WOLVERINE MINE

WILDLIFE PROTECTION PLAN

2014 ANNUAL MONITORING REPORT

QML - 0006

Prepared for:

Wolverine Project Wildlife Technical Committee

Yukon Energy, Mines and Resources

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1 Introduction

Yukon Zinc Corporation's (YZC) Wolverine Mine is located in the southeast Yukon within the Kaska Traditional Territory (Figure 1-1). Commencing in spring 2009, YZC actively implemented wildlife protection measures and monitoring programs as per *Wildlife Protection Plan V2009-01* (*WPP*). The *WPP* was approved in April 2009 by Yukon Energy, Mines and Resources under Quartz Mining License QML-0006 Section 12.3. The *WPP* describes YZC's commitments for minimizing and managing impacts from routine mine activities, presents a framework for the wildlife monitoring programs, provides the process of improving mitigation and management measures through the process of adaptive management, and outlines reporting requirements.

The purpose of the 2014 monitoring program was to continue to gather data on the state of wildlife during the operations phase of the mine, and compare it to baseline data to identify any potential impacts from the mining activities. This report provides an overview of the Wolverine Mine site activities in 2014, and a detailed summary of the activities and wildlife monitoring programs that were completed in 2014.

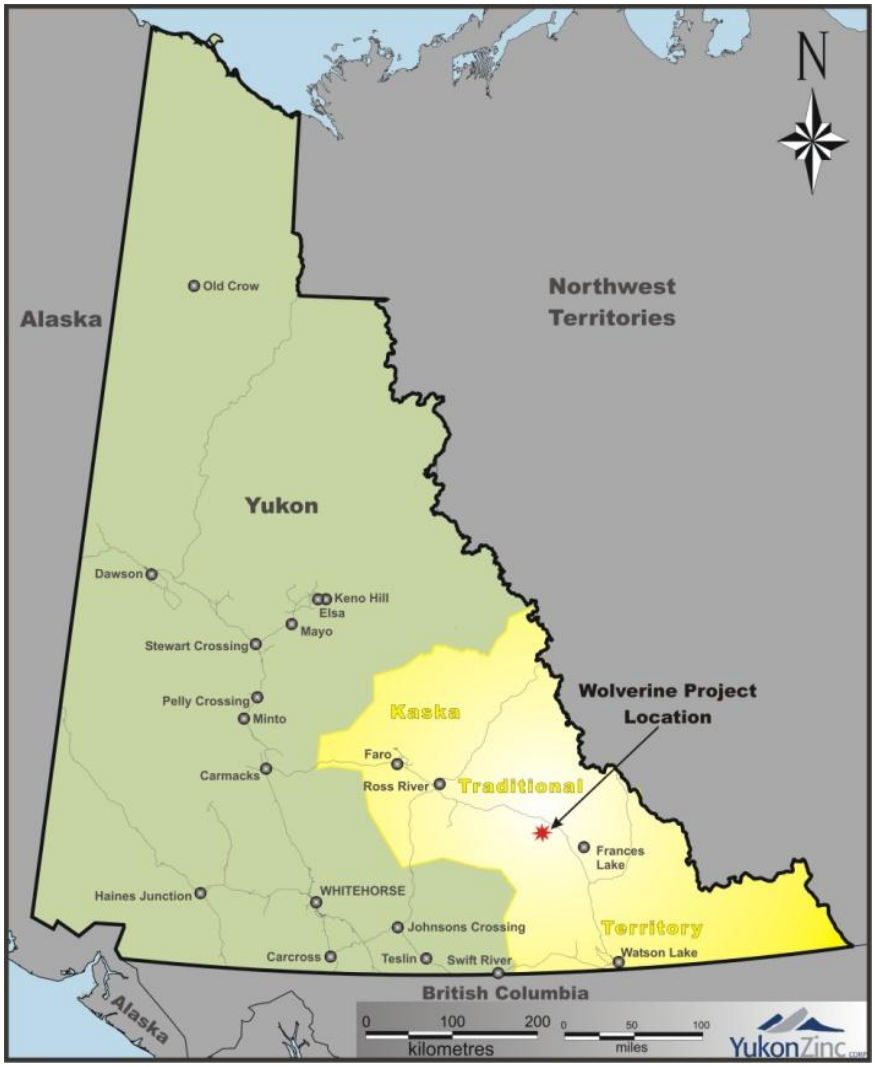


Figure 1-1: Wolverine Project Location, Yukon

1.1 Project Development and Operations

The focus of YZC's activities in 2014 was to continue the development of the Wolverine Mine for operation.

Mine surface infrastructure maintenance and underground mine development continued into 2014, and included the following activities:

- Access road improvements (i.e., grading, ditching, culvert installation, slope stabilization and progressive reclamation);
- Operation of quarry area (i.e., crushing activities at KM 11);
- Decommissioning and reclamation of Sump 1;
- Improvements to Sump 2 and collection ditches (e.g., installation of new liner in Ditch 4) to improve water management efficiency;
- Improvements made to Ditch A collection ditch, including installation of a HDPE liner to prevent water percolation beneath the ditch and tailings pond;
- Construction of new Warehouse building;
- Underground mine ramp and stope development; and,
- Milling activities, with production continuing through 2014. Tailings were either discharged to the tailings storage facility, or thickened and utilized underground as paste backfill.

2 Summary of 2014 WPP Programs

Provided below are summaries of the activities completed in 2014 that fulfill YZCs commitments outlined under *WPP Section 4: Wildlife Protection Procedures,* including wildlife safety training and consultation with the local outfitting concession holder. No Wildlife Technical Committee meetings were held in 2014.

2.1 Wildlife Safety Training

Under *WPP Section 4.1: Protection Procedure 1*, YZC committed to providing mine personnel and contractors with wildlife safety training. During site orientation training for all employees, contractors and visitors, wildlife protection measures and reporting requirements were outlined on a weekly basis. Specific wildlife safety training sessions were delivered to all new YZC employees and contractors during full orientations by the YZC Environmental Department at the Wolverine Mine throughout 2014.

The training sessions focused on the importance of wildlife protection, both for the wildlife and the safety for those working/living in camp, and emphasized the need to follow the wildlife protection policies that were implemented on site.

As in 2010, 2011, 2012 and 2013 questions and open discussions during the training programs centered on the presence of 'nuisance wildlife' (e.g., foxes, coyotes, and ravens) on site, and approaches to minimize wildlife attraction, including:

- Spill prevention (i.e., performing regular maintenance checks on equipment, taking extra precaution when handling dangerous substances, performing Job Hazard Analyses (JHA's) on any non-routine job tasks) and immediately reporting spills, regardless of the quantity, to a supervisor or the Environmental Department.
- Maintaining a tidy and litter-free work environment and keeping pick-up trucks free of miscellaneous garbage and debris;
- Following the various wildlife protection policies (e.g., no feeding of wildlife, wildlife have the right away, no fishing or hunting, etc.), with discussions surrounding the rationale behind them;
- Being an active participant in the waste management program on site;
- Ensuring spill kits are adequately replenished so that spills of hydrocarbons and antifreeze (animal attractant) are collected and disposed of in a timely manner; and,
- The importance of reporting wildlife observations and locations where wildlife are seen most frequently at the mine site.

2.2 Consultation with Local Outfitting Concession Holder

Consultation with the local outfitting concession holder, Teslin Oufitters, was completed by YZC as identified by the *WPP Section 4.2: Protection Measure 3*. The outcome of YZC's discussion with Teslin Outfitters indicated that YZC's operational activities were outside of Teslin Outfitters active outfitting areas for 2011, and therefore their activities would not be compromised.

3 Wildlife Monitoring Programs

The wildlife monitoring programs that continued in 2014 as outlined in *WPP Section 5* include:

- Wildlife Records Program
- Winter Wildlife Monitoring Program
- Vegetation Metals Program
- Small Mammals Metals Program
- Tailings Facility Monitoring

The description for each program includes the study area, sampling locations, methods, and results. Recommendations for program modifications are included in Section 3.8.

3.1 Wildlife Research Permits

A *Wildlife Research Permit*, required to undertake the trapping of small mammals for The Small Mammal Metals Program, was obtained on April 23, 2014 and provided in Appendix H.

3.2 Wildlife Records Program

The Wildlife Records Program consists of reporting of wildlife observations and incidents within the mine site area and along the access road. The information collected from this program provides incidental data on wildlife occurrences to identify existing and/or potential issues and/or areas of concern in relation to project components. Detailed methods for reporting wildlife incidents and observations are provided in *WPP Appendix C*.

3.2.1 2014 Wildlife Observations

Wildlife observations were reported to site management, crew supervisors, and/or recorded in the wildlife logs located in various locations around site. In 2014, 17 wildlife species (Table 3-1) were documented in proximity to the exploration camp, mine site, camp complex, tailings facility, landfill, and access road. Table 3-2 provides a summary by month of all reported wildlife observations in 2014. The 2014 wildlife log for the incidental wildlife observation program is provided in Appendix A.

Table 3-1: Wildlife species list from 2014 reported wildlife observations

Common Name	Scientific Name	Common Name	Scientific Name
Woodland Caribou	*Rangifer tarandus caribou*	Porcupine	*Erethizon dorsatum*
Moose	*Alces alces*	Snowshoe Hare	*Lepus americanus*
Red fox	*Vulpes vulpes*	Ptarmigan	*Lagopus* sp.
Grey Wolf	*Canis lupus*	Peregrine Falcon	*Falco peregrinus*
Vole sp.	*Microtus pennsylvanicus*	Sandhill Crane	*Grus canadensis*
Beaver	*Castor sp.*	Red-tailed hawk	*Buteo jamaicensis*
Black Bear	*Ursus americanus*	Grizzly Bear	*Ursus arctos*
Raven	*Corvus corax*	Golden Eagle	*Aquila chrysaetos*
Snow Bunting	*Plectrophenax nivalis*		

Table 3-2: Summary of reported wildlife observations within the Wolverine Mine area in 2014

Species	No. Observations by Project Component					Species	No. Observations by Project Component				
	Robert Campbell HWY	Access Rd (KM 1-24)	Tailings Pond/Airstrip/Landfill (KM 24-27)	Camp & Industrial Complex (KM 27-29)	Exploration Road/Camp (KM 29-32)		Robert Campbell HWY	Access Rd (KM 1-24)	Tailings Pond/Airstrip/Landfill (KM 24-27)	Camp & Industrial Complex (KM 27-29)	Exploration Road/Camp (KM 29-32)
January						***June***					
Fox		1				Grizzly Bear		14	3	7	
Vole/shrew				2		Fox			1		
Moose						Woodland Caribou		3		8	
February						Wolf		2	2	1	
Ptarmigan				20		Moose		1			
Moose		4				Snow shoe Hare		1			
March						***July***					
Moose		2				Fox				3	
Snow Bunting				10		Woodland Caribou				14	
Ptarmigan				25		Wolf		1			
						Moose	1			2	
						Porcupine		2		1	
April						***August***					
Fox						Wolf		1			
Ptarmigan			15			Porcupine				1	
Moose		2				Black Bear		1			
Sandhill Crane		80				Woodland Caribou		2			
Snowshoe Hare		1				***September***					
May						Beaver		1			
Perigrin Falcon		1				Sandhill Crane				120	

Species	No. Observations by Project Component					Species	No. Observations by Project Component				
	Robert Campbell HWY	Access Rd (KM 1-24)	Tailings Pond/Airstrip/Landfill (KM 24-27)	Camp & Industrial Complex (KM 27-29)	Exploration Road/Camp (KM 29-32)		Robert Campbell HWY	Access Rd (KM 1-24)	Tailings Pond/Airstrip/Landfill (KM 24-27)	Camp & Industrial Complex (KM 27-29)	Exploration Road/Camp (KM 29-32)
Golden Eagle		1				Grizzly Bear					
Wolf					2	Moose					1
Red-tail Hawk				1		***October***					
Woodland Caribou					4	Grizzly Bear				1	
Sandhill Crane				1000		Woodland Caribou		4			
Porqupine		2		4	3	***November***					
Moose		6	1		2	Woodland Caribou		19			
Raven			3			Wolf		1			
Black Bear		2				***December***					
Grizzly Bear				1	1	Wolf		1			
Snowshoe Hare		11			1	Moose		1			

3.2.2 2014 Wildlife Incidents

A total of nine wildlife incidents occurred in 2014. Each incident was reported to site management as soon as they occurred, and reports were completed for all of the incidents. Table 3-3 provides incident date, the nature of each incident and wildlife involved, and the action taken by YZC employees.

Table 3-3: 2014 wildlife incidents

Date	Incident	Action Taken
20-Jan-14	Dead Ptarmigan discovered inside the Mill	Reminded crew to keep all doors closed if not in use
15-Apr-14	Dead Ptarmigan @ KM26 - assumed struck by truck	Removed from road and incinerated
15-Jun-14	Grizzly bears (x2) and a lone wolf observed occupying areas throughout site for past 2 weeks - getting close to entrances	Constantly monitored bear and wolf movement; implemented site wide 'buddy' policy for all work in the field; had garbage bins located outside brought inside to reduce wildlife attractants; issued bear spray to field work personnel for protection
26-Jun-14	Wolf becoming a common presence onsite - in landfill, camp pad, etc	Contacted the local Conservation Officer and received permission to shoot the Wolf in the hind quarters with rubber buckshot - was deterred and after another day, did not return
15-Jul-14	Small bird found near CLO that may have just left its nest	An employee captured the bird, and called the Environmental Department for assistance. The bird was placed in a soft towel and transported to a meadow off site. After a few minutes, the bird flew off and landed in the top of a spruce tree.
05-Aug-14	6 Wolves in Mill Laydown watching a worker on N/S	Once worker became aware of their presence they ran off. Environment department investigated area the next day - no sign of them.
10-Aug-14	Dead fox found in Sump 1 on the liner by the water	Cause unknown. Carcass was incinerated. Sump 1 was decommissioned and reclaimed shortly after.
28-Sep-14	Dead marmot in Tailings Pond	Recent death - noticed by rope ladder at barge by the electrician.
19-Nov-14	Injured Ptarmigan	Observed by employee, cause unknown. Still moving and ran off so not too badly injured

3.3 Winter Wildlife Monitoring

The study areas for the Winter Wildlife Monitoring Program include the Mine Site Study Area (MSSA), Putt Creek Study Area (PCSA), and Money Creek Study Area (MCSA). The MSSA encompasses the Wolverine Project mine site, including mine portal, tailings facility, camp complex, industrial complex, airstrip, and landfill. The PCSA encompasses the access road that connects the mine site to the Robert Campbell Highway. The MCSA (referred to in the *WPP* as the Money Creek Reference Area or MCRA) is the reference control site for the program and encompasses the Money Creek watershed, located south of the main mine site area.

3.3.1 2014 Summary and Monitoring Schedule

Winter Wildlife Monitoring for 2014 occurred from January to April and recommenced November to December. Surveys were performed for each transect on average of 4 times a year. Field monitoring was conducted according to methods detailed in *WPP Appendix E*. All sampling was carried out by trained YZC personnel. Table 3-4 provides details on each transect and the 2014 monitoring dates. As mentioned in the *2011*, 2012 and *2013 WPP Annual Reports*, transect MCSA-WT02 was replaced by MCSA-WT03, and therefore is not included in the Table.

Table 3-4: 2014 winter transects summary and monitoring dates

Study Area	Transect ID	POC Coordinates		POT Coordinates		Transect Length (m)	2014 Monitoring Dates
		Easting	Northing	Easting	Northing		
MCRA	MCSA-WT01	444059	6805764	442561	6807991	1400	13-Jan, 10-Feb, 11-Mar, 1-Nov
MCRA	MCSA-WT03	442561	6807991	443443	680212	3000	13-Jan, 10-Feb, 11-Mar, 1-Nov
MSSA	MSSA-WT01	439000	6811459	437381	6812665	2000	8-Feb, 10-Mar, 2-Apr, 2-Nov, 20-Dec
MSSA	MSSA-WT02	438474	6812355	439661	6811320	1100	3-Jan, 8-Feb, 10-Mar, 2-Apr, 2-Nov, 20-Dec
MSSA	MSSA-WT03	441972	6809022	442606	6808088	800	19-Jan, 15-Feb, 13-Apr, 18-Nov
MSSA	MSSA-WT04	440513	6810504	441041	6809862	800	19-Jan, 24-Feb, 17-Mar
MSSA	MSSA-WT05	440222	6810352	442661	6807797	3100	25-Feb, 3-Apr, 4-Nov,
PCSA	PCSA-WT01	452486	6816714	452914	6818695	2020	Not sampled
PCSA	PCSA-WT02	450450	6812277	450600	6814375	2100	7-Feb, 24-Mar, 28-Nov, 6-Dec
PCSA	PCSA-WT03	450673	6811319	450450	6812277	1000	7-Feb, 24-Mar, 6-Dec
PCSA	PCSA-WT04	450554	6814048	450967	6813940	430	7-Feb, 16-Nov, 28-Nov

MSSA = Mine Site Study Area; PCSA = Putt Creek Study Area; MCSA = Money Creek Study Area; POC = Point Of Commencement; POT = Point Of Termination

As described in the *2010, 2011, 2012 and 2013 Wildlife Protection Plan Annual Report*, transect MCSA-WT02 was discontinued and replaced by a new transect (MCSA-WT03), due to accessibility/safety reasons. For consistency, the new transect has kept the label MCSA-WT02 in the maps presented in the figures below, but will be labeled as MCSA-WT03 moving forward.

3.3.2 2014 Winter Transect Results

The 2014 field program documented wildlife sign observed along the monitoring transects. A summary of these observations (i.e., location and count) is presented in Figure 3-1 to Figure 3-11 for each species, including American Mink, Marten, American Red Squirrel, Short-tailed Weasel, Vole Sp. (species unknown), Snowshoe Hare, Lynx, Wolf, Coyote, Red Fox, Moose, Woodland

Caribou, and Rock Ptarmigan, respectively (raw data set can be found in Appendix B). Other observations (e.g., temperature, wind, snow depth, time of last snow fall) were also recorded for all transects monitored, as prescribed in the *WPP* and is also provided in Appendix B. The 2014 observations are compared to the 2009, 2010, 2011, 2012, and 2013 observations in the figures below for the purposes of evaluating trends in the data year to year. Blank count graphs indicate that the species was not identified in any of the monitoring years.

