 | 30 | MOLI4 | moose | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 76 | <0.3 | 0.063 | 260 | 140 | 2.5 | 1.1 |
| A930175 | BZ1105 | 41 | OTKI5 | otter | kidney | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 88 | <0.3 | 0.026 | 190 | 140 | 0.7 | 0.18 |
| A930175 | BZ1106 | 42 | OTLI5 | otter | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 76 | <0.3 | 0.030 | 280 | 200 | 5.4 | 0.52 |
| A930175 | BZ1107 | 43 | OTLI4 | otter | liver | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 74 | <0.3 | 0.025 | 280 | 170 | 3.4 | 0.58 |
| A935224 | CB4539 | 16 | PAFL 5 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 100 | <0.3 | <0.005 | 47 | 320 | <0.3 | <0.05 |
| A930175 | BZ1065 | 1 | PAFL1 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | 0.006 | 6 | 360 | <0.3 | 0.27 |

| Appendix D continued. | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A930175 | BZ1066 | 2 | PAFL4 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | <0.005 | 6 | 330 | <0.3 | <0.05 |
| A930175 | BZ1067 | 3 | PAFL12 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 54 | <0.3 | <0.005 | 8 | 330 | <0.3 | <0.05 |
| A930175 | BZ1068 | 4 | PAFL7 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 65 | <0.3 | 0.006 | 5 | 350 | <0.3 | <0.05 |
| A930175 | BZ1069 | 5 | PAFL2 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | <0.3 | <0.005 | 5 | 340 | <0.3 | <0.05 |
| A930175 | BZ1070 | 6 | PAFL9 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | 0.7 | 50 | <0.3 | 0.008 | 8 | 300 | <0.3 | <0.05 |
| A930175 | BZ1071 | 7 | PAFL10 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | 0.9 | <50 | <0.3 | <0.005 | 5 | 320 | <0.3 | <0.05 |
| A930175 | BZ1072 | 8 | PAFL13 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | 0.7 | 51 | <0.3 | <0.005 | 5 | 320 | <0.3 | <0.05 |
| A930175 | BZ1073 | 9 | PAFL11 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | 0.9 | <50 | <0.3 | <0.005 | 5 | 320 | <0.3 | <0.05 |
| A930175 | BZ1074 | 10 | PAFL8 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | <50 | 0.7 | <0.005 | 12 | 360 | <0.3 | <0.05 |
| A930175 | BZ1075 | 11 | PAFL3 | partridge | flesh | <0.05 | <0.3 | <0.05 | <0.05 | <0.5 | 69 | <0.3 | <0.005 | 6 | 370 | <0.3 | <0.05 |
| A935224 | CB4541 | 18 | RGFL 3 | roughed | flesh | 0.10 | <0.3 | <0.05 | <0.05 | <0.5 | 75 | <0.3 | <0.005 | 44 | 340 | 0.4 | <0.05 |

Appendix E. Concentration of **organochlorine pesticides** in tissue samples collected by hunters and trappers from **Wabauskang First Nation**. Units are µg/g. "<" means less than reportable detection limit, which is indicated by value after "<" symbol.

| Maxxam job # | A8F0749 | A8F0749 | A8F0749 | A8F0749 | A8F0749 | A8F0749 | A8F0749 | A8F0749 | A8F0749 |
|---|---|---|---|---|---|---|---|---|---|
| Maxxam ID | BJ0440 | BJ0428 | BJ0433 | BJ0454 | BJ0459 | BJ0461 | BJ0447 | BJ0450 | BJ0430 |
| Project sample # | 15 | 1 | 7 | 28 | 34 | 36 | 22 | 25 | 4 |
| Sample ID | BELI 1 6 | DELI 6 PESTICIDE | DELI 5 | DELI 2 | DELI 3 | DELU 5 | MOLI 4 | MOLI 3 | LIFI 2 |
| Animal | beaver | deer | deer | deer | deer | deer | moose | moose | ling |
| Tissue | liver | liver | liver | liver | liver | lung | liver | liver | flesh |
| | | | | | | | | | |
| Aldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| a-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| b-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| d-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| a-Chlordane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| g-Chlordane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDD | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDD | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDT | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDT | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Dieldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan I | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan II | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan sulfate | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin aldehyde | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor epoxide | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Lindane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Methoxychlor | <0.02 | <0.02 | <0.02 | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Mirex | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Octachlorostyrene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Total PCB | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1016 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1221 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1232 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1242 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1248 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1254 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1260 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Toxaphene | <0.08 | <0.08 | <0.08 | <0.1 | <0.2 | <0.4 | <0.08 | <0.2 | <0.08 |