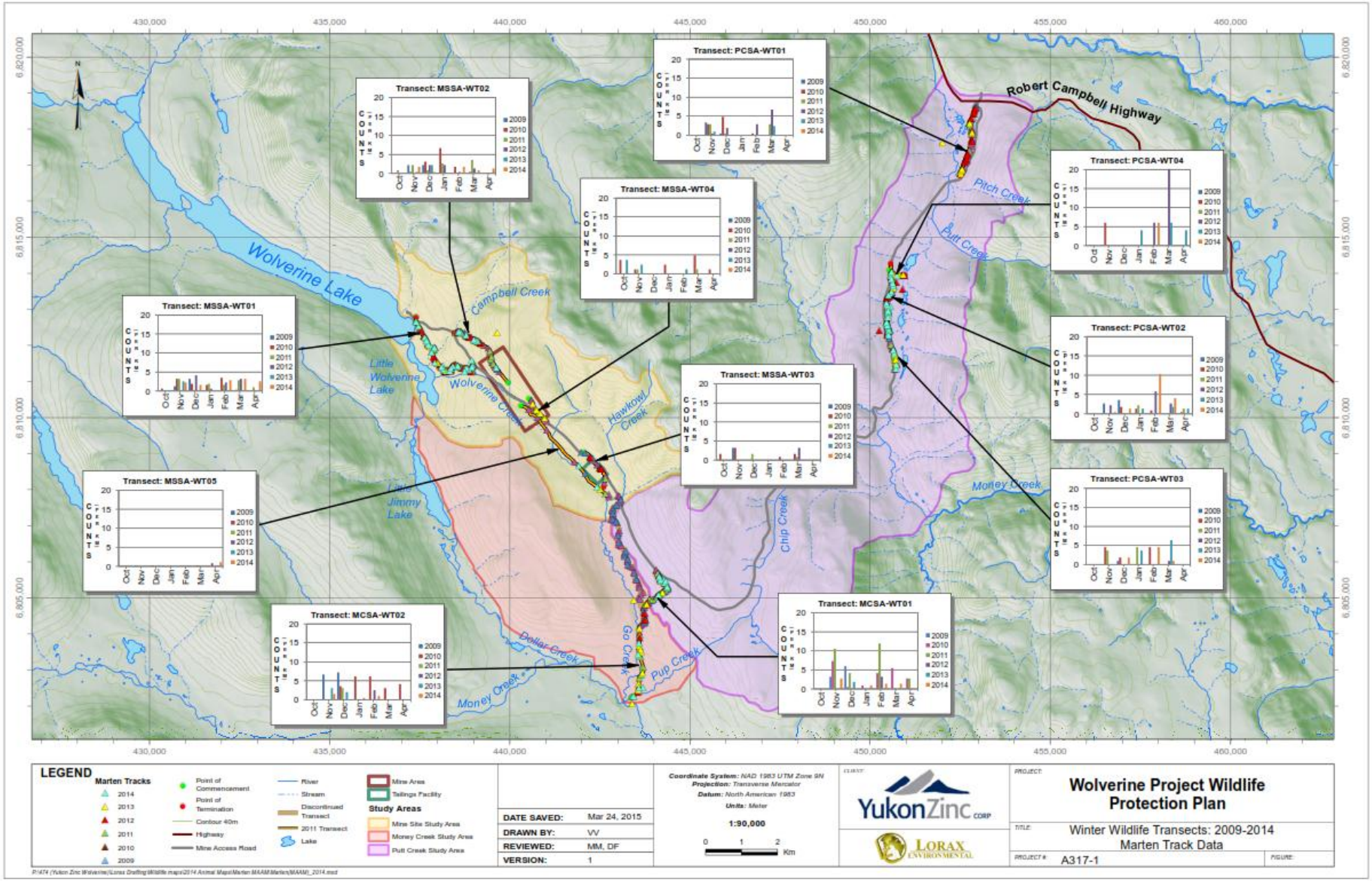


Figure 3-1: American Marten: 2014 summary of location and count along established Winter Wildlife Transects

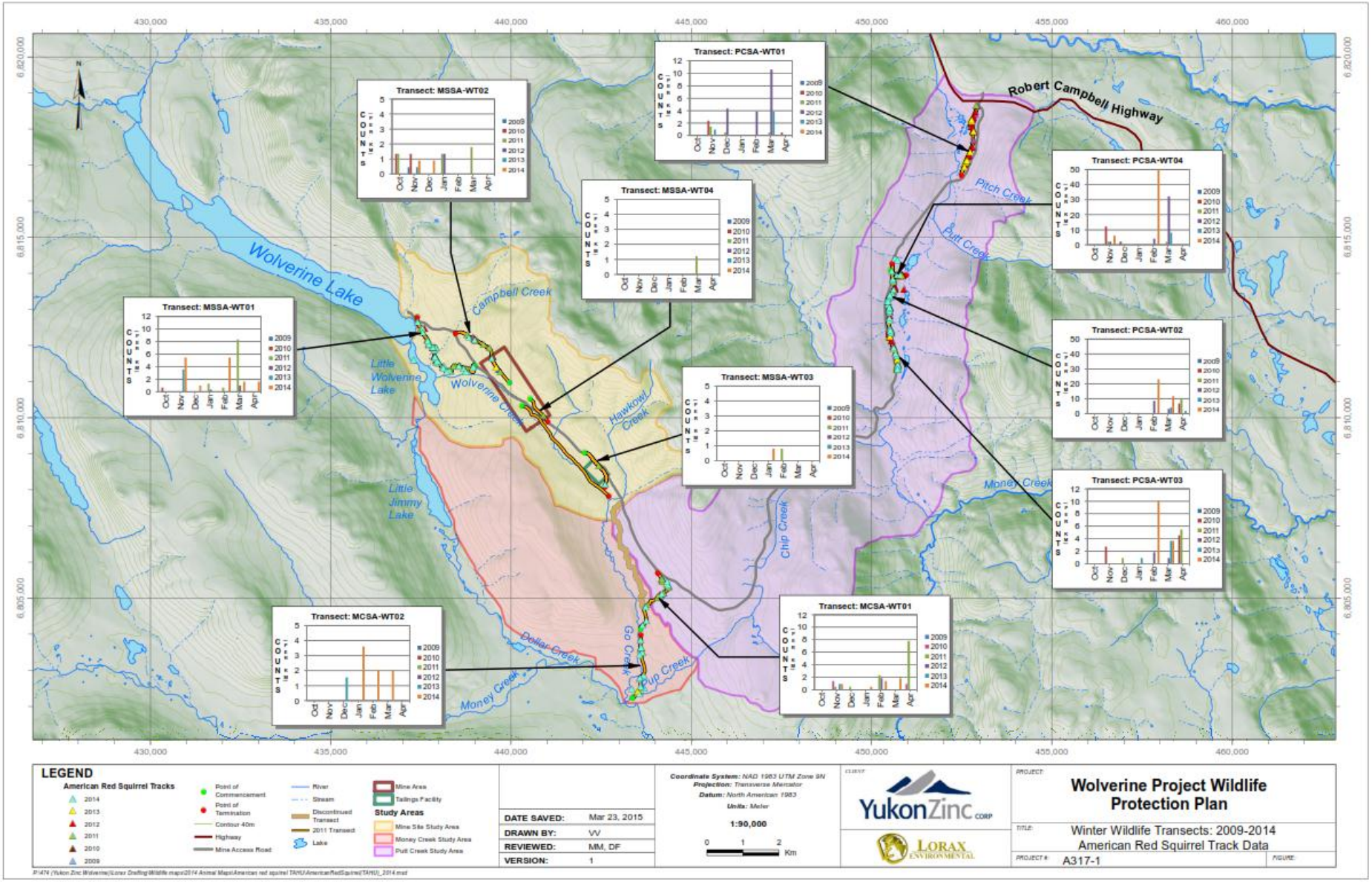


Figure 3-2: American Squirrel: 2014 summary of location and count along established Winter Wildlife Transects

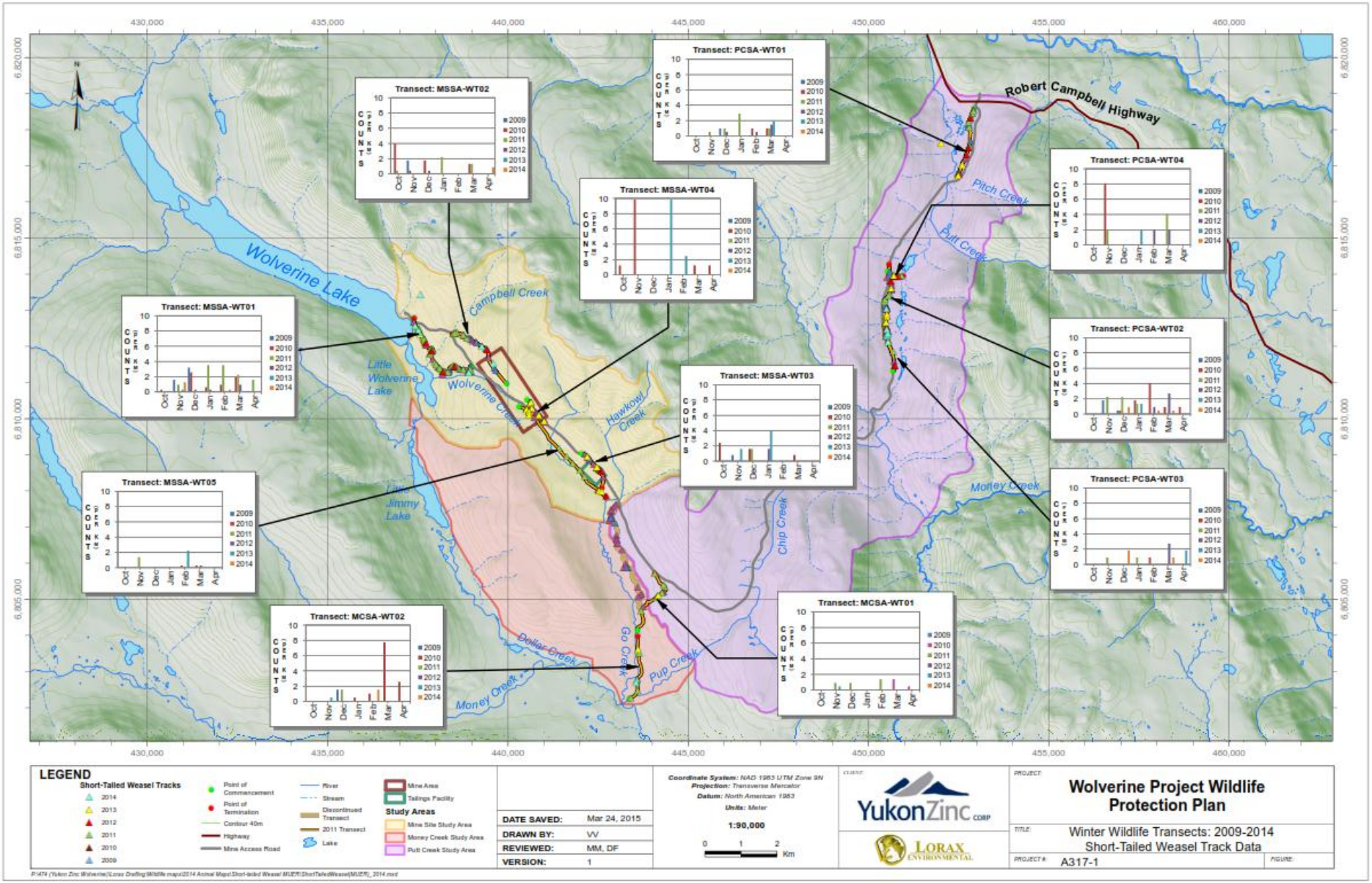


Figure 3-3: Short-tailed weasel: 2014 summary of location and count along established Winter Wildlife Transects

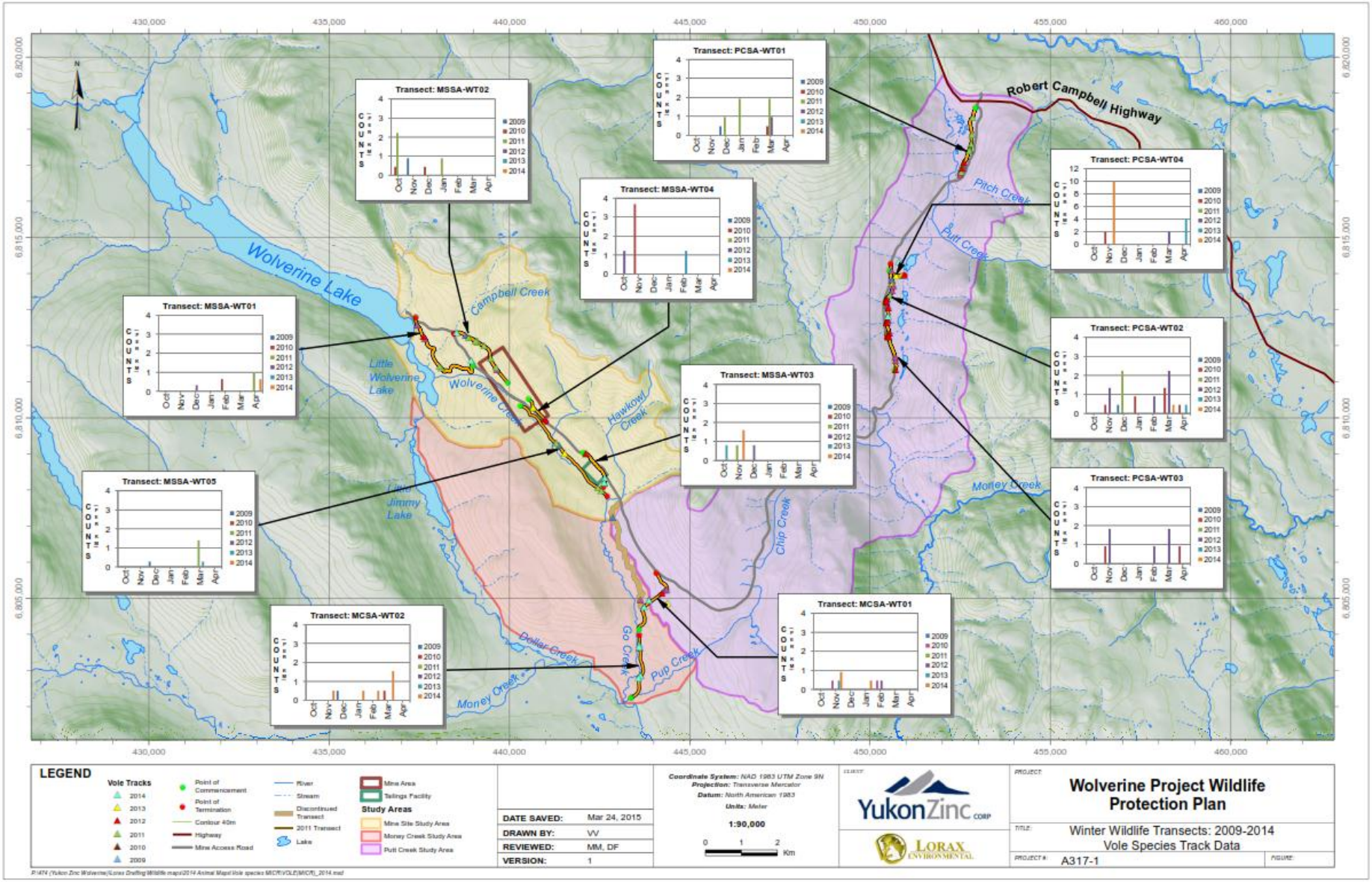


Figure 3-4: Vole species: 2014 summary of location and count along established Winter Wildlife Transects

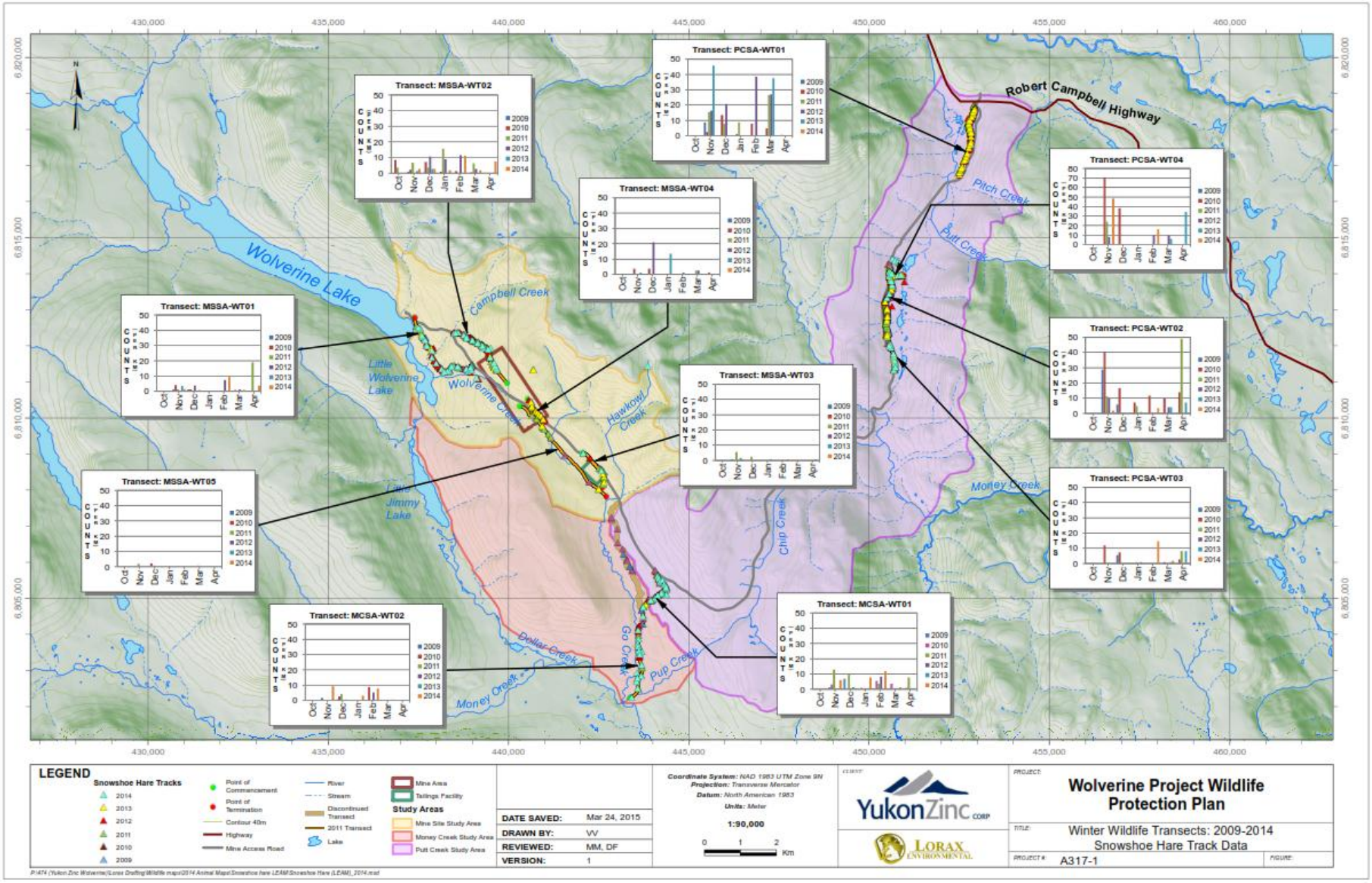


Figure 3-5: Snowshoe Hare: 2014 summary of location and count along established Winter Wildlife Transects

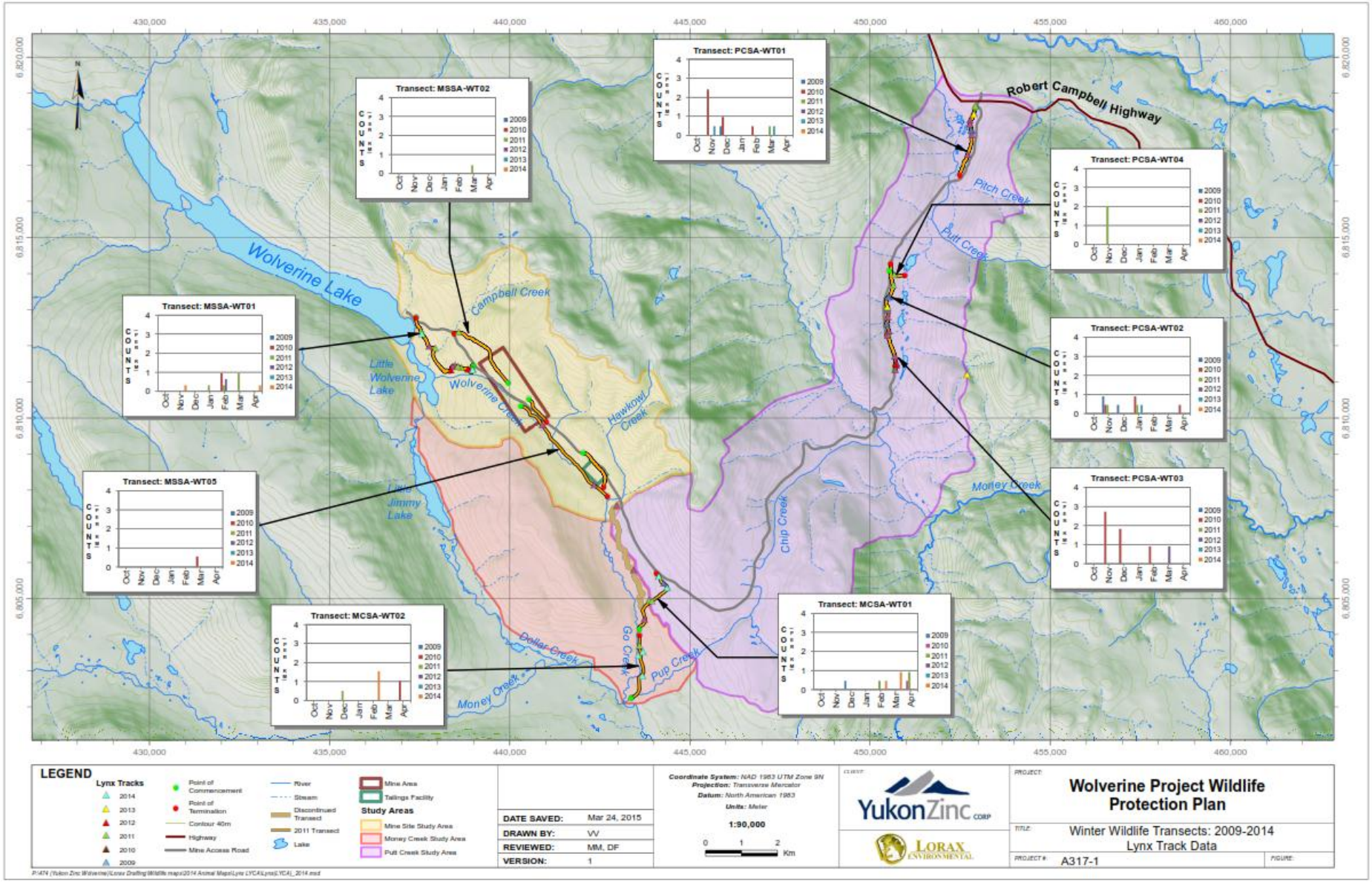


Figure 3-6: Lynx: 2014 summary of location and count along established Winter Wildlife Transects

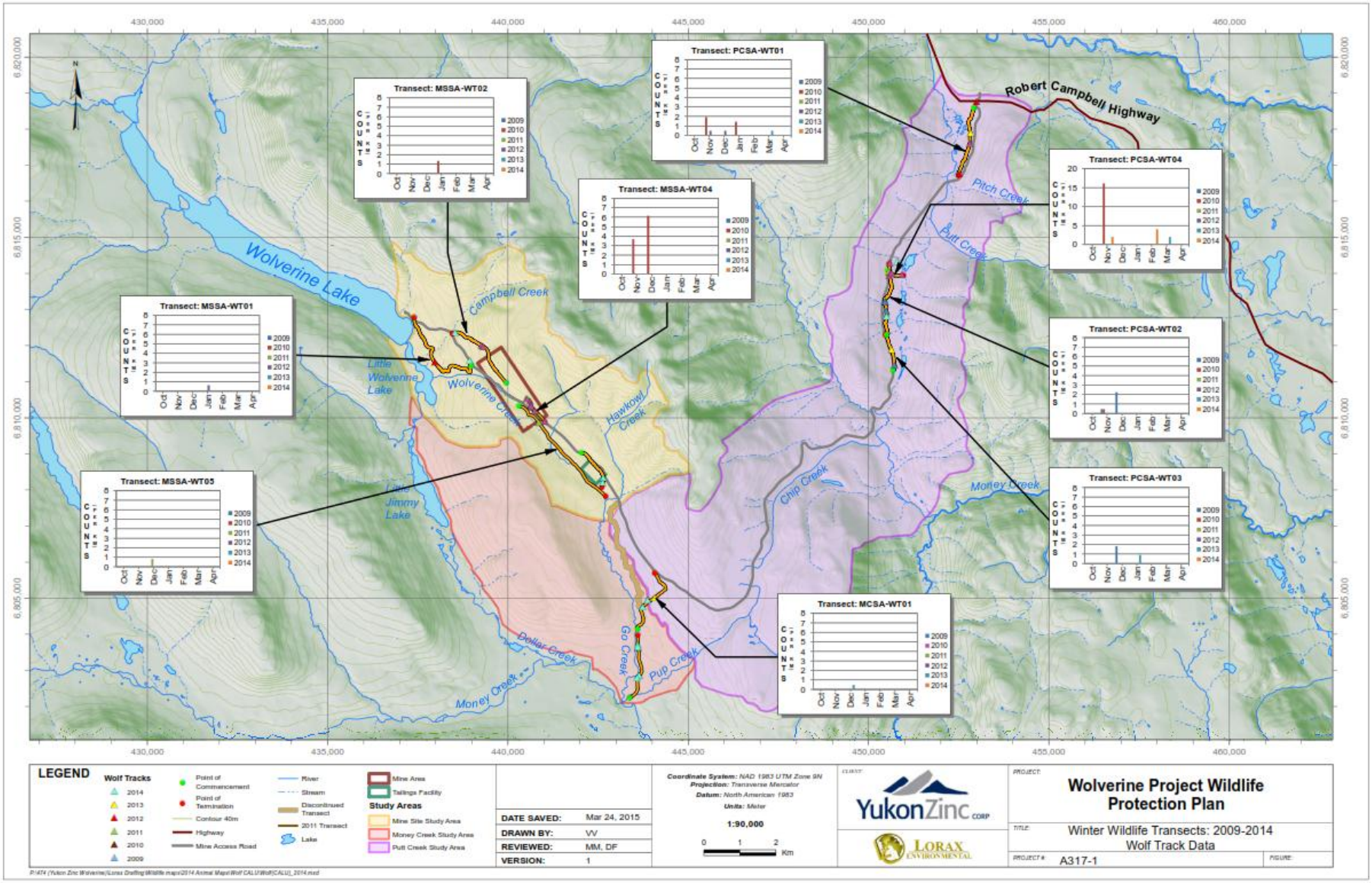


Figure 3-7: Wolf: 2014 summary of location and count along established Winter Wildlife Transects

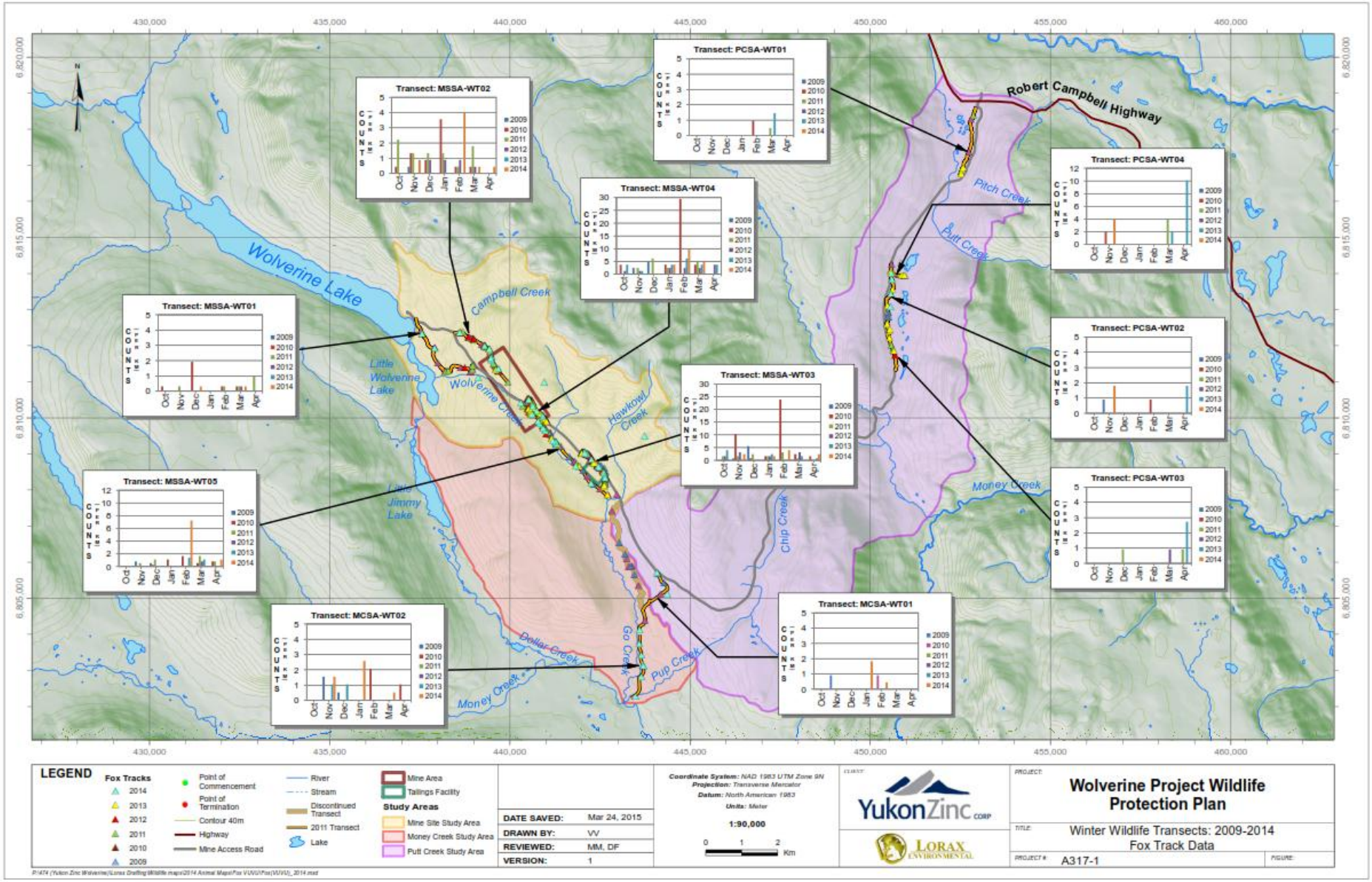


Figure 3-8: Red Fox: 2014 summary of location and count along established Winter Wildlife Transects

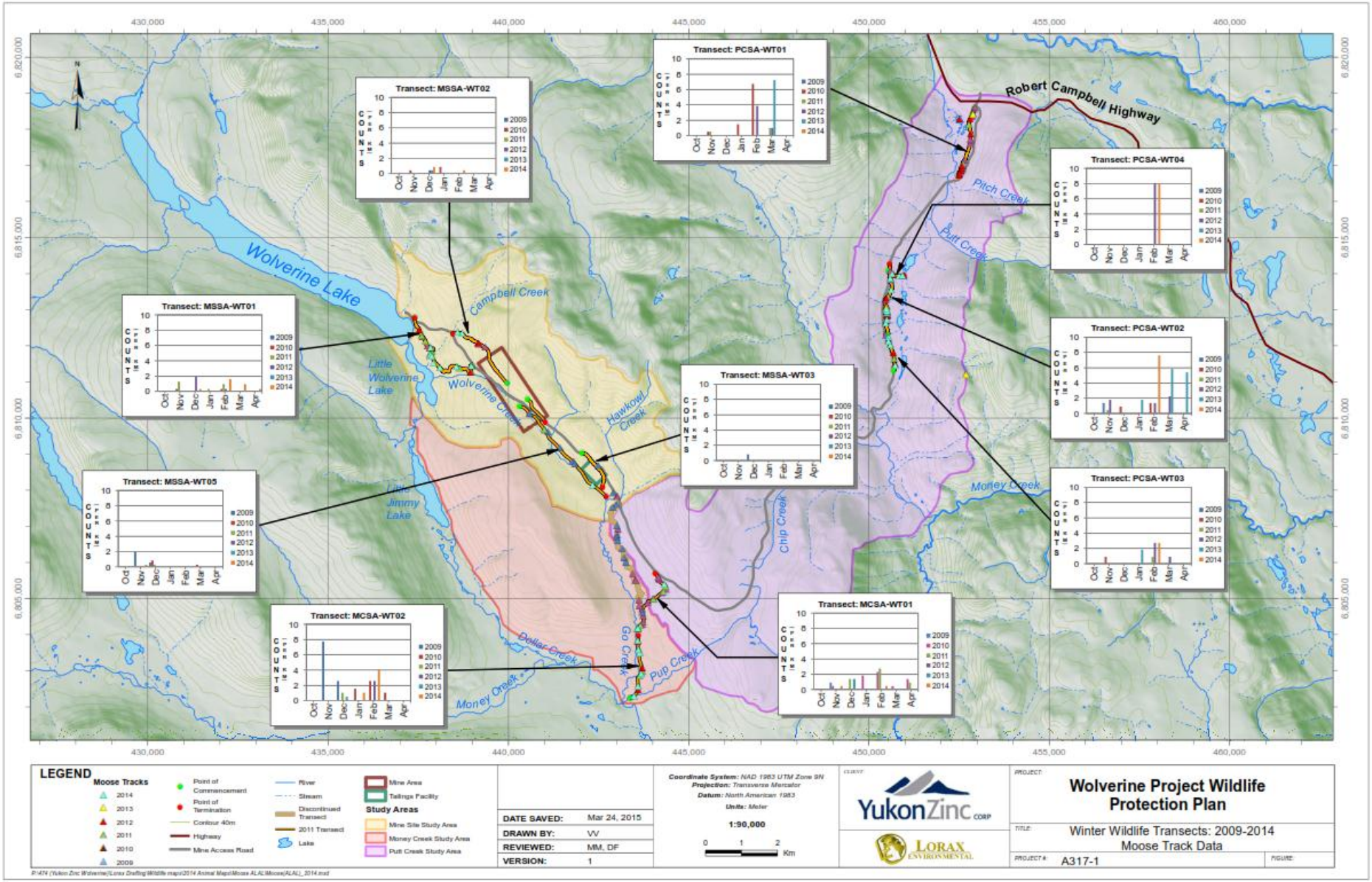


Figure 3-9: Moose: 2014 summary of location and count along established Winter Wildlife Transects

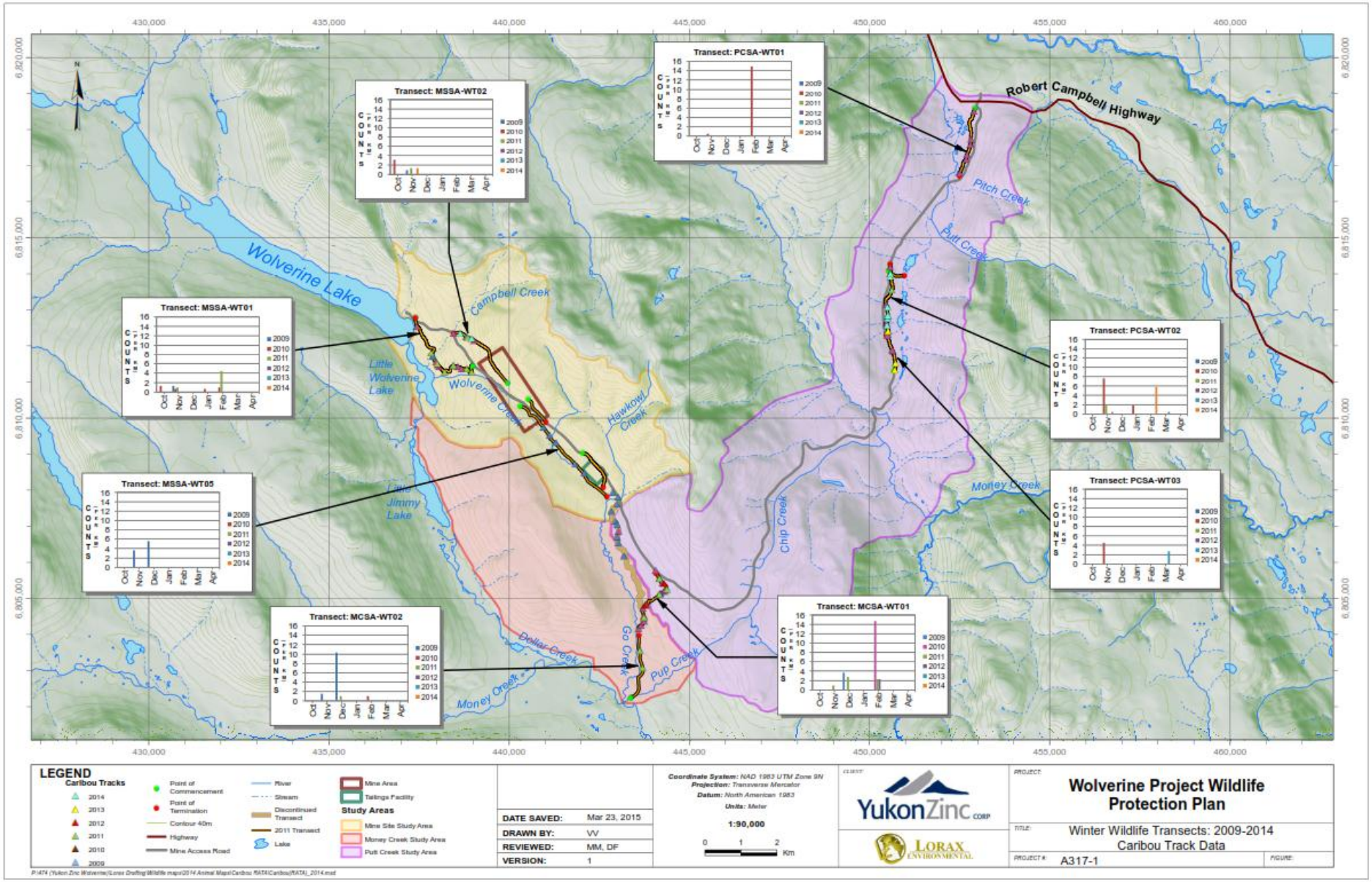


Figure 3-10: Woodland Caribou: 2014 summary of location and count along established Winter Wildlife Transects

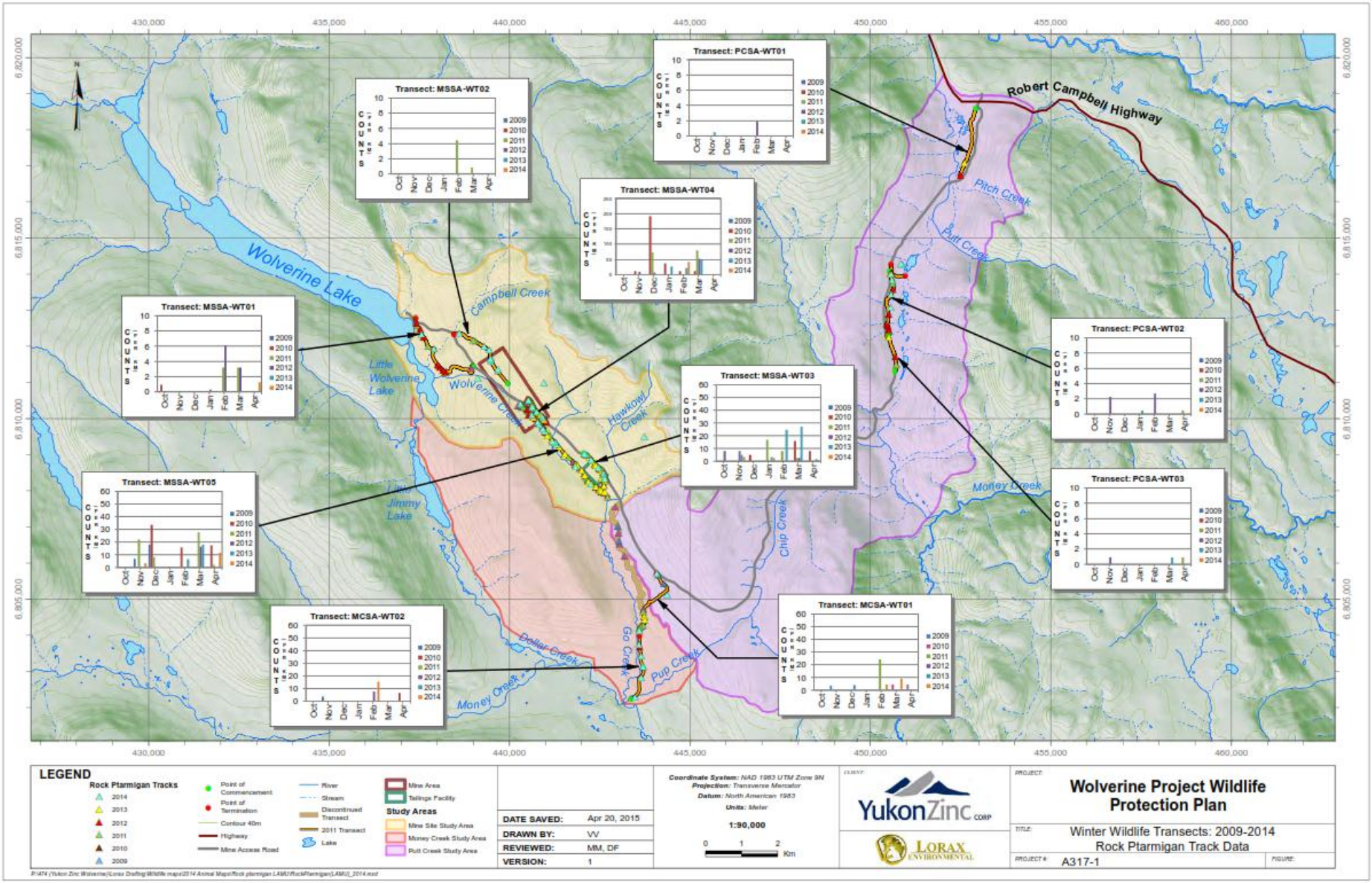


Figure 3-11: Rock Ptarmigan: 2014 summary of location and count along established Winter Wildlife Transects

3.4 Metals Levels in Vegetation

As prescribed in the *WPP*, vegetation sample collection for the metals levels monitoring program was continued in August 2014. Vegetation samples were collected according to the methods outlined in *WPP Appendix F*. Based on discussions held with the Wildlife Technical Committee, the only species collected was lichen (*Cladina stellaris*), locally known as Caribou Moss, from the MSSA, PCSA and the MCRA as shown on Figure 3-14, due to its low variability among data sets and its high importance as a food source for grazing mammals in the area, particularly Woodland Caribou.