Appendix F. Concentration of **organochlorine pesticides** in tissue samples collected by hunters and trappers from **Grassy Narrows First Nation**. Units are *µ*g/g. "<" means less than reportable detection limit, which is indicated by value after "<" symbol.

| Maxxam job number | A935224 | A935224 | A930175 | A930175 | A935224 | A930175 | A930175 | A935224 | A935224 | A935224 | A935224 | A930175 | A930175 | A930175 | A930175 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam ID | CB4542 | CB4544 | BZ1088 | BZ1090 | CB4543 | BZ1087 | BZ1089 | CB4535 | CB4538 | CB4536 | CB4537 | BZ1083 | BZ1078 | BZ1080 | BZ1076 |
| Project sample # | BEFL 1 | BEHE 1 | BEKI7 | BEKI8 | BEKI 1 | BELI8 | BELI15 | DEFL 6 | DEHE 6 | DEKI 6 | DELI 6 | DELI4 | DELI2 | DELI5 | HMFL1 |
| Sample ID | 19 | 21 | 24 | 26 | 20 | 23 | 25 | 12 | 15 | 13 | 14 | 19 | 14 | 16 | 12 |
| Animal | beaver | beaver | beaver | beaver | beaver | beaver | beaver | deer | deer | deer | deer | deer | deer | deer | hooded merganser |
| Tissue | flesh | heart | kidney | kidney | kidney | liver | liver | flesh | heart | kidney | liver | liver | liver | liver | flesh |
| | | | | | | | | | | | | | | | |
| Aroclor 1262 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Aroclor 1268 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Aldrin | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| a-BHC | <0.02 | <0.002 | <0.002 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| b-BHC | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| d-BHC | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 |
| a-Chlordane | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| g-Chlordane | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 |
| Chlordane (Total) | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| o,p-DDD | <0.02 | <0.002 | <0.002 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.006 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| p,p-DDD | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 |
| o,p-DDD + p,p-DDD | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.003 | <0.002 | <0.006 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| o,p-DDE | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | 0.008 |
| o,p-DDE + p,p-DDE | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.008 |
| o,p-DDT | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| p,p-DDT | <0.002 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDT + p,p-DDT | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| DDT+ Metabolites | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.003 | <0.002 | <0.006 | <0.002 | <0.002 | <0.002 | <0.002 | 0.008 |
| Dieldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| Endosulfan I | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Endosulfan II | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| Endosulfan sulfate | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 |
| Total Endosulfan | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Endrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 |
| Endrin aldehyde | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin ketone | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.004 ( 1 ) |
| Heptachlor | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor epoxide | <0.002 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.002 | <0.002 |
| Hexachlorobenzene | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Lindane | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 |
| Methoxychlor | <0.02 | <0.008 | <0.02 | <0.008 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.008 |
| Mirex | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 |
| Octachlorostyrene | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 |
| Total PCB | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1016 | <0.03 | <0.02 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.02 |
| Aroclor 1221 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1232 | <0.03 | <0.02 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.02 |
| Aroclor 1242 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1248 | <0.03 | <0.02 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.02 |
| Aroclor 1254 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1260 | <0.03 | <0.02 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.02 |
| Toxaphene | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 |

Appendix F continued.