Laboratory procedures were detailed by Maxxam Analytics Inc, an accredited laboratory based in Burnaby, BC. Procedures included dissection of samples, compositing of samples (as required), digestion and metals analysis. Vegetation samples were digested with a nitric-hydrochloric acid mixture to solubilize the solid matter and remove the organic material by oxidation and volatilization. The sample was then analyzed for total metals by inductively coupled plasma mass spectrometry (ICP-MS). Vegetation samples were measured for 30 elements at specified laboratory Reportable Detection Limits (RDLs) as outlined in Table 3-5. The Maxxam Lab Reports on all vegetation metal analysis area available in Appendix G.

Table 3-5: Total metal analysis parameters with Reportable Detection Limits (RDL's)

Element	Symbol	RDL (mg/kg)	Element	Symbol	RDL (mg/kg)	Element	Symbol	RDL (mg/kg)
Aluminum	Al	1	**Copper**	Cu	0.5	**Silver**	Ag	0.05
Antimony	Sb	0.1	**Iron**	Fe	10	**Sodium**	Na	10
Arsenic	As	0.01	**Lead**	Pb	0.01	**Strontium**	Sr	0.1
Barium	Ba	0.1	**Magnesium**	Mg	10	**Thallium**	Tl	0.05
Beryillium	Be	0.1	**Manganese**	Mn	0.1	**Tin**	Sn	0.1
Bismuth	Bi	0.1	**Mercury**	Hg	0.01	**Titanium**	Ti	1
Boron	B	5	**Molybdenum**	Mo	0.1	**Uranium**	U	0.05
Cadmium	Cd	0.01	**Nickel**	Ni	0.1	**Vanadium**	V	2
Calcium	Ca	10	**Phosphorus**	P	10	**Zinc**	Zn	0.1
Chromium	Cr	0.5	**Potassium**	K	10			
Cobalt	Co	0.1	**Selenium**	Se	0.01			

3.4.1 2014 Sampling Distribution and Locations

Lichen samples were collected from 40 locations during the 2014 sampling program. Additionally, 4 triplicates were collected randomly from the set of 40 locations to make up a 10% QA/QC quota. Table 3-6 outlines the sampling distribution within the two survey areas (Mine Site Survey Area and Putt Creek Survey Area) and the reference area (Money Creek Reference Area – formerly denoted as MCSA in the *2010 Wildlife Protection Plan Annual Report*). Ten of the samples within the MCRA were collected in a newly established location (MCRA 2) that is separated from the Mine (and related activities) by a mountain. As determined by the Wildlife Technical Committee, this location acts as a more suitable control location than the original, since the mountain acts as a barrier from potential air-borne contamination from the Mine. The sampling locations within the 3 study areas are provided in Figure 3-12.

Table 3-6: Distribution of vegetation samples taken in 2014.

Species	MSSA	PCSA	MCRA	MCRA 2
Lichen	10	10	10	10

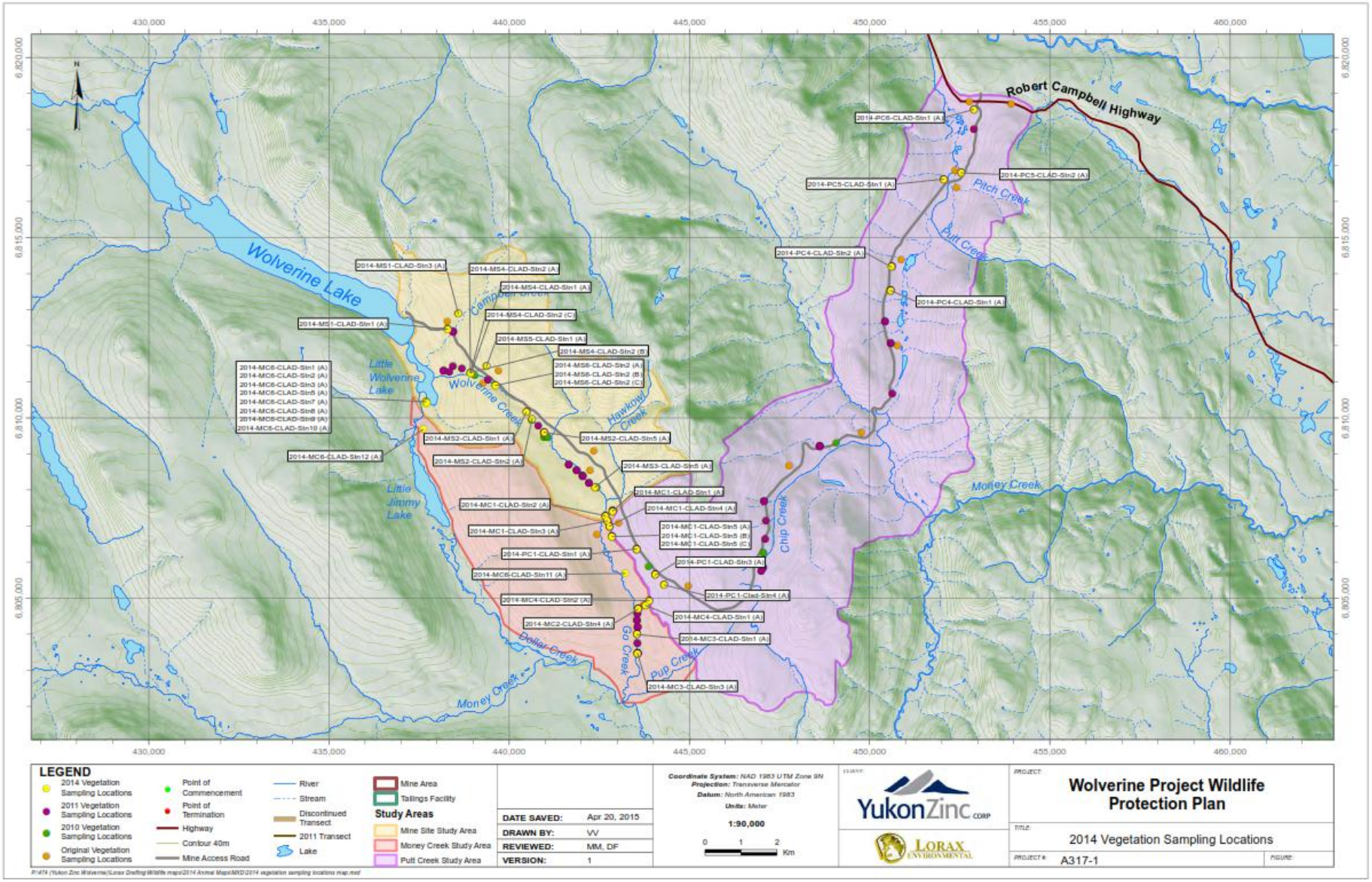


Figure 3-12: 2014 vegetation sampling distribution

3.4.2 2014 Sampling Analysis and Results

Parameters of concern are identified as being arsenic, copper, lead, nickel, selenium, cadmium, and zinc and have been examined in detail in sections 3.4.2.1 to 3.4.2.7, respectively (a summary of all the data is provided in Appendix C). Statistical comparisons using Analysis of Variance (ANOVA) were used to determine if significant differences exist between the mean total metal concentrations among survey areas (PCSA and MSSA) and reference area (MCRA) over time (i.e., between samples collected in 2009/2010, 2011 and 2014). All samples were taken from the exact locations as previously sampled, in order to get a good understanding of the changes over time. The results from these statistical comparisons are provided in Appendix D but are discussed in sections 3.4.2.1 to 3.4.2.7, along with the graphical representations of the means between sampling periods for each metal examined.

A difference being deemed significant simply means that it is reliable, or that it did not happen by chance. When making comparisons, a 95% confidence value ($\alpha = 0.05$) was used. Hence, if a statistic is found to be significantly greater than another, one can be 95% confident that the difference is reliable/true, and did not happen by chance. For statistical and graphing purposes, parameters that were below the detection limit were taken as equal to the detection limit. Also note that due to an insufficient number of samples collected during 2009, samples were also taken during 2010 to support the baseline data. For instance, no samples were taken from the MCRA in 2009, so all the samples representing the MCRA were taken in 2010.

3.4.2.1 Arsenic Results

The mean total arsenic concentrations (mg/L) in Lichen for each survey area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-13. The graph shows increased arsenic concentrations in 2014 across all three areas (including the reference area MCRA), with the greatest increase occurring in MSSA. However, statistical comparisons revealed that the increase in means from the PCSA and the MCRA in 2014 were of greater significance (i.e., higher F-value) due to a lower variability among the samples (i.e., lower P-value). The high variability among the samples taken from MSSA is mainly attributed to one sample collected just south-west the mine, having a concentration of 39.7 mg/kg compared to a mean of 4.6 mg/kg among the other 9 samples. The total mean arsenic concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

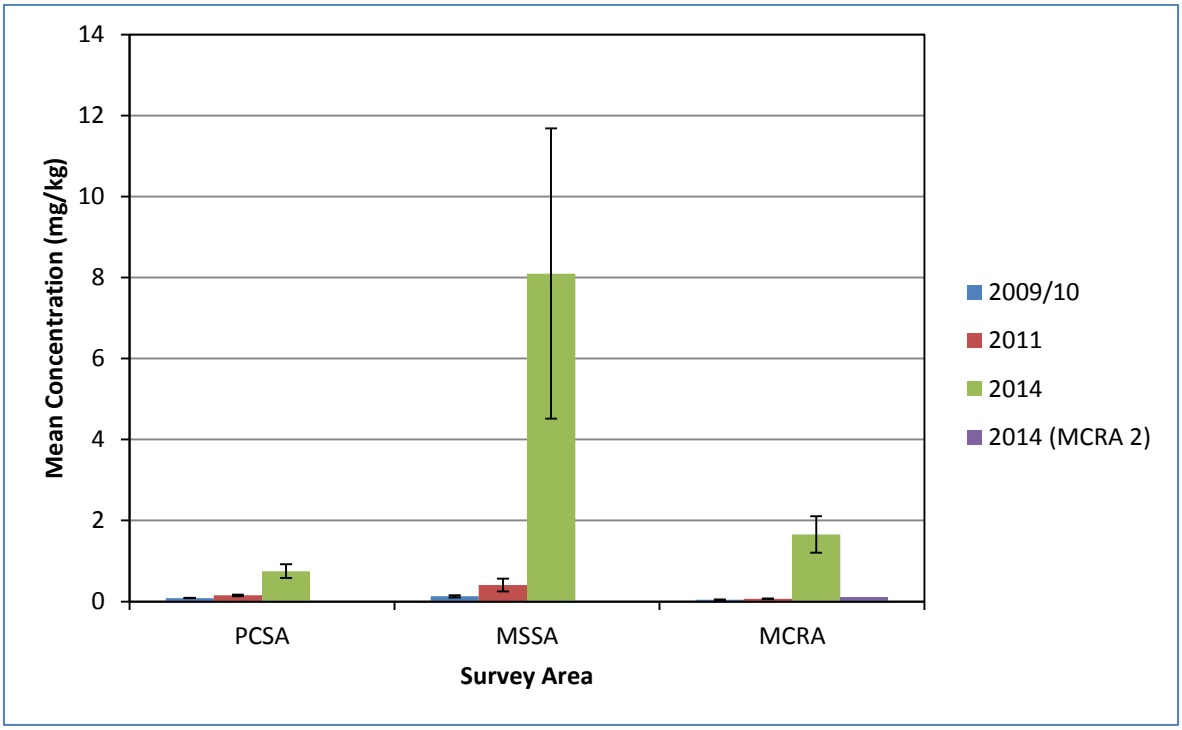


Figure 3-13: Comparison of mean total arsenic concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.2.2 Cadmium Results

The mean total cadmium concentrations (mg/L) for Lichen within each area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-14. The graph shows increased cadmium concentrations in 2014 across all three areas (including the reference area MCRA), with the greatest increase occurring in MSSA. However, statistical comparisons revealed that the increase in means from the PCSA and the MCRA in 2014 were of greater significance (i.e., higher F-value) due to a lower variability among the samples (i.e., lower P-value), with PCSA having the lowest variability, and thus the greatest significant increase. The high variability among the samples taken from MSSA is mainly attributed to one sample collected just south-west the mine, having a concentration of 34.7 mg/kg compared to a mean of 4.6 mg/kg among the other 9 samples. The total mean cadmium concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

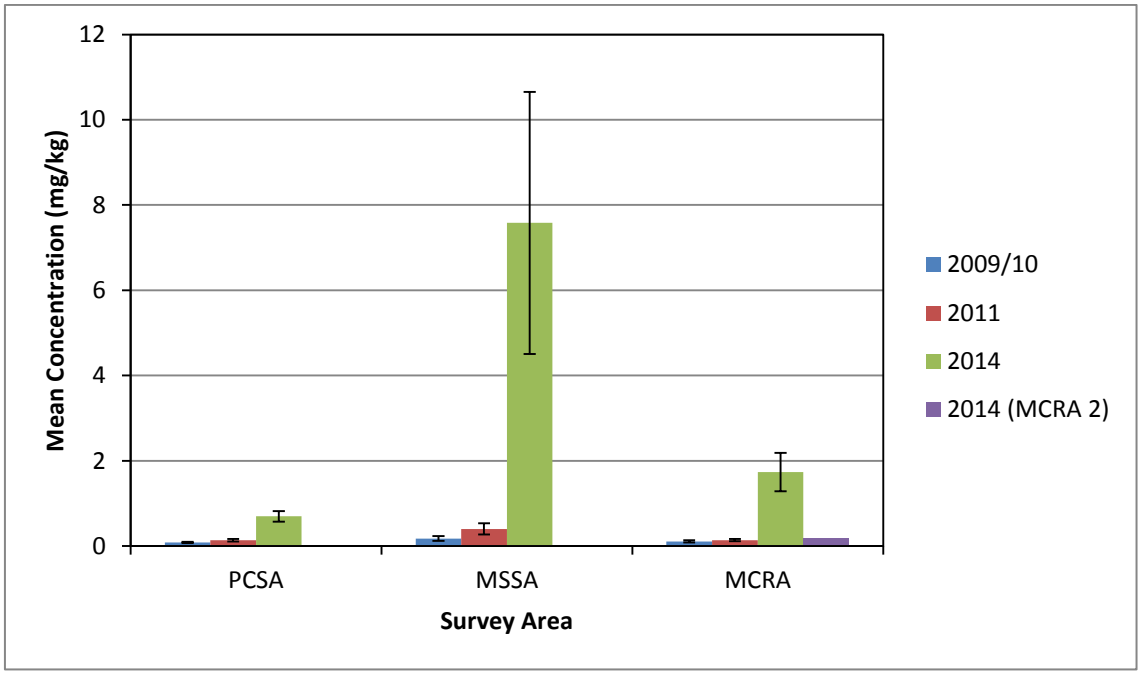


Figure 3-14: Comparison of mean total cadmium concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.2.3 Copper Results

The mean total copper concentrations (mg/L) in Lichen for each area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-15. Similarly to arsenic and cadmium, the graph shows increased copper concentrations in 2014 across all three areas (including the reference area MCRA), with the greatest increase occurring in MSSA. But again, as with arsenic and cadmium, statistical comparisons revealed that the increase in means from the PCSA and the MCRA in 2014 were of greater significance (i.e., higher F-value) due to a lower variability among the samples (i.e., lower P-value), with PCSA showing the greatest significant increase. The high variability among the samples taken from MSSA is mainly attributed to one sample collected just south-west the mine, having a concentration of 367 mg/kg compared to a mean of 48 mg/kg among the other 9 samples. The total mean copper concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

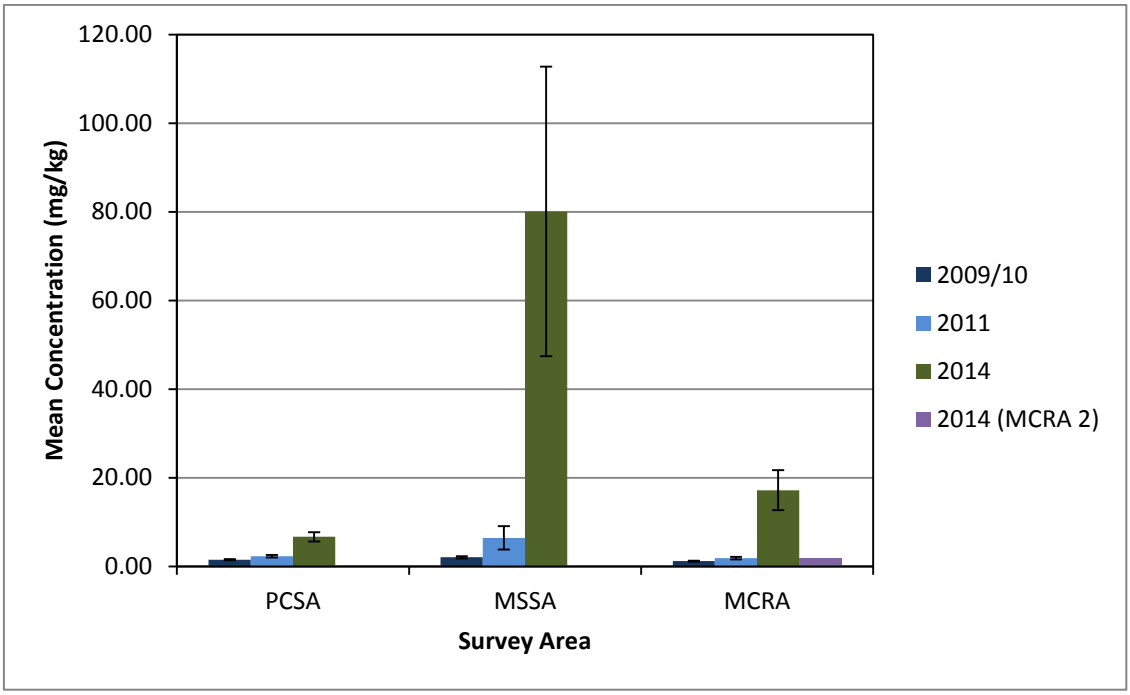


Figure 3-15: Comparison of mean total copper concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.2.4 Lead Results

The mean total lead concentrations (mg/L) in Lichen for each area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-16. Similarly to the mean arsenic, cadmium, and copper concentrations, the graph shows increased lead concentrations in 2014 across all three areas (including the reference area MCRA), with the greatest increase occurring in MSSA. But again, as with arsenic, cadmium and copper, statistical comparisons revealed that the increase in means from the PCSA and the MCRA in 2014 were of greater significance (i.e., higher F-value) than MSSA due to a lower variability among the samples (i.e., lower P-value), with PCSA showing the greatest significant increase. The high variability among the samples taken from MSSA is mainly attributed to one sample collected just south-west the mine, having a concentration of 374 mg/kg compared to a mean of 46 mg/kg among the other 9 samples. The total mean lead concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

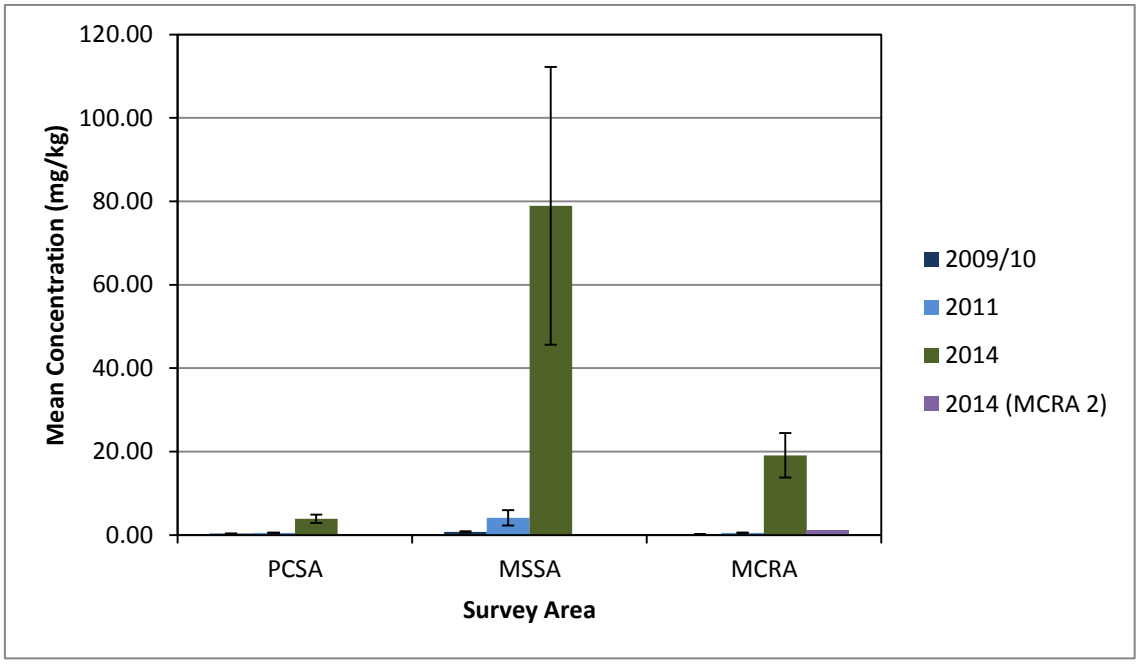


Figure 3-16: Comparison of mean total lead concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.2.5 Nickel Results

The mean total lead concentrations (mg/L) in Lichen for each area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-17. The graph shows increased nickel concentrations in 2014 across all three areas (including the reference area MCRA). However, unlike arsenic, cadmium, copper and lead, the greatest increase in the mean occurred in the PCSA, and the statistical comparisons between the means support that. The total mean lead concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

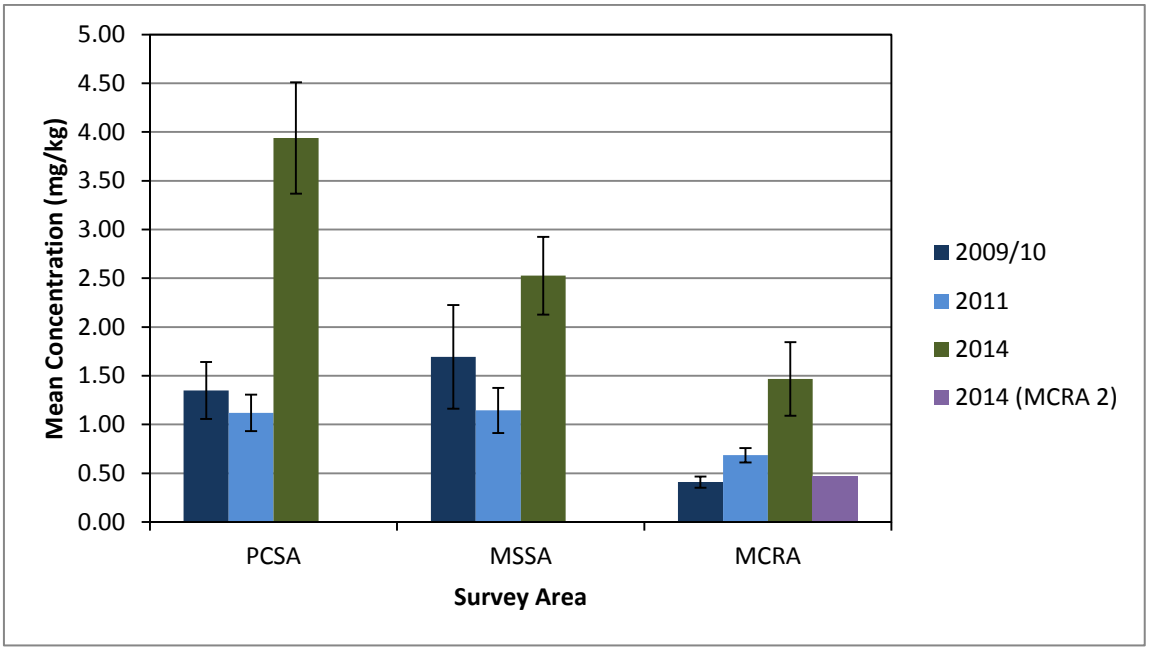


Figure 3-17: Comparison of mean total nickel concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.2.6 Selenium Results

The mean total selenium concentrations (mg/L) in Lichen for each area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-18. Once again, much like the mean increases in arsenic, cadmium, copper and lead, the graph shows an increase in mean selenium in 2014 for all three areas (including the reference area MCRA), with the greatest increase occurring in MSSA. Statistical comparisons, however, continue to reveal the most significant increase occurring in the PCSA (i.e., higher F-value), and the lowest in the MSSA due to a lower variability among the samples (i.e., lower P-value). The high variability among the samples taken from MSSA is again mainly attributed to one sample collected just south-west the mine, having a concentration of 30.9 mg/kg compared to a mean of 3.6 mg/kg among the other 9 samples. The total mean selenium concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

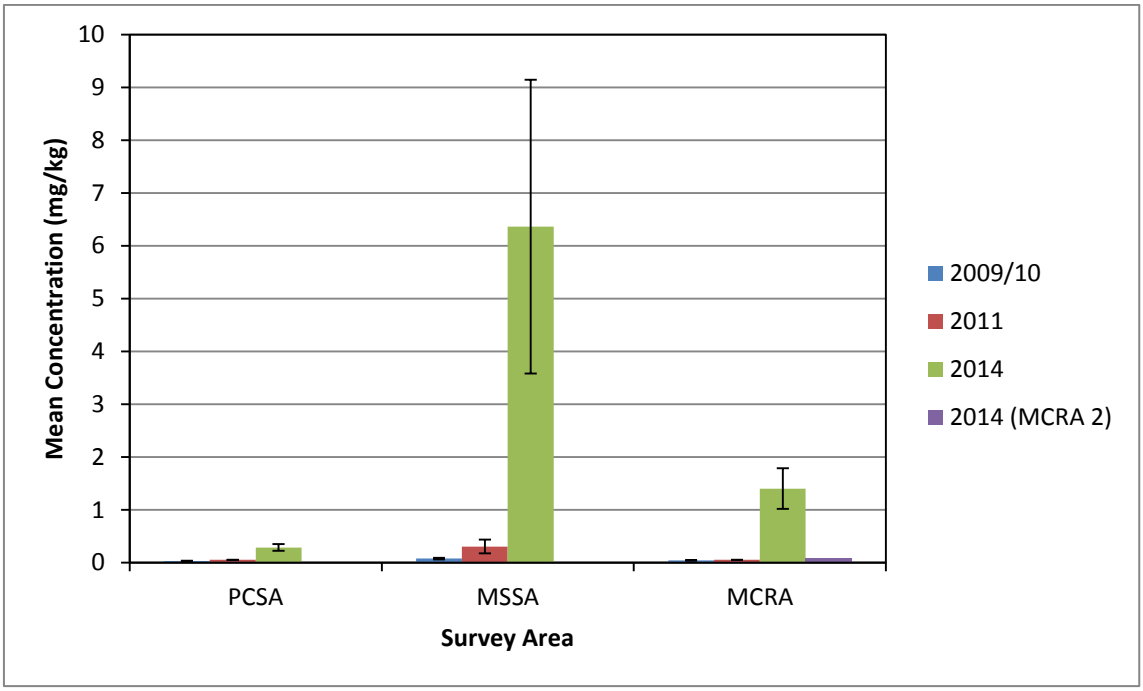


Figure 3-18: Comparison of mean total selenium concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.2.7 Zinc Results

The mean total zinc concentrations (mg/L) in Lichen for each area (MSSA, PCSA, and MCRA) across sampling periods (2009/10, 2011 and 2014) are presented in Figure 3-19. With the exception of nickel, the mean zinc concentration followed the same pattern of increase in 2014 as the other metals examined, where MSSA showed the greatest increase. Statistical comparisons continue to reveal the most significant increase occurring in the PCSA (i.e., higher F-value), and the lowest in the MSSA due to a lower variability among the samples (i.e., lower P-value). The high variability among the samples taken from MSSA is again mainly attributed to one sample collected just south-west the mine, having a concentration of 3390 mg/kg compared to a mean of 471 mg/kg among the other 9 samples. The total mean zinc concentration for the newly established MCRA 2 has a very low variability and is comparable to the results from 2009/2010 and 2011 with the original MCRA location. Refer to Appendix D for a summary of statistical comparisons.

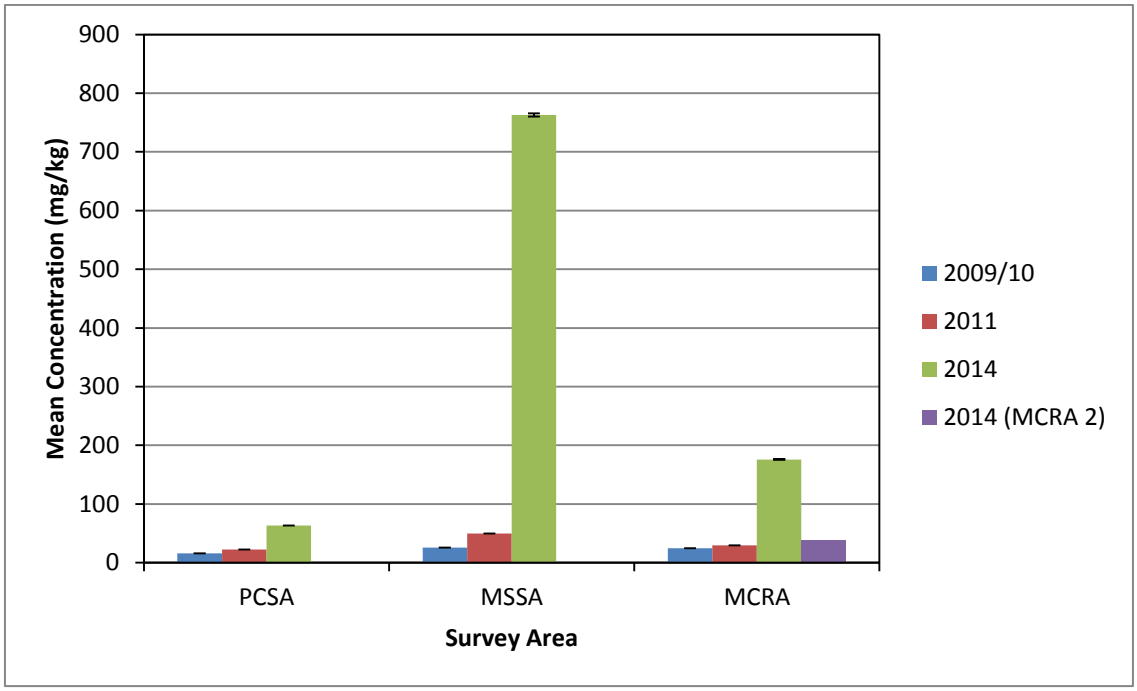


Figure 3-19: Comparison of mean total zinc concentrations of Lichen samples among the three study areas (PCSA, MSSA and MCRA) over time (2009/10, 2011, and 2014).

3.4.3 Quality Assurance / Quality Control Results

Triplicate samples were collected for 4 of the 40 (10%) vegetation samples during the 2014 sampling program for Quality Assurance/Quality Control (QA/QC) purposes. A stratified-random sampling approach was employed, where a triplicate was collected within each study area for a given vegetation type but was also randomly selected within each strata grouping (see Table 3-7 for sample distribution in 2014). This ensured an even distribution of triplicates across the various study areas and vegetation types, while avoiding bias toward sampling at a more desirable/convenient sampling location within a given study area.

Table 3-7: QA/QC sample distribution 2014

	QA/QC samples per monitoring samples taken (#QA/QC samples/# monitoring samples)		
Species	**MSSA**	**PCSA**	**MCRA**
Lichen	2/10	1/10	1/10

A summary of standard deviations calculated from triplicate samples for Lichen collected in 2014 is provided in Table 3-8. Values less than detection were taken to be the detection limit when calculating the standard deviation. Results from 3 of the 4 triplicate control samples indicated consistency for sampling technique. The one exception was the triplicate sample taken at 2014-MS6-CLAD-STN6, which resulted in an average standard deviation of 135 and was an obvious outlier (i.e., far from the mean) from the rest of the samples. Apart from that sample, the results for six out of seven parameters of concern (i.e., arsenic, cadmium, copper, lead, nickel and selenium) had low standard deviations across the majority of metals analysied. Zinc, lead and copper generally had much higher standard deviations, indicating high variability between the samples.

Table 3-8: 2014 QA/QC results for Lichen (*Cladina stellaris*) for the potential parameters of concern

Sample ID's	Sample Date	Arsenic	Cadmium	Copper	Lead	Nickel	Selenium	Zinc
2014-MS4-CLAD-STN2-A, -B, & -C	18/08/2014	0.36	0.70	10.39	9.57	0.20	0.94	95.00
2014-MS6-CLAD-STN6-A, -B, & -C	18/08/2014	11.44	8.45	102.37	40.51	0.25	8.17	745.86
2014-PC2-CLAD-STN2-A, -B, & -C	25/08/2014	0.05	0.11	0.59	0.20	0.20	0.02	11.02
2014-MC1-CLAD-STN5-A, -B, & -C	26/08/2014	0.22	0.27	2.63	6.07	1.21	0.17	16.92
Ave. Stan. Dev.		**5.90**	**4.57**	**56.38**	**25.04**	**0.22**	**4.55**	**420.43**
No. of Samples		**3**	**3**	**3**	**3**	**3**	**3**	**3**

3.4.4 2014 Summary of Metals in Vegetation Results

The 2014 data identifies significantly higher mean metal concentrations in Lichen across all areas surveyed when compared to past (2009/10 and 2011) sampling periods. The samples taken along the road (PCSA) indicated the greatest significant (i.e., statistical) difference, due to low variability within the data set. The samples taken around the Mine Site (MSSA) indicated the greatest difference between means but showed a lower significant difference due to a higher variability among the data set.

The source of these increases is most likely airborne, in the form of dust from the road in the PCSA and MCRA, and a combination of dust/fumes from the mining activities in the MSSA. Water quality samples taken within adjacent creeks did not show any major differences from past sampling periods (refer to *2014 Monitoring and Surveillance Plan Annual Report*), so is unlikely the contaminant source.

The location of the original control (MCRA) was poorly selected, since it is directly downwind from the road. While it did not indicate as high mean concentrations as those found in the PCSA, it did indicate an increase, and therefore should be continued to be monitored in future sampling periods.

The newly established control site (MCRA 2) was properly selected, as there is a land barrier (i.e., mountain) dividing it from the Mine Site and its activities. The results show that mean metal concentrations were comparable to the baseline concentrations from all three areas (PCSA, MSSA, and MCRA) and can be used as a reliable control in future sampling periods.

3.5 Small Mammals Metals Program

As prescribed in the Wildlife Protection Plan, data collection for the small mammal metals levels monitoring program was continued in July and August 2014. Small mammal samples were trapped and collected according to the methods outlined in *WPP Appendix G*. However, as per comments made by the Wildlife Technical Committee following a review of the 2011 program results, whole body metals analysis was only conducted (i.e., no dissection and analysis of kidney, liver and muscle tissue), and only Red Back Vole species (*Clethrionomys rutilus*) were run through whole body analysis.

The samples were digested in a nitric acid/hydrogen peroxide/hydrochloric bath which eradicates the organic matrix and dissolves the metals in the sample. The remaining solution was analyzed by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) and Inductively Coupled Plasma Mass Spectroscopy (ICP-MS). Small mammal samples were analyzed for 30 elements at the specified laboratory Reportable Detection Limits (RDLs) outlined in Table 3-9. The identified metals of concern selected for statistical analysis are arsenic, copper, lead, nickel, selenium, cadmium, and zinc.

Table 3-9: Total metal analysis parameters with reportable detection limits

Element	Symbol	RDL (mg/kg)	Element	Symbol	RDL (mg/kg)	Element	Symbol	RDL (mg/kg)
Aluminum	Al	0.2	**Copper**	Cu	0.01	**Silver**	Ag	0.004
Antimony	Sb	0.001	**Iron**	Fe	2	**Sodium**	Na	2
Arsenic	As	0.01	**Lead**	Pb	0.002	**Strontium**	Sr	0.02
Barium	Ba	0.02	**Magnesium**	Mg	2	**Thallium**	Tl	0.0004
Beryillium	Be	0.02	**Manganese**	Mn	0.02	**Tin**	Sn	0.02
Bismuth	Bi	0.02	**Mercury**	Hg	0.01	**Titanium**	Ti	0.2
Boron	B	0.4	**Molybdenum**	Mo	0.002	**Uranium**	U	0.0004
Cadmium	Cd	0.002	**Nickel**	Ni	0.01	**Vanadium**	V	0.04
Calcium	Ca	2	**Phosphorus**	P	2	**Zinc**	Zn	0.04
Chromium	Cr	0.04	**Potassium**	K	2			
Cobalt	Co	0.004	**Selenium**	Se	0.01			

3.5.1 2014 Sampling Schedule, Distribution and Analysis

The same transect locations that were used in 2009 and 2011 were used; except for PCSA-02, PCSA-04, and PCSA-05, which had a trap success of 5% or lower in 2009, and MSSA-03 since the specimen quota (based on wildlife permit) was already met before attempting it. Transects MCRA-04 and MCRA-05 were attempted but the volume of water in those areas was significant at the time of sampling, compounded by heavy rains but possibly affected by a Beaver dam located downstream. As per requests by the Wildlife Technical Committee in 2012 (reported in section 3.7 of the *Wildlife Protection Plan – 2012 Annual Report*), an additional 600 m transect was established as a reference (i.e., control) site in an area completely isolated from potential impacts from the mine. Table 3-10 summarizes the coordinates for the Points of Commencement (POC) and Points of Termination (POT) for each transect, as well as the transect lengths and sampling dates. Trap nights were kept to a minimum based on the allowable quota described in the Wildlife Permit. A map describing all transect locations is provided in Figure 3-20.