| Maxxam job number | A935224 | A935224 | A935224 | A930175 | A930175 | A935224 | A935224 | A935224 | A935224 | A935224 | A935224 | A930175 | A930175 | A930175 | A935224 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam ID | CB4527 | CB4529 | CB4530 | BZ1092 | BZ1094 | CB4525 | CB4528 | CB4531 | CB4532 | CB4533 | CB4534 | BZ1105 | BZ1106 | BZ1107 | CB4541 |
| Project sample # | MOFA 3 | MOFL 3 | MOKI 3 | MOLI7 | MOLI4 | MOLI 1 | MOLI 3 | OTFL 11 | OTFL 12 | OTFL 13 | OTFL 14 | OTKI5 | OTLI5 | OTLI4 | RGFL 3 |
| Sample ID | 4 | 6 | 7 | 28 | 30 | 2 | 5 | 8 | 9 | 10 | 11 | 41 | 42 | 43 | 18 |
| Animal | moose | moose | moose | moose | moose | moose | moose | otter | otter | otter | otter | otter | otter | otter | roughed grouse |
| Tissue | fat | flesh | kidney | liver | liver | liver | liver | flesh | flesh | flesh | flesh | kidney | liver | liver | flesh |
| | | | | | | | | | | | | | | | |
| Aroclor 1262 | <0.4 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.08 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Aroclor 1268 | <0.4 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.08 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Aldrin | <0.05 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.002 |
| a-BHC | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.003 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.02 |
| b-BHC | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.003 | <0.02 | <0.02 | <0.02 | <0.002 |
| d-BHC | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.01 | <0.005 | <0.002 | <0.002 | <0.002 | <0.02 |
| a-Chlordane | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 |
| g-Chlordane | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.02 |
| Chlordane (Total) | <0.05 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.003 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| o,p-DDD | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.004 | <0.01 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 |
| p,p-DDD | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.003 | <0.002 | <0.002 | <0.02 | <0.002 |
| o,p-DDD + p,p-DDD | <0.05 | <0.003 | <0.003 | <0.002 | <0.002 | <0.002 | <0.002 | <0.004 | <0.004 | <0.01 | <0.003 | <0.002 | <0.002 | <0.002 | <0.002 |
| o,p-DDE | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 |
| p,p-DDE | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.01 | <0.002 | <0.002 | <0.002 | <0.02 | <0.002 |
| o,p-DDE + p,p-DDE | <0.05 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.003 | <0.004 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| o,p-DDT | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.01 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 |
| p,p-DDT | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.01 | <0.003 | <0.002 | <0.002 | <0.02 | <0.002 |
| o,p-DDT + p,p-DDT | <0.05 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.01 | <0.003 | <0.002 | <0.002 | <0.002 | <0.002 |
| DDT+ Metabolites | <0.05 | <0.003 | <0.003 | <0.002 | <0.002 | <0.002 | <0.002 | <0.004 | <0.004 | <0.01 | <0.003 | <0.002 | <0.002 | <0.002 | <0.002 |
| Dieldrin | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.04 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan I | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Endosulfan II | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.01 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Endosulfan sulfate | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Total Endosulfan | <0.05 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Endrin | <0.05 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.01 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin aldehyde | <0.05 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Endrin ketone | <0.05 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Heptachlor | <0.05 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor epoxide | <0.05 | <0.02 | <0.002 | <0.002 | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Hexachlorobenzene | <0.05 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.003 | <0.002 | <0.003 | <0.01 | <0.003 | <0.002 | <0.002 | <0.002 | <0.002 |
| Lindane | <0.05 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 |
| Methoxychlor | <0.2 | <0.02 | <0.02 | <0.008 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.04 | <0.008 | <0.008 | <0.008 | <0.008 | <0.02 |
| Mirex | <0.05 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.002 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.002 |
| Octachlorostyrene | <0.05 | <0.02 | <0.02 | <0.002 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 | <0.02 |
| Total PCB | <0.8 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.2 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1016 | <0.4 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.03 | <0.02 | <0.08 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 |
| Aroclor 1221 | <0.8 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.08 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1232 | <0.4 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.03 | <0.02 | <0.08 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 |
| Aroclor 1242 | <0.4 | <0.02 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.08 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 |
| Aroclor 1248 | <0.4 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.03 | <0.02 | <0.08 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 |
| Aroclor 1254 | <0.4 | <0.02 | <0.03 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 | <0.03 | <0.08 | <0.03 | <0.03 | <0.02 | <0.03 | <0.03 |
| Aroclor 1260 | <0.4 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.03 | <0.02 | <0.08 | <0.02 | <0.02 | <0.02 | <0.03 | <0.02 |
| Toxaphene | <2 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.4 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 |

Appendix G. Concentration of **organochlorine pesticides** in tissue samples collected by hunters and trappers from **Whitedog Independent Nation**. Units are µg/g. "<" means less than reportable detection limit, which is indicated by value after "<" symbol.

| Maxxam job number | A968627 | A968627 | A968627 | A968627 | A968627 | A968627 | A968627 | A968627 | A968627 | A968698 | A968698 | A968698 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam ID | CS3605 | CS3606 | CS3608 | CS3607 | CS3611 | CS3615 | CS3619 | CS3627 | CS3631 | CS3992 | CS3996 | CS4000 |
| Project sample # | 1 | 2 | 4 | 3 | 7 | 11 | 15 | 23 | 27 | 6 | 10 | 14 |
| Sample ID | DE 1 FL | DE 1 HE | DE 1 KI | DE 1 LI | DE 2 LI | DE 3 LI | DE 4 LI | DE 6 LI | DE 7 LI | MO?LI1 | DE?LI1 | DE?LI2 |
| Animal | deer | deer | deer | deer | deer | deer | deer | deer | deer | moose | deer | deer |
| Tissue | flesh | heart | kidney | liver | liver | liver | liver | liver | liver | liver | liver | liver |
| | | | | | | | | | | | | |
| Aldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| a-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| b-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.1 | <0.08 | <0.02 | <0.02 | <0.02 |
| d-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| a-Chlordane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| g-Chlordane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDD | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDD | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDT | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDT | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Dieldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan I | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan II | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.02 |
| Endosulfan sulfate | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.02 |
| Endrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin aldehyde | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.02 | <0.02 | <0.02 |
| Heptachlor | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor epoxide | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lindane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Methoxychlor | <0.1 | <0.06 | <0.06 | <0.06 | <0.1 | <0.06 | <0.09 | <0.06 | <0.1 | <0.02 | <0.02 | <0.02 |
| Mirex | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Octachlorostyrene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Total PCB | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1016 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1221 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1232 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1242 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1248 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1254 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1260 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Toxaphene | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 |

Appendix G continued.

| Maxxam job number | A968698 | A968698 | A968698 | A968698 | A968698 | A968698 | A968698 | A968698 | A968698 | A968698 | A968698 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam ID | CS4031 | CS4032 | CS4033 | CS4034 | CS4035 | CS4030 | CS4041 | CS4042 | CS4043 | CS4044 | CS4045 |
| Project sample # | 45 | 46 | 47 | 48 | 49 | 44 | 55 | 56 | 57 | 58 | 59 |
| Sample ID | NP1FL | NP2FL | NP3FL | NP4FL | NP5FL | OT1FL | PI 1 FL | PI 2 FL | PI 3 FL | PI 4 FL | PI 5 FL |
| Animal | northern pike | northern pike | northern pike | northern pike | northern pike | otter | pickerel | pickerel | pickerel | pickerel | pickerel |
| Tissue | flesh | flesh | flesh | flesh | flesh | flesh | flesh | flesh | flesh | flesh | flesh |
| | | | | | | | | | | | |
| Aldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| a-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| b-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| d-BHC | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| a-Chlordane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| g-Chlordane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDD | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDD | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDE | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o,p-DDT | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| p,p-DDT | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Dieldrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan I | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan II | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endosulfan sulfate | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Endrin aldehyde | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Heptachlor epoxide | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Lindane | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Methoxychlor | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mirex | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Octachlorostyrene | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Total PCB | 0.06 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1016 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1221 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1232 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1242 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1248 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1254 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Aroclor 1260 | 0.06 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Toxaphene | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 |

Appendix H. **Dioxins and Furans** in tissue samples collect by the hunters and trappers of **Grassy Narrows First Nation**. Units are in pg/g (= ppt).