Table 3-10: Small mammal transect summary and sampling schedule

Study Area	Transect ID	POC		POT		Transect Length	2014 Sampling Schedule		
		Easting	Northing	Easting	Northing	(m)	Start Date	End Date	Trap Nights
MCRA	MCRA-04	443220	6805681	443394	6805169	600	29-Jul-14	30-Jul-14	1
	MCRA-06	437541	6809757	437614	6809678	600	26-Jul-14	30-Jul-14	4
MSSA	MSSA-01	442583	6808559	442658	6808682	150	18-Jul-14	20-Jul-14	2
	MSSA-02	441552	6808807	441645	6808694	150	18-Jul-14	19-Jul-14	1
	MSSA-04	438967	6811245	439045	6811168	150	18-Jul-14	19-Jul-14	1
	MSSA-05	440576	6810049	440476	6810162	150	18-Jul-14	20-Jul-14	2
	MSSA-06	439318	6811289	439372	6811427	150	18-Jul-14	20-Jul-14	2
PCSA	PCSA-01	443561	6806334	443654	6806219	150	21-Jul-14	24-Jul-14	3
	PCSA-03	448680	6809207	448616	6809323	150	21-Jul-14	24-Jul-14	3
	PCSA-06	452848	6818635	452799	6818491	150	21-Jul-14	24-Jul-14	3

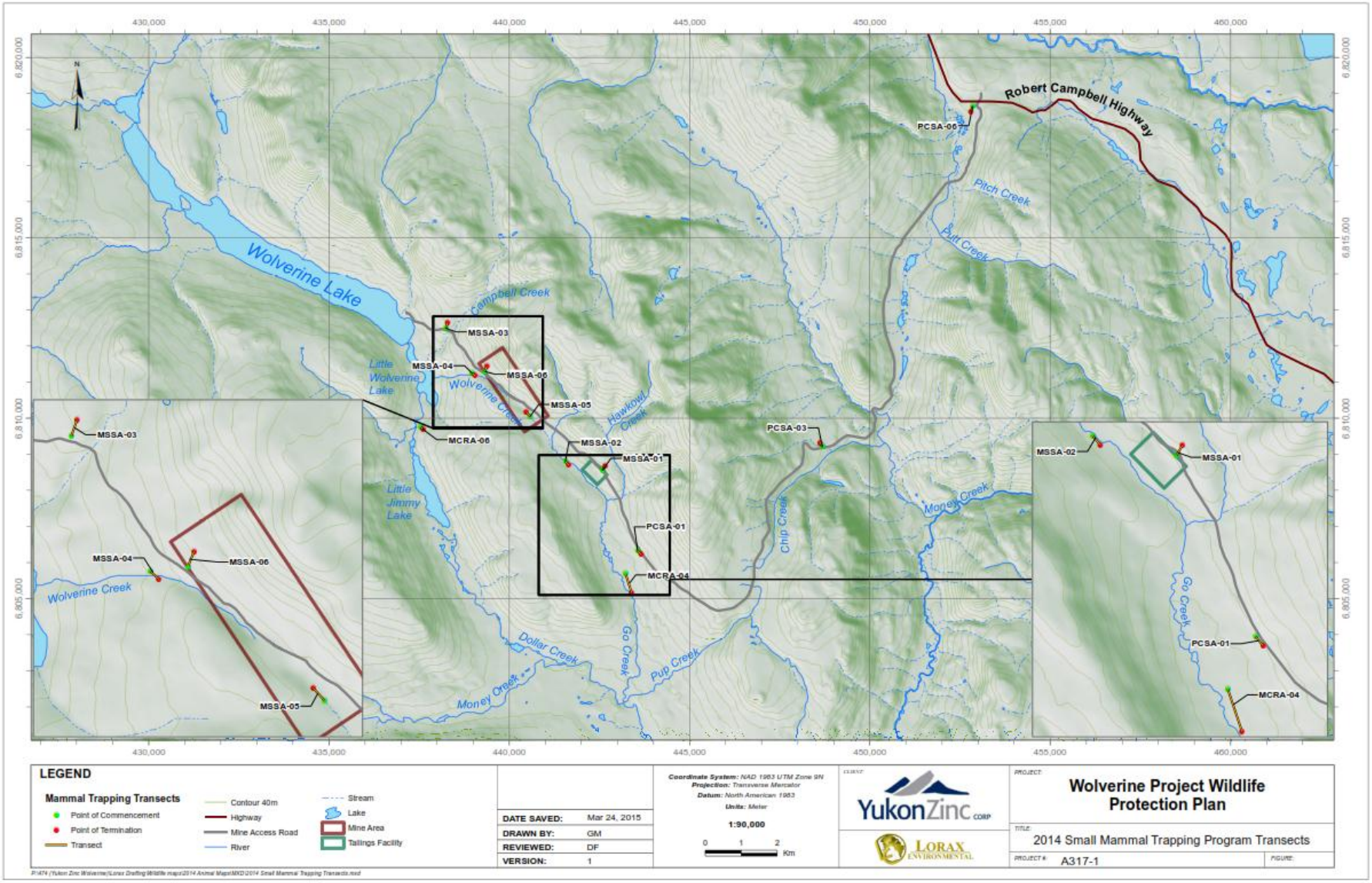


Figure 3-20: 2014 small mammal sampling distribution

The trapping program yielded 4 different small mammal species, which are listed in Table 3-11. Whole body analyses were performed on the Redback Vole only.

Table 3-11: Summary of small mammal species collected in the three study areas (MCRA, MSSA and PCSA) and the laboratory analysis performed

Species Code	Species	Analysis	MCRA	MSSA	PCSA
CLRU	Redback Vole (*Clethrionomys rutilus*)	Whole Body	16	22	20
MIPE	Meadow Vole (*Microtus pennsylvanicus*)	None	5	7	3
ZAHA	Jumping Mouse (*Zapus hudsonius)*	None	2	0	0
SOCI	Masked Shrew (*Sorex cinereus*)	None	1	1	8
Bird Sp.	Gray Jay (*Perisoreus canadensis*)	None	0	1	0

Statistical comparisons using Analysis of Variance (ANOVA) were made to determine if significant differences in the mean metal concentrations exist between 2011 and 2014 sampling periods. When making comparisons, a 95% confidence value (α = 0.05) was used. The results of the ANOVA tests are summarized in Appendix D to support the graphs generated for each metal type examined. For statistical and graphing purposes, parameters that were below the detection limit were taken as equal to the detection limit.

3.5.2 2014 Methodology for Metals Analysis

The relative abundance of the Redback Vole (compared to other vole/shrew species previously captured in 2009) across all three study areas, coupled with the species' importance in the region as a first level consumer, demonstrates a good bio-marker for the purposes of this and future studies. This species was therefore selected as the focal point of the Small Mammals Metals Program, and the sampling effort was adjusted accordingly to ensure robust statistical comparisons could be made, whilst minimizing unnecessary environmental impact. The Wildlife Technical Committee were in agreement with this, as reported in the *2012 Wildlife Protection Annual Report*.

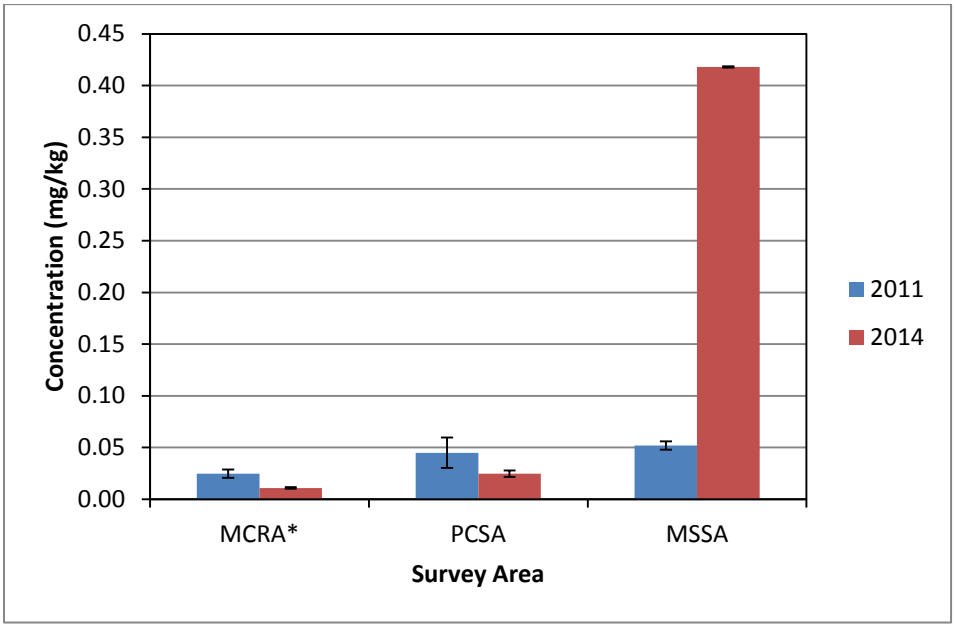
Parameters of concern are identified as being arsenic, copper, lead, nickel, selenium, cadmium, and zinc and have been examined in detail in sections 3.5.2.1 to 3.5.2.7, respectively (a summary of all raw data is provided in Appendix E). Statistical comparisons using Analysis of Variance (ANOVA) were used to determine if significant differences exist between the mean total metal concentrations among survey areas (PCSA and MSSA) and reference area (MCRA) over time (i.e., between samples collected in 2011 and 2014). The results from these statistical comparisons are provided in Appendix D but are discussed in sections 3.5.2.1 to 3.5.2.7, along with the graphical representations of the means between sampling periods for each metal examined.

A difference being deemed significant simply means that it is reliable, or that it did not happen by chance. When making comparisons, a 95% confidence value (α = 0.05) was used. Hence, if a statistic is found to be significantly greater than another, one can be 95% confident that the difference is reliable/true, and did not happen by chance. For statistical and graphing purposes, parameters that were below the detection limit were taken as equal to the detection limit.

3.5.2.1 Arsenic Results

The mean total arsenic concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-21. Statistical comparisons revealed that the mean arsenic concentration in the MSSA was significantly higher in 2014 than 2011, with a very low variability among the data set (P-value = 0.0002). In contrast, the

mean arsenic concentrations in the PCSA were not significantly different between sampling periods. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean arsenic concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.

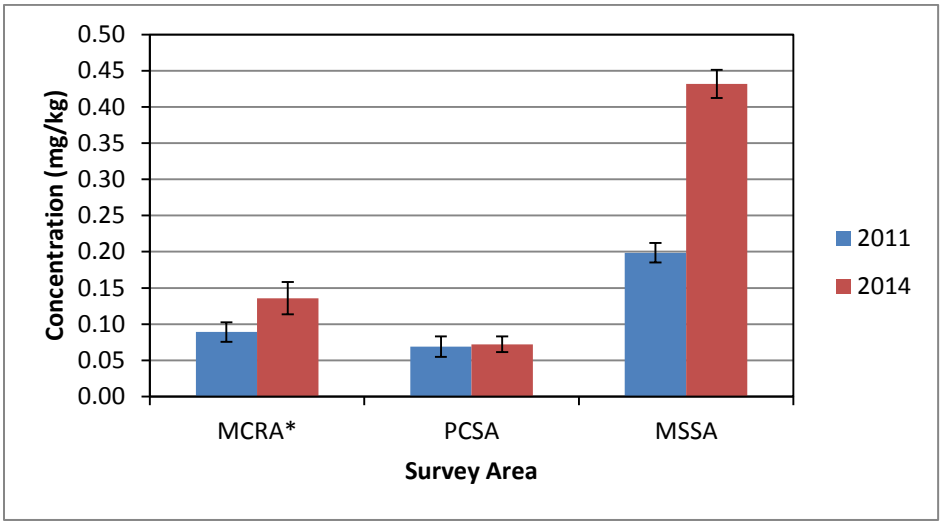


*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-21: Comparison of 2011 and 2014 mean total arsenic concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.2.2 Cadmium Results

The mean total cadmium concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-22. Similarly to the arsenic results, statistical comparisons revealed cadmium concentration in the MSSA significantly higher in 2014 than 2011, but with not as much certainty (F-value just above the F-critical). Mean cadmium concentrations in the PCSA were not significantly different between sampling periods. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean cadmium concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.

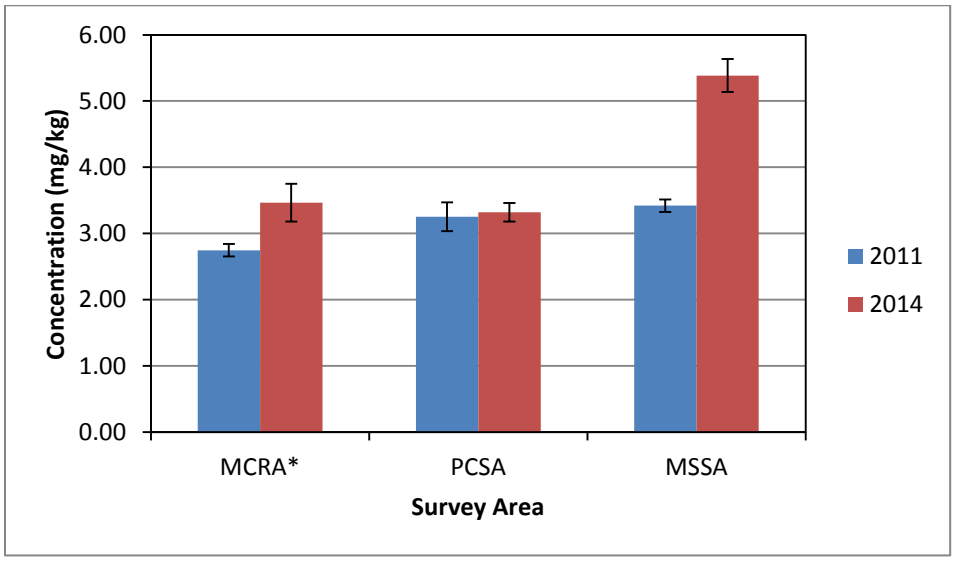


*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-22: Comparison of 2011 and 2014 mean total cadmium concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.2.3 Copper Results

The mean total copper concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-23. Statistical comparisons revealed that the mean copper concentration in the MSSA was significantly higher in 2014 than 2011, with a very low variability among the data set (P-value = 0.003). In contrast, the mean copper concentrations in the PCSA were not significantly different between sampling periods. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean copper concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.

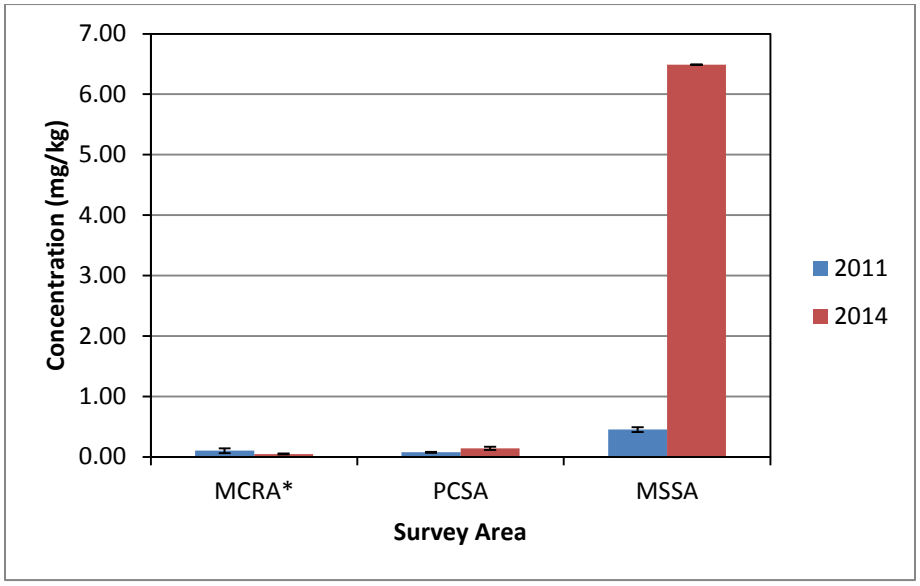


*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-23: Comparison of 2011 and 2014 mean total copper concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.2.4 Lead Results

The mean total lead concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-24. Statistical comparisons revealed that the mean lead concentration in the MSSA was significantly higher in 2014 than 2011, with a very low variability among the data set (P-value = 0.001). The mean lead concentrations in the PCSA were also significantly higher in 2014 but at a very low concentration. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean lead concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.

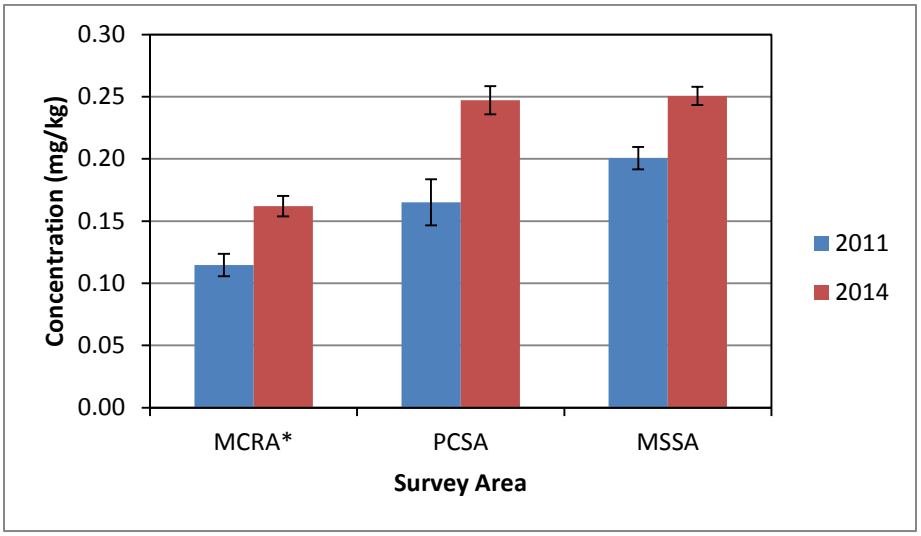


*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-24: Comparison of 2011 and 2014 mean total lead concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.2.5 Nickel Results

The mean total nickel concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-25. Statistical comparisons revealed that the mean nickel concentration in the MSSA was not significantly higher in 2014 than 2011. The mean nickel concentration in the PCSA was significantly higher in 2014 when compared to 2011. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean nickel concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.

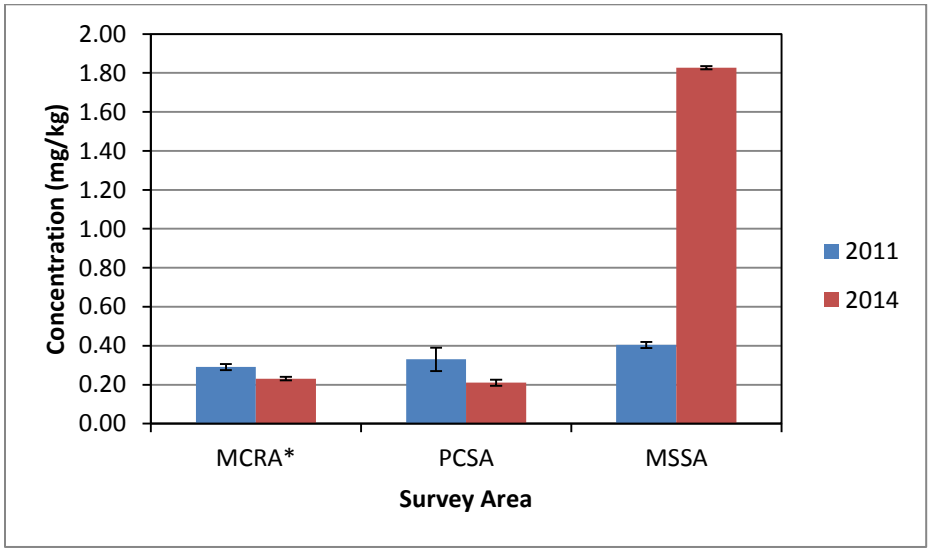


*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-25: Comparison of 2011 and 2014 mean total nickel concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.2.6 Selenium Results

The mean total selenium concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-216. Statistical comparisons revealed that the mean selenium concentration in the MSSA was significantly higher in 2014 than 2011, with an extremelly low variability among the data set (P-value = 0.00001). In contrast, the mean selenium concentrations in the PCSA were not significantly different between sampling periods. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean selenium concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.

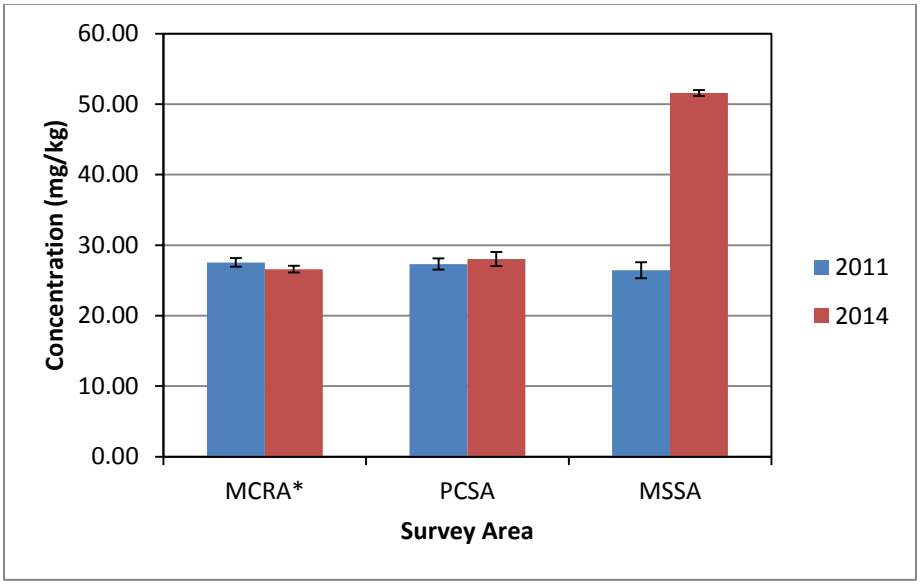


*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-26: Comparison of 2011 and 2014 mean total selenium concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.2.7 Zinc Results

The mean total zinc concentrations (mg/L) in Redback Voles for each area (MSSA, PCSA, and MCRA) across sampling periods (2011 and 2014) are presented in Figure 3-217. Statistical comparisons revealed that the mean zinc concentration in the MSSA was significantly higher in 2014 than 2011, with a very low variability among the data set (P-value = 0.0002). In contrast, the mean zinc concentrations in the PCSA were not significantly different between sampling periods. The newly established sampling transect in the MCRA (i.e., MCRA 2) resulted in a mean zinc concentration comparable to 2011. Refer to Appendix F for a summary of statistical comparisons.



*The sampling location of MCRA in 2014 is different than in 2011 (see section 3.5.1 for explanation)

Figure 3-27: Comparison of 2011 and 2014 mean total zinc concentrations found in the whole body analysis of Redback Voles within the three study areas.

3.5.3 Quality Assurance / Quality Control Results

Lab duplicate samples were conducted for 3 of the 10 (10%) small mammal samples for Assurance/Quality Control (QA/QC) purposes. A summary of standard deviations calculated from triplicate samples for Lichen collected in 2014 is provided in Table 3-8. Values less than detection were taken to be the detection limit when calculating the standard deviation. Results from all 3 duplicate control samples indicated a consistency for sampling technique (standard deviation less than 1.5).

Table 3-12: 2014 QA/QC results for Lichen (*Cladina stellaris*) for the potential parameters of concern

Sample ID's	Arsenic	Cadmium	Copper	Lead	Nickel	Selenium	Zinc
2014-CLRU-MCRA06-67	0.00	0.08	1.58	0.01	0.02	0.14	17.36
2014-CLRU-MSSA01-04	0.00	0.00	0.03	0.08	0.00	0.04	1.20
2014-CLRU-PCSA01-32	0.00	0.01	0.06	0.02	0.01	0.01	0.49
Ave. Stan. Dev.	**0.00**	**0.03**	**0.55**	**0.04**	**0.01**	**0.06**	**6.35**
No. of Samples	**3**	**3**	**3**	**3**	**3**	**3**	**3**

3.5.4 2014 Summary of Metals in Small Mammals Results

With the exception of Nickel, the 2014 data indicated significantly higher mean metal concentrations in Redback Voles within the MSSA when compared to 2011 means. Conversely, the samples taken along the road (PCSA) indicated no significant differences between 2014 and 2011 metal concentration means.

Similar to the vegetation results, the source of the increase around the Mine Site is most likely a combination of dust/fumes from the mining activities. Water quality samples taken within adjacent creeks did not show any major differences from past sampling periods (refer to *2014 Monitoring and Surveillance Plan Annual Report*), so is unlikely the contaminant source.

The newly established control site (MCRA 2) was properly selected, as there is a land barrier (i.e., mountain) dividing it from the Mine Site and its activities. The results show that mean metal concentrations were comparable to the baseline concentrations from all three areas (PCSA, MSSA, and MCRA) and can be used as a reliable control in future sampling periods

3.6 Tailings Facility Monitoring

Bird surveys were conducted during the spring and fall 2014 at the Tailings Facility monitoring station and the three reference stations (Piper Lake, Little Wolverine Lake, and Johnson Jules Lake), as prescribed in the *Wildlife Protection Plan*. Table 3-13 describes the vegetation characteristics of the Tailings Facility Monitoring Station and the three Reference Stations, and Figure 3-28 provides a map of their respective locations.

Table 3-13: Location description and vegetation characteristics of the Tailings Facility Monitoring Station and the 3 Reference Stations

Station	Stn. No.	Station Vegetation Characteristics											Comments
		Location Coordinates		Total Vegetation % Cover	Tree Layer		Shrub Layer		Forb Layer		Ground % Cover	Water % Cover	
		Easting	Northing		% Cover	Species	% Cover	Species	% Cover	Species			
Tailings Facility	TRP-1	442737	6808318	**5**	35	Spruce dominated	35	Willow dominated	30	Horsetail dominated	**15**	**80**	TRP-1 = Tailings Reference Point, where a photo will be taken every season moving forward
	BSS-1	442565	6808482	**5**	35	Spruce dominated	35	Willow dominated	30	Horsetail dominated	**15**	**80**	BSS-1 = Bird Survey Station #1
Piper Lake	BRS-1	450595	6810685	**30**	20	Spruce dominated	40	Willow dominated	40	Lichen dominated on slopes, Horsetail dominated near waters edge	**0**	**70**	BRS-1 = Bird Reference Station #1
Little Wolverine Lake	BRS-2	437422	6812159	**20**	30	Spruce dominated with some stands of Poplar	40	Buckbrush and Willow dominated	30	Even distribution of Hudson Bay, Blueberry, Lichen, and horsetail	**5**	**75**	BRS-1 = Bird Reference Station #2
Johnson Jules Lake	BRS-3	450939	6814248	**10**	30	Spruce dominated with some stands of Poplar	50	Buckbrush and Willow dominated	20	mainly grass moss	**5**	**85**	BRS-1 = Bird Reference Station #3

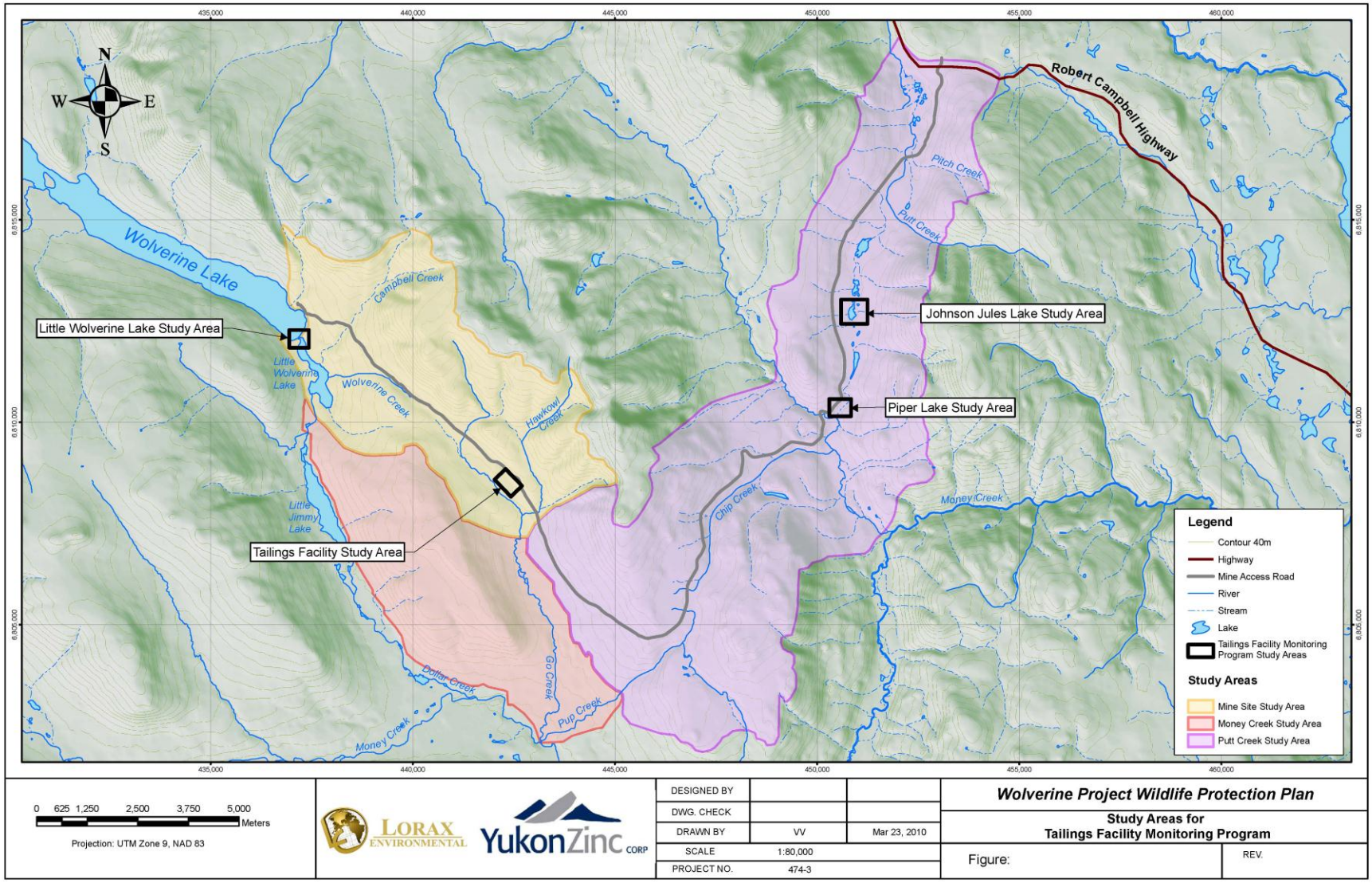


Figure 3-28: Location of Tailings Study Area, Piper Lake Study Area, Little Wolverine Lake Study Area and Johnson Jules Lake Study Area

The results from the bird surveys are summarized in Table 3-144 (Tailings Facility), Table 3-15 (Piper Lake),

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenile**	**Comments**
May 21st	BRS-1	9:30	Mallard (*Anas platyrhynchos*)			3		swimming/forging/bathing
	BRS-1	9:40	Bonaparte's Gull (*Larus philadelphia*)	1	1			diving for fish
	BRS-1	9:45	Spotted sandpiper (*Actitis macularius*)			2		walking/forging along shore
June 17th	BRS-1	10:00	Mallard (*Anas platyrhynchos*)	1	5			Swimming/foraging
	BRS-1	10:05	Spotted sandpiper *(Actitis macularius)*			2		Foraging along the bank
	BRS-1	10:10	Greater Scaup (*Aythya marila*)			3		Swimming/foraging
	BRS-1	10:20	Belted Kingfisher (*Megaceryle alcyon*)			1		Flying around pond area looking for prey
Oct. 6th	BRS-1	10:10	Greater Scaup (*Aythya marila*)	4	2		1	swimming and forging
	BRS-1	10:14	Mallard (*Anas platyrhynchos*)	2	4			flew away
	BRS-1	10:18	Lesser yellowlegs (*Tringa flavipes*)			3		lesser yellow legs (forging along shore)
	BRS-1	10:25	Barrow's Goldeneye (*Bucephala islandica*)	6	2			swimming and forging
Oct. 11th	BRS-1	10:45	Mallard (*Anas platyrhynchos*)	2	4			same as one before (hudling together)
	BRS-1	10:48	Mew Gull (*Larus canus*)			2		flying over and landed in pond
	BRS-1	10:50	Spotted sandpiper (*Actitis macularius*)			1		forging along shore
	BRS-1	11:00	Sandhill Crane (*Grus canadensis*)			40		flew over head
Total				**16**	**18**	**57**	**1**	**92**

Table 3-166 (Little Wolverine Lake), and

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenile**	**Comments**
June 21st	BRS-2	13:40	Common Loon (*Gavia immer*)	1	1			Diving for food
	BRS-2	13:45	Common Goldeneye (*Bucephala clangula*)			6		Grouped In the middle of the lake
	BRS-2	13:48	Spotted sandpiper (*Actitis macularius*)			1		Foraging along shore

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenille**	**Comments**
	BRS-2	13:55	White-winged Scoter (*Melanitta fusca*)		3			Foraging close shore, then fly away together
	BRS-2	13:58	Surf Scoter (*Melanitta perspicillata*)	16	6			grouped in bay
	BRS-2	14:05	Buffle Head (*Bucephala albeola*)	2	1			Foraging near shore
Oct. 12th	BRS-2	14:00	Common Loon (*Gavia immer*)			2		calling
	BRS-2	14:10	Arctic Tern (*Sterna paradisaea*)			5		forging at confluence
	BRS-2	14:20	Bald Eagle (*Haliaeetus leucocephalus*)				1	perched
	BRS-2	14:22	Common Goldeneye (*Bucephala clangula*)			4		forging along shore.
Total				**19**	**11**	**18**	**1**	**49**

Table 3-1717 (Johnson Jules Lake).

Table 3-14: Summary of 2014 results from the bird surveys conducted at the Tailings Facility Monitoring Station

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenille**	**Comments**
May 9th	BSS-1	11:05	Mallard (*Anas platyrhynchos*)			4		swimming, took off
	BSS-1	11:35	Mew Gull (*Larus canus*)			10		swimming, took off
	BSS-1	12:10	Sandhill Crane (*Grus canadensis*)			11		walking on tailings - scared off with bear bangers
May 21st	BSS-1							No birds observed
June 14th	BSS-1							No birds observed
Sept. 21st	BSS-1							No birds observed
Oct. 6th	BSS-1							No birds observed
Oct. 12th	BSS-1							No birds observed
Total				**0**	**0**	**25**	**0**	**25**

Table 3-15: Summary of 2014 results from the bird surveys conducted at the Piper Lake Reference Station

				No. of Birds				
Date	**Stn.**	**Time**	**Species**	**Adult**	**Adult**	**Uncl.**	**Juvenille**	**Comments**

	No.	(24 hour)		Female	Male	Adult		
May 21st	BRS-1	9:30	Mallard (*Anas platyrhynchos*)			3		swimming/forging/bathing
	BRS-1	9:40	Bonaparte's Gull (*Larus philadelphia*)	1	1			diving for fish
	BRS-1	9:45	Spotted sandpiper (*Actitis macularius*)			2		walking/forging along shore
June 17th	BRS-1	10:00	Mallard (*Anas platyrhynchos*)	1	5			Swimming/foraging
	BRS-1	10:05	Spotted sandpiper *(Actitis macularius)*			2		Foraging along the bank
	BRS-1	10:10	Greater Scaup (*Aythya marila*)			3		Swimming/foraging
	BRS-1	10:20	Belted Kingfisher (*Megaceryle alcyon*)			1		Flying around pond area looking for prey
Oct. 6th	BRS-1	10:10	Greater Scaup (*Aythya marila*)	4	2		1	swimming and forging
	BRS-1	10:14	Mallard (*Anas platyrhynchos*)	2	4			flew away
	BRS-1	10:18	Lesser yellowlegs (*Tringa flavipes*)			3		lesser yellow legs (forging along shore)
	BRS-1	10:25	Barrow's Goldeneye (*Bucephala islandica*)	6	2			swimming and forging
Oct. 11th	BRS-1	10:45	Mallard (*Anas platyrhynchos*)	2	4			same as one before (hudling together)
	BRS-1	10:48	Mew Gull (*Larus canus*)			2		flying over and landed in pond
	BRS-1	10:50	Spotted sandpiper (*Actitis macularius*)			1		forging along shore
	BRS-1	11:00	Sandhill Crane (*Grus canadensis*)			40		flew over head
Total				**16**	**18**	**57**	**1**	**92**

Table 3-16: Summary of 2014 results from the bird surveys conducted at the Little Wolverine Reference Station

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenille**	**Comments**
June 21st	BRS-2	13:40	Common Loon (*Gavia immer*)	1	1			Diving for food
	BRS-2	13:45	Common Goldeneye (*Bucephala clangula*)			6		Grouped In the middle of the lake
	BRS-2	13:48	Spotted sandpiper (*Actitis macularius*)			1		Foraging along shore
	BRS-2	13:55	White-winged Scoter (*Melanitta fusca*)		3			Foraging close shore, then fly away together
	BRS-2	13:58	Surf Scoter (*Melanitta perspicillata*)	16	6			grouped in bay

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenille**	**Comments**
	BRS-2	14:05	Buffle Head (*Bucephala albeola*)	2	1			Foraging near shore
Oct. 12th	BRS-2	14:00	Common Loon (*Gavia immer*)			2		calling
	BRS-2	14:10	Arctic Tern (*Sterna paradisaea*)			5		forging at confluence
	BRS-2	14:20	Bald Eagle (*Haliaeetus leucocephalus*)				1	perched
	BRS-2	14:22	Common Goldeneye (*Bucephala clangula*)			4		forging along shore.
Total				**19**	**11**	**18**	**1**	**49**

Table 3-17: Summary of 2014 results from the bird surveys conducted at the Johnson Jules Lake Reference Station

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenille**	**Comments**
June 17th	BRS-3	11:15	Trumpeter Swan (*Cygnus buccinator*)	1	1			Waddling at end of lake
	BRS-3	11:17	Greater Scaup (*Aythya marila*)			16		Swimming
	BRS-3	11:20	Common Goldeneye (*Bucephala clangula*)			8		Foraging along shore
	BRS-3	11:22	Belted Kingfisher (*Megaceryle alcyon*)			1		Flying around lake - preying/diving
	BRS-3	11:30	Surf Scoter (*Melanitta perspicillata*)			4		(MAPE) swimming around.
	BRS-3	11:32	Northern Harrier (*Circus cyaneus*)		1			Perched in tree above lake
Oct. 6th	BRS-3	9:30	Greater Scaup (*Aythya marila*)			12	2	Foraging below water
	BRS-3	9:35	Trumpeter Swan (*Cygnus buccinator*)	1	1			Grooming
	BRS-3	9:38	Belted Kingfisher (*Megaceryle alcyon*)			1		Calling/flying/diving
	BRS-3	9:40	Common Goldeneye (*Bucephala clangula*)					Swam close to shore
	BRS-3	9:42	Green-winged Teal (*Anas crecca*)			4		Swimming
Oct. 11th	BRS-3	11:20	Trumpeter Swan (*Cygnus buccinator*)			2		hanging out at end of lake
	BRS-3	11:25	Green-winged Teal (*Anas crecca*)	6	2			near station forging in shallows
	BRS-3	11:28	Belted Kingfisher (*Megaceryle alcyon*)			1		flying , calling overhead

				No. of Birds				
Date	**Stn. No.**	**Time (24 hour)**	**Species**	**Adult Female**	**Adult Male**	**Uncl. Adult**	**Juvenile**	**Comments**
	BRS-3	11:35	Greater Scaup (*Aythya marila*)			14		swimming/fishing
	BRS-3	11:40	Lesser yellowlegs (*Tringa flavipes*)			2		forging along shore
Total				**8**	**5**	**65**	**2**	**80**

The number of surveys conducted at each station decreased in 2014, with the most surveys conducted at the Tailings Facility and the least number of surveys conducted at Little Wolverine Lake (Table 3-18). The number of species observed at each reference area in 2014 also decreased with the lower effort, as many migratory species may have occupied the areas at different times during the transition seasons. The species count at the Tailings Facility slightly decreased from the previous years (Table 3-18), as expected due to the success of the newly employed deterrent measures.