| Maxxam ID | | BZ1102 | | BZ1103 | | BZ1104 | | CB4531 | | CB4532 | | CB4533 | | CB4534 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam Job # | | A930175 | | A930175 | | A930175 | | A935224 | | A935224 | | A935224 | | A935224 | |
| Animal | | Otter | | Otter | | Otter | | Otter | | Otter | | Otter | | Otter | |
| Tissue | | flesh | | flesh | | flesh | | flesh | | flesh | | flesh | | flesh | |
| | TEF (2005 WHO) | OTFL1 | TEQ(DL) | OTFL10 | TEQ(DL) | OTFL7 | TEQ(DL) | OTFL 11 | TEQ(DL) | OTFL 12 | TEQ(DL) | OTFL 13 | TEQ(DL) | OTFL 14 | TEQ(DL) |
| **Dioxins** | | | | | | | | | | | | | | | |
| 2,3,7,8-Tetra CDD * | 1.00 | <0.128 | 0.128 | <0.135 | 0.135 | <0.114 | 0.114 | <0.124 | 0.124 | <0.095 | 0.095 | <0.118 | 0.118 | <0.083 | 0.083 |
| 1,2,3,7,8-Penta CDD | 1.00 | <0.113 | 0.113 | <0.095 | 0.095 | <0.117 | 0.117 | <0.123 | 0.123 | <0.119 | 0.119 | <0.169 | 0.169 | <0.095 | 0.095 |
| 1,2,3,4,7,8-Hexa CDD | 0.100 | <0.103 | 0.010 | <0.098 | 0.010 | <0.087 | 0.009 | <0.103 | 0.010 | <0.104 | 0.010 | <0.106 | 0.011 | <0.082 | 0.008 |
| 1,2,3,6,7,8-Hexa CDD | 0.100 | <0.110 | 0.011 | 0.157 | 0.016 | <0.092 | 0.009 | <0.109 | 0.011 | <0.110 | 0.011 | 0.168 | 0.017 | 0.146 | 0.015 |
| 1,2,3,7,8,9-Hexa CDD | 0.100 | <0.107 | 0.011 | <0.101 | 0.010 | <0.0894 | 0.009 | <0.106 | 0.011 | <0.107 | 0.011 | <0.109 | 0.011 | 0.107 | 0.011 |
| 1,2,3,4,6,7,8-Hepta CDD | 0.0100 | 0.257 | 0.003 | 0.361 | 0.004 | 0.264 | 0.003 | 0.265 | 0.003 | 0.304 | 0.003 | 0.386 | 0.004 | 0.342 | 0.003 |
| Octa CDD | 0.000300 | 0.794 | 0.000 | 0.738 | 0.000 | 0.752 | 0.000 | 0.604 | 0.000 | 0.706 | 0.000 | 0.731 | 0.000 | 1.020 | 0.000 |
| | | | | | | | | | | | | | | | |