Table 3-18: Summary of bird survey effort comparing species count between 2011, 2012, 2013 and 2014

		Tailings Facility	Piper Lake	Little Wolverine Lake	Johnson Jules Lake
2011	# of Surveys	9	10	6	5
	Species Count	7	13	12	9
2012	# of Surveys	6	6	7	6
	Species Count	4	16	20	28
2013	# of Surveys	9	6	3	5
	Species Count	4	16	13	17
2014	# of Surveys	6	4	2	3
	Species Count	3	9	8	8

3.7 Regional Wildlife Monitoring Programs

In 2014, YZC did not make a contribution to the Finlayson Caribou herd fall composition survey in the Ross River region. This was due to financial constraints. The survey did take place, however, and reporting on the survey results were conducted by Yukon Environment and are not contained herein.

3.8 Monitoring Program Recommendations for 2014

Based on the results herein, both the Lichen species (*Cladina stellaris*), and the selected Vole species (Redback Vole, or *Clethrionomys rutilus*) proved to be good indicator species. Both sampling programs identified localized areas of potential contamination from mine related activities, particularly around the north-west end of the Mine Site where wind may be displacing debris. It is therefore recommended that these studies continue moving forward and techniques be employed

(e.g., dust suppression) to mitigate airborne debris (e.g., dust, fumes) and reduce any potential contamination from continuing.

4 Summary

In 2014 Yukon Zinc completed the following activities required by *Wildlife Protection Plan V2009-01* under *QML-0006*:

- Conducted incidental monitoring of wildlife in and around the Mine site;
- Conducted monitoring of winter wildlife transects from January – April, and from October – December;
- Conducted vegetation sampling of lichen in the three study areas and subsequent analysis for metal concentrations to supplement and compare with previous data sets, as per the Metals in Vegetation Monitoring Program;
- Conducted small mammals sampling of the Redback Vole (indicator species) in the three study areas and subsequent metal concentration analysis to continue the Metals in Small Mammals Monitoring Program;
- Establishment of a new sampling location within the MCRA for vegetation and small mammal sampling as a suitable control/reference site for future sampling moving forward; and,
- Continued the Tailings Facility Monitoring Program, and conducted bird surveys during the spring and fall migration periods.

Appendix A

Wildlife Records Program - YZC 2014 Wildlife Log

Date	Location	Species	# of Animals	Activity
03-Jan-14	km 27-29	Shrew	1	Running along boardwalk
03-Jan-14	km 27-29	Shrew	1	catching air off bumps in the parking lot
07-Jan-14	Access road	Cow moose	2	Cow and calf near by as cow would not leave area.
15-Jan-14	Camp Complex	Fox	1	Trying to get into mend dry
03-Feb-14	Camp Complex	ptarmigan	20	In bush behind camp
06-Feb-14	Access road	Cow and calf moose	2	cow and calf
10-Feb-14	Access road	moose	2	Cow and calf beaded down
04-Mar-14	Access road	moose	2	Grazeing
21-Mar-14	Camp Complex	Snow bunting	10	feeding on grass
28-Mar-14	Camp Complex	ptarmigan	25	Forging/burrowing
19-Apr-14	Tailings/landfill area	ptarmigan	15	
20-Apr-14	Access road	snowshoe hare	1	
24-Apr-14	Access road	moose	2	cow/calf
29-Apr-14	Access road	Crane	80	flying
03-May-14	Camp Complex	porcupine	1	Under enviro steps
04-May-14	above camp complex	Cranes	1000+	5 flush 200 each +
06-May-14	Tailings pond	Raven	3	in tailings
14-May-14	camp complex	porcupine	1	
14-May-14	access road	moose	2	cow and calf
15-May-14	access road	black bear	1	
16-May-14	access road	porcupine	2	
18-May-14	Exploration	porcupine	3	forging along road
18-May-14	Exploration	snowshoe hair	1	
18-May-14	Exploration	caribou	4	many tracks
18-May-14	Exploration	moose	2	
18-May-14	Exploration	wolf	2	scat sign
19-May-14	Access road	moose	2	
19-May-14	camp complex	red tailed hawk	1	
19-May-14	access road	golden eagle	1	
19-May-14	access road	Perigan falcon	1	
20-May-14	access road	porcupine	2	
21-May-14	access road	snowshoe hair	1	
21-May-14	Exploration	Grizzly	1	
22-May-14	access road	moose	1	
24-May-14	tailings area	moose	1	
24-May-14	access road	black bear	1	

Date	Location	Species	# of Animals	Activity
27-May-14	Access road	Snowshoe Hare	10	
28-May-14	Access road	Moose	1	
31-May-14	Camp Complex	Bear	1	lost, scared and ran
01-Jun-14	Camp Complex	Bear	1	mucking about
03-Jun-14	Access road	Grizzly	2	sow and cub
03-Jun-14	Access road	Caribou	3	
05-Jun-14	Landfill	Skinny fox	1	
05-Jun-14	Trail #1	Bear	1	
06-Jun-14	km 14	Bear	2	Following caribou with cub
07-Jun-14	F.A. clinic	Bear	1	Black, small, ran away
09-Jun-14	km 26.2	Wolf	1	Landfill/valley
10-Jun-14	km 19	Grizzly	3	sow and cub
10-Jun-14	km 24.4	Grizzly	1	2 yr old
10-Jun-14	km 24.5	Grizzly	1	crossed road up to tailings on ridge over landfill
10-Jun-14	km 26.2	Moose	1	
10-Jun-14	km 23	hare	1	
10-Jun-14	Camp Complex	Caribou	5	on ridge above camp
10-Jun-14	Camp Complex	wolf	1	Mill pad to camp
14-Jun-14	Camp Complex	Grizzly	1	camp pad
15-Jun-14	Camp Complex	Grizzly	1	Across from bach plant
15-Jun-14	Tailings to landfill	caribou	1	Bull- feeding on lichen
15-Jun-14	Tailings to landfill	Grizzly	2	large at 24.5 and small at 29
15-Jun-14	Tailings to landfill	wolf	1	Roaming around yard
16-Jun-14	Camp Complex	Caribou	3	Down the hill
21-Jun-14	exploration camp	Grizzly	2	forging on the side of the road
22-Jun-14	km 16	Grizzly	1	forging on the side of the road
24-Jun-14	km 23	Grizzly	2	forging on the side of the road
24-Jun-14	km 20.5	Grizzly	2	forging on the side of the road
26-Jun-14	Tailings to landfill	Wolf	1	procon laydown
26-Jun-14	Warehouse	Grizzly	1	walked through WH yard
02-Jul-14	km 14	Wolf	1	spotted heading into valley
04-Jul-14	Camp Complex	Fox	6	playing near procon office
9-Jul-14	Camp Complex	Caribou	14	hanging out on top of mountain
12-Jul-14	RC highway	Moose	1	bull crossed road

Date	Location	Species	# of Animals	Activity
16-Jul-14	Camp Complex	porcupine	1	crossing road on lower by pass
24-Jul-14	km 26.2	porcupine	1	crossing road
24-Jul-14	km 27.4	porcupine	1	crossing road
25-Jul-14	Camp Complex	Fox	2	fox arround ore pad
26-Jul-14	Camp Complex	Moose	2	bulls grazing
3-Aug-14	Camp Complex	porcupine	1	chewing back steps
10-Aug-14	km 18	Caribou	2	sleeping in gravel pit
19-Aug-14	km 6.5	black bear	1	grubbing
19-Aug-14	km 12	wolf	1	crossing road
06-Sep-14	Camp Complex	sandhill cranes	40	flying over camp
10-Sep-14	Camp Complex	sandhill cranes	80	flying over camp
11-Sep-14	exploration camp	Moose	1	staring at thomas
11-Sep-14	Access road	beaver	1	
04-Oct-14	above camp	Grizzly	1	traveling mountain
17-Oct-14	km21-22	caribou	4	grazing
12-Nov-14	km18	Caribou	19	
28-Nov-14	0-1	Wolf	1	
05-Dec-14	km11	Wolf	1	
12-Dec-14	km20	Moose	1	bull moose grazing

Appendix B

Winter Wildlife Monitoring - Transect Data

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438966	6811439	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438966	6811439	ALAL	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438966	6811439	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438949	6811397	LEAM	TR	4
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438887	6811300	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438831	6811344	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438831	6811344	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438765	6811348	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438630	6811388	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438538	6811435	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438466	681143	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438393	6811420	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438393	6811420	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438333	6811279	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438333	6811279	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438144	6811342	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	438103	6811379	ALAL	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437999	6811503	TAHU	TR	3
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437999	6811503	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437297	6811597	TAHU	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437883	6811679	TAHU	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437883	6811679	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437882	6811858	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437882	6811858	TAHU	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437923	6811916	TAHU	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437834	6811937	ALAL	TR	1

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437834	6811937	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437834	6811937	TAHU	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437723	6812008	TAHU	TR	4
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437723	6812008	LEAM	TR	3
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437714	6812081	MAAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437675	6812172	MAAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437675	6812172	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437614	6812240	LEAM	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437544	6812466	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437544	6812466	TAHU	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437567	6813408	MUER	TR	1
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437498	6812498	LEAM	TR	2
MSSA-WT01	Feb-8-2014	TP/RM	11:45	12:30	-18	-17	0	0	0	0	48	62	437411	6812637	TAHU	TR	2
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	443856	6811436	LEAM	TR	3
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438866	6811328	MAAM	TR	2
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438805	6811344	MAAM	TR	2
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438686	6811359	TAHU	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438541	6811430	MAAM	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438285	6811299	TAHU	TR	2
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438133	6811431	MAAM	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	438133	6811431	TAHU	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437923	6811512	TAHU	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437923	6811512	MAAM	TR	2
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437923	6811512	ALAL	TR	2
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437833	6811748	ALAL	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437914	6811922	MAAM	TR	1

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437914	6811922	VUVU	TR	1
MSSA-WT01	Mar-10-2014	TP/KU	11:05	11:55	-15	-4	5	5	10	0	9	80	437738	6812006	MAAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438962	6811327	LEAM	TR	4
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438962	6811327	LYCA	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438551	6811420	TAHU	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438551	6811420	ALAL	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438551	6811420	MAAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438551	6811420	MAAM	TR	2
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438361	6811291	LEAM	TR	5
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438166	6811318	MAAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438098	6811384	TAHU	TR	2
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438098	6811384	MAAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438938	6811570	MAAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	438938	6811570	MICR	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437902	6811632	TAHU	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437740	6812001	LEAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437686	6812153	LEAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437597	6812269	LEAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437551	6812355	TAHU	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437464	6812528	LAMU	TR	4
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437464	6812528	MAAM	TR	1
MSSA-WT01	2-Apr-14	TP/RM	10:40	11:30	-5	-6	5	5	0	0	150	73	437402	6812641	MAAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438957	6811432	TAHU	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438922	6811254	MUER	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438826	6811350	LEAM	TR	2
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438745	6811257	TAHU	TR	2

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438745	6811257	MAAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438592	6811409	LEAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438418	6811431	LEAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438418	6811431	MAAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438301	6811295	LEAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	438115	6811364	TAHU	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437950	6811555	TAHU	TR	2
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437887	6811664	TAHU	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437887	6811664	TAHU	TR	2
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437832	6811803	MAAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437908	6811934	MAAM	TR	3
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437826	6811937	TAHU	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437720	6812040	TAHU	TR	7
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437642	6812214	MAAM	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437561	6812324	LYCA	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437542	6812375	MUER	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437520	6812430	MUER	TR	1
MSSA-WT01	2-Nov-14	TP/RM	13:57	14:54	-5	-3	5	5	0	0	40	22	437426	6812568	MUER	TR	1
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438952	6811373	LEAM	TR	3
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438952	6811373	MAAM	TR	2
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438952	6811373	TAHU	TR	1
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438594	6811418	LEAM	TR	1
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438369	6811355	MAAM	TR	2
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438217	6811277	LEAM	TR	2
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	438217	6811277	TAHU	TR	1
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	437873	6811711	ALAL	TR	1

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MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	437688	6812123	MAAM	TR	1
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	437688	6812123	TAHU	TR	1
MSSA-WT01	20-Dec-14	TP/AK	11:55	12:35	-18	-20	5	5	0	0	52	38	437559	6812323	VUVU	TR	1
MSSA-WT02	3-Jan-14	TP/RM	12:00	12:30	-24	-18	10	5	2	0	15	68	439282	6811917	LEAM	TR	2
MSSA-WT02	3-Jan-14	TP/RM	12:00	12:30	-24	-18	10	5	2	0	15	68	439003	6812157	LEAM	TR	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439480	6811592	VUVU	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439484	6811673	LEAM	TR	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439484	6811673	VUVU	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439494	6811922	LEAM	TR	3
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439341	6811948	LEAM	TRAIL	4
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439295	6811982	VUVU	TR	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439295	6811982	LEAM	TR	3
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439170	6812064	LEAM	TR	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439117	6811097	LEAM	TR	6
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439117	6811097	VUVU	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	439008	6812148	MAAM	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438899	6816130	VUVU	TRAIL	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438838	6812227	LEAM	TRAIL	3
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438713	6812326	ALAL	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438657	6812353	MAAM	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438613	6812361	VUVU	TR	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438613	6812361	LEAM	TR	1
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438567	6812361	MAAM	TRAIL	2
MSSA-WT02	8-Feb-14	TP/RM	11:15	11:40	-18	-17	0	0	0	0	48	65	438481	6812354	LEAM	TR	1
MSSA-WT02	Mar-10-14	TP/KU	10:45	11:05	-15	-4	5	5	15	10	9	53	439472	6811621	VUVU	TR	1
MSSA-WT02	Mar-10-14	TP/KU	10:45	11:05	-15	-4	5	5	15	10	9	53	439282	6811991	LEAM	TR	4

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MSSA-WT02	Mar-10-14	TP/KU	10:45	11:05	-15	-4	5	5	15	10	9	53	439111	6812104	MAAM	TR	2
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439676	6811363	LEAM	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439676	6811363	VUVU	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439636	6811422	LEAM	TR	5
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439587	6811508	MUER	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439587	6811508	LEAM	TR	2
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439267	6812001	LEAM	TR	5
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439267	6812001	MUER	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	439070	6812117	MAAM	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	438839	6812227	LEAM	TR	3
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	438789	6812281	MAAM	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	438629	6812367	MAAM	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	438541	6812362	LEAM	TR	1
MSSA-WT02	2-Apr-14	TP/RM	10:15	10:35	-5	-6	5	5	0	0	150	70	438541	6812362	MICR	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439621	6811369	MAAM	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439465	6811633	VUVU	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439465	6811633	TAHU	TR	2
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439426	6811894	VUVU	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439426	6811894	LEAM	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439146	6812074	LEAM	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439000	6812156	MAAM	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	439000	6812156	LEAM	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	438957	6812195	RATA	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	438833	6812226	LEAM	TR	2
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	438759	6812291	LEAM	TR	1
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	438639	6812353	MAAM	TR	1

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MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	438639	6812353	RATA	TR	2
MSSA-WT02	2-Nov-14	TP/RM	13:10	13:53	-5	-3	5	5	0	0	48	24	438583	6812362	MAAM	TR	1
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	439142	6812070	LEAM	TR	2
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	438997	6812151	LEAM	TR	2
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	438997	6812151	TAHU	TR	1
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	438838	6812224	LEAM	TR	2
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	438838	6812224	TAHU	TR	1
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	438581	6812364	MAAM	TR	1
MSSA-WT02	20-Dec-14	TP/AK	11:30	11:50	-18	-20	5	5	0	5	24	44	438581	6812364	ALAL	TR	2
MSSA-WT03	Jan-19-2014	AK	14:37	14:55	-2	-2	5	5	0	0	72	67	442153	6808976	VUVU	TR	1
MSSA-WT03	Jan-19-2014	AK	14:37	14:55	-2	-2	5	5	0	0	72	67	442604	6808471	VUVU	TR	1
MSSA-WT03	Jan-19-2014	AK	14:37	14:55	-2	-2	5	5	0	0	72	67	442630	6808362	LAMU	TR	3
MSSA-WT03	Jan-19-2014	AK	14:37	14:55	-2	-2	5	5	0	0	72	67	442610	6808149	TAHU	TR	1
MSSA-WT03	Feb-15-2014	AK	10:30	11:00	-29	-15	15	5	2	0	12	33	442124	6808987	VUVU	TR	1
MSSA-WT03	Feb-15-2014	AK	10:30	11:00	-29	-15	15	5	2	0	12	33	442482	6808610	VUVU	TR	2
MSSA-WT03	Feb-15-2014	AK	10:30	11:00	-29	-15	15	5	2	0	12	33	442578	6808518	LEAM	TR	1
MSSA-WT03	Feb-15-2014	AK	10:30	11:00	-29	-15	15	5	2	0	12	33	442604	6808468	VUVU	TR	1
MSSA-WT03	Feb-15-2014	AK	10:30	11:00	-29	-15	15	5	2	0	12	33	442628	6808360	VUVU	TR	1
MSSA-WT03	13-Apr-14	AK	15:23	15:49	-1	6	5	5	0	0	48	70	442112	6808993	VUVU	TR	1
MSSA-WT03	13-Apr-14	AK	15:23	15:49	-1	6	5	5	0	0	48	70	442263	6808849	VUVU	TR	1
MSSA-WT03	13-Apr-14	AK	15:23	15:49	-1	6	5	5	0	0	48	70	442444	6808642	LAMU	TR	1
MSSA-WT03	13-Apr-14	AK	15:23	15:49	-1	6	5	5	0	0	48	70	442444	6808642	VUVU	TR	1
MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442076	6809023	VUVU	TR	2
MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442076	6809023	LAMU	TR	2+
MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442076	6809023	LEAM	TR	1
MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442578	6808514	LAMU	TR	2

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MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442640	6808323	MICR	TR	1
MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442640	6808323	VUVU	TR	1
MSSA-WT03	18-Nov-14	AK/JO	14:16	14:50	-8	-7	0	5	0	0	72	32	442623	6808196	MICR	TR	1
MSSA-WT04	Jan-19-2014	Ak	16:05	16:25	-2	-4	5	5	0	0	72	80	440525	6810507	VUVU	TR	1
MSSA-WT04	Jan-19-2014	Ak	16:05	16:25	-2	-4	5	5	0	0	72	80	440630	6810343	VUVU	TR	1
MSSA-WT04	Jan-19-2014	Ak	16:05	16:25	-2	-4	5	5	0	0	72	80	440904	6810041	VUVU	TR	1
MSSA-WT04	Feb-24-2014	AK	15:00	15:20	-8	-11	5	5	0	0	96	81	440524	6810496	VUVU	TR	5
MSSA-WT04	Feb-24-2014	AK	15:00	15:20	-8	-11	5	5	0	0	96	81	440524	6810496	LAMU	TR	20
MSSA-WT04	Feb-24-2014	AK	15:00	15:20	-8	-11	5	5	0	0	96	81	440626	6810316	VUVU	TR	2
MSSA-WT04	Feb-24-2014	AK	15:00	15:20	-8	-11	5	5	0	0	96	81	440626	6810316	LAMU	TR	10
MSSA-WT04	Feb-24-2014	AK	15:00	15:20	-8	-11	5	5	0	0	96	81	440763	6810158	LAMU	TR	4
MSSA-WT04	Feb-24-2014	AK	15:00	15:20	-8	-11	5	5	0	0	96	81	440946	6810973	VUVU	TR	1
MSSA-WT04	17-Mar-14	AK	15:00	15:32	-2	-5	0	