| **Furans** | | | | | | | | | | | | | | | |
| 2,3,7,8-Tetra CDF ** | 0.100 | <0.099 | 0.010 | <0.115 | 0.012 | <0.112 | 0.011 | <0.121 | 0.012 | <0.122 | 0.012 | <0.101 | 0.010 | <0.095 | 0.010 |
| 1,2,3,7,8-Penta CDF | 0.0300 | 0.157 | 0.005 | <0.124 | 0.004 | <0.091 | 0.003 | <0.136 | 0.004 | <0.123 | 0.004 | <0.130 | 0.004 | 0.172 | 0.005 |
| 2,3,4,7,8-Penta CDF | 0.300 | <0.131 | 0.039 | 0.136 | 0.041 | 0.099 | 0.030 | <0.129 | 0.039 | 0.129 | 0.039 | <0.123 | 0.037 | 0.154 | 0.046 |
| 1,2,3,4,7,8-Hexa CDF | 0.100 | 0.132 | 0.013 | 0.174 | 0.017 | <0.125 | 0.013 | 0.116 | 0.012 | 0.163 | 0.016 | 0.168 | 0.017 | 0.183 | 0.018 |
| 1,2,3,6,7,8-Hexa CDF | 0.100 | 0.131 | 0.013 | 0.135 | 0.014 | <0.134 | 0.013 | 0.113 | 0.011 | <0.138 | 0.014 | <0.138 | 0.014 | 0.188 | 0.019 |
| 2,3,4,6,7,8-Hexa CDF | 0.100 | <0.096 | 0.010 | <0.114 | 0.011 | <0.127 | 0.013 | <0.106 | 0.011 | <0.121 | 0.012 | <0.130 | 0.013 | 0.100 | 0.010 |
| 1,2,3,7,8,9-Hexa CDF | 0.100 | <0.096 | 0.010 | <0.114 | 0.011 | <0.127 | 0.013 | <0.106 | 0.011 | <0.121 | 0.012 | <0.131 | 0.013 | 0.140 | 0.014 |
| 1,2,3,4,6,7,8-Hepta CDF | 0.0100 | <0.154 | 0.002 | <0.389 | 0.004 | <0.199 | 0.002 | <0.150 | 0.002 | <0.193 | 0.002 | <0.166 | 0.002 | <0.221 | 0.002 |
| 1,2,3,4,7,8,9-Hepta CDF | 0.0100 | <0.122 | 0.001 | <0.099 | 0.001 | <0.102 | 0.001 | <0.112 | 0.001 | <0.111 | 0.001 | <0.108 | 0.001 | 0.191 | 0.002 |
| Octa CDF | 0.000300 | 0.230 | 0.000 | 0.274 | 0.000 | 0.224 | 0.000 | 0.216 | 0.000 | 0.267 | 0.000 | 0.184 | 0.000 | 0.363 | 0.000 |
| | | | | | | | | | | | | | | | |
| TOTAL TOXIC EQUIVALENCY | | | 0.378 | | 0.384 | | 0.359 | | 0.383 | | 0.361 | | 0.440 | | 0.342 |

## Appendix H Continued

* CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
"<" means less than the estimated detection limit
EDL = Estimated Detection Limit
TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
TEQ (DL) values are calculated from the value of the EDL where "<" is reported.
WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

Appendix I. **Dioxins and Furans** in tissue samples collect by the hunters and trappers of **Whitedog Independent Nation**. Units are in pg/g (= ppt).

| Maxxam ID | | CS4030 | | CS4031 | | CS4032 | | CS4033 | | CS4034 | | CS4035 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam Job # | | A968698 | | A968698 | | A968698 | | A968698 | | A968698 | | A968698 | |
| Animal | | otter | | northern pike | | northern pike | | northern pike | | northern pike | | northern pike | |
| Tissue | | flesh | | flesh | | flesh | | flesh | | flesh | | flesh | |
| | **TEF (2005 WHO)** | **OT1FL** | **TEQ(DL)** | **NP1FL** | **TEQ(DL)** | **NP2FL** | **TEQ(DL)** | **NP3FL** | **TEQ(DL)** | **NP4FL** | **TEQ(DL)** | **NP5FL** | **TEQ(DL)** |
| **Dioxins** | | | | | | | | | | | | | |
| 2,3,7,8-Tetra CDD * | 1.00 | <0.182 | 0.182 | <0.189 | 0.189 | <0.211 | 0.211 | <0.135 | 0.135 | <0.156 | 0.156 | <0.185 | 0.185 |
| 1,2,3,7,8-Penta CDD | 1.00 | 0.219 | 0.219 | 0.977 | 0.977 | 0.471 | 0.471 | <0.225 | 0.225 | 0.397 | 0.397 | 0.532 | 0.532 |
| 1,2,3,4,7,8-Hexa CDD | 0.100 | <0.109 | 0.011 | <0.143 | 0.014 | <0.153 | 0.015 | <0.161 | 0.016 | <0.154 | 0.015 | <0.139 | 0.014 |
| 1,2,3,6,7,8-Hexa CDD | 0.100 | 0.208 | 0.021 | 1.020 | 0.102 | 0.248 | 0.025 | 0.345 | 0.035 | 0.336 | 0.034 | 0.553 | 0.055 |
| 1,2,3,7,8,9-Hexa CDD | 0.100 | <0.112 | 0.011 | <0.148 | 0.015 | <0.158 | 0.016 | <0.166 | 0.017 | <0.159 | 0.016 | <0.143 | 0.014 |
| 1,2,3,4,6,7,8-Hepta CDD | 0.0100 | 0.753 | 0.008 | 1.580 | 0.016 | 0.812 | 0.008 | 0.921 | 0.009 | 0.726 | 0.007 | 0.818 | 0.008 |
| Octa CDD | 0.000300 | 2.910 | 0.001 | 37.700 | 0.011 | 6.730 | 0.002 | 8.190 | 0.002 | 11.200 | 0.003 | 13.400 | 0.004 |
| | | | | | | | | | | | | | |
| **Furans** | | | | | | | | | | | | | |
| 2,3,7,8-Tetra CDF ** | 0.100 | <0.160 | 0.016 | 1.320 | 0.132 | 0.254 | 0.025 | 0.635 | 0.064 | 0.373 | 0.037 | 0.708 | 0.071 |
| 1,2,3,7,8-Penta CDF | 0.0300 | <0.174 | 0.005 | <2.34 | 0.070 | <0.511 | 0.015 | <0.865 | 0.026 | <0.624 | 0.019 | <0.738 | 0.022 |
| 2,3,4,7,8-Penta CDF | 0.300 | <0.165 | 0.050 | 0.494 | 0.148 | <0.171 | 0.051 | 0.229 | 0.069 | <0.152 | 0.046 | 0.262 | 0.079 |
| 1,2,3,4,7,8-Hexa CDF | 0.100 | <0.137 | 0.014 | <0.161 | 0.016 | <0.123 | 0.012 | <0.138 | 0.014 | <0.125 | 0.013 | <0.108 | 0.011 |
| 1,2,3,6,7,8-Hexa CDF | 0.100 | <0.585 | 0.059 | <15.0 | 1.500 | <1.74 | 0.174 | <3.84 | 0.384 | <3.06 | 0.306 | <3.97 | 0.397 |
| 2,3,4,6,7,8-Hexa CDF | 0.100 | <0.139 | 0.014 | <0.164 | 0.016 | <0.125 | 0.013 | <0.166 | 0.017 | <0.128 | 0.013 | 0.111 | 0.011 |
| 1,2,3,7,8,9-Hexa CDF | 0.100 | <0.140 | 0.014 | <0.164 | 0.016 | <0.126 | 0.013 | <0.118 | 0.012 | <0.128 | 0.013 | <0.111 | 0.011 |
| 1,2,3,4,6,7,8-Hepta CDF | 0.0100 | <0.232 | 0.002 | <1.92 | 0.019 | <0.546 | 0.005 | <0.701 | 0.007 | <0.687 | 0.007 | <1.04 | 0.010 |
| 1,2,3,4,7,8,9-Hepta CDF | 0.0100 | <0.143 | 0.001 | <0.158 | 0.002 | <0.166 | 0.002 | <0.197 | 0.002 | <0.142 | 0.001 | <0.141 | 0.001 |
| Octa CDF | 0.000300 | <0.209 | 0.000 | <0.378 | 0.000 | 0.226 | 0.000 | 0.272 | 0.000 | 0.237 | 0.000 | 0.242 | 0.000 |
| | | | | | | | | | | | | | |
| TOTAL TOXIC EQUIVALENCY | | | 0.627 | | 3.24 | | 1.06 | | 1.03 | | 1.08 | | 1.43 |

Appendix I continued.

* CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
"<" means less than the estimated detection
limit
EDL = Estimated Detection Limit
TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
TEQ (DL) values are calculated from the value of the EDL where "<" is reported.
WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

Appendix I continued.

| Maxxam ID | | CS4041 | | CS4042 | | CS4043 | | CS4044 | | CS4045 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxxam Job # | | A968698 | | A968698 | | A968698 | | A968698 | | A968698 | |
| Animal | | pickerel | | pickerel | | pickerel | | pickerel | | pickerel | |
| Tissue | | flesh | | flesh | | flesh | | flesh | | flesh | |
| | **TEF (2005 WHO)** | **PI 1 FL** | **TEQ(DL)** | **PI 2 FL** | **TEQ(DL)** | **PI 3 FL** | **TEQ(DL)** | **PI 4 FL** | **TEQ(DL)** | **PI 5 FL** | **TEQ(DL)** |
| **Dioxins** | | | | | | | | | | | |
| 2,3,7,8-Tetra CDD * | 1.00 | <0.187 | 0.187 | <0.196 | 0.196 | <0.137 | 0.137 | <0.156 | 0.156 | <0.171 | 0.171 |
| 1,2,3,7,8-Penta CDD | 1.00 | 0.346 | 0.346 | 0.347 | 0.347 | <0.203 | 0.203 | <0.141 | 0.141 | <0.160 | 0.160 |
| 1,2,3,4,7,8-Hexa CDD | 0.100 | <0.152 | 0.015 | <0.164 | 0.016 | <0.158 | 0.016 | <0.179 | 0.018 | <0.209 | 0.021 |
| 1,2,3,6,7,8-Hexa CDD | 0.100 | 0.176 | 0.018 | <0.190 | 0.019 | <0.168 | 0.017 | <0.190 | 0.019 | <0.223 | 0.022 |
| 1,2,3,7,8,9-Hexa CDD | 0.100 | <0.158 | 0.016 | <0.169 | 0.017 | <0.163 | 0.016 | <0.185 | 0.019 | <0.217 | 0.022 |
| 1,2,3,4,6,7,8-Hepta CDD | 0.0100 | 0.770 | 0.008 | 0.595 | 0.006 | 0.708 | 0.007 | 1.250 | 0.013 | <0.560 | 0.006 |
| Octa CDD | 0.000300 | 7.980 | 0.002 | 5.390 | 0.002 | 8.200 | 0.002 | 9.530 | 0.003 | 8.140 | 0.002 |
| | | | | | | | | | | | |
| **Furans** | | | | | | | | | | | |
| 2,3,7,8-Tetra CDF ** | 0.100 | <0.139 | 0.014 | 0.252 | 0.025 | <0.140 | 0.014 | <0.168 | 0.017 | 0.244 | 0.024 |
| 1,2,3,7,8-Penta CDF | 0.0300 | <0.319 | 0.010 | <0.205 | 0.006 | <0.257 | 0.008 | <0.162 | 0.005 | <0.394 | 0.012 |
| 2,3,4,7,8-Penta CDF | 0.300 | <0.198 | 0.059 | <0.194 | 0.058 | <0.182 | 0.055 | <0.154 | 0.046 | <0.192 | 0.058 |
| 1,2,3,4,7,8-Hexa CDF | 0.100 | <0.150 | 0.015 | <0.152 | 0.015 | <0.177 | 0.018 | <0.143 | 0.014 | <0.164 | 0.016 |
| 1,2,3,6,7,8-Hexa CDF | 0.100 | <1.27 | 0.127 | <1.21 | 0.121 | <0.534 | 0.053 | <0.577 | 0.058 | <1.18 | 0.118 |
| 2,3,4,6,7,8-Hexa CDF | 0.100 | <0.152 | 0.015 | <0.155 | 0.016 | <0.180 | 0.018 | <0.146 | 0.015 | <0.167 | 0.017 |
| 1,2,3,7,8,9-Hexa CDF | 0.100 | <0.153 | 0.015 | <0.155 | 0.016 | <0.181 | 0.018 | <0.146 | 0.015 | <0.167 | 0.017 |
| 1,2,3,4,6,7,8-Hepta CDF | 0.0100 | <0.559 | 0.006 | <0.444 | 0.004 | <0.330 | 0.003 | <0.277 | 0.003 | <0.374 | 0.004 |
| 1,2,3,4,7,8,9-Hepta CDF | 0.0100 | <0.157 | 0.002 | <0.174 | 0.002 | <0.184 | 0.002 | <0.132 | 0.001 | <0.190 | 0.002 |
| Octa CDF | 0.000300 | <0.283 | 0.000 | <0.213 | 0.000 | <0.187 | 0.000 | <0.204 | 0.000 | 0.202 | 0.000 |
| | | | | | | | | | | | |
| TOTAL TOXIC EQUIVALENCY | | | 0.854 | | 0.866 | | 0.587 | | 0.541 | | 0.671 |

Appendix I continued.

* CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
"<" means less than the estimated detection limit
EDL = Estimated Detection Limit
TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
TEQ (DL) values are calculated from the value of the EDL where "<" is reported.
WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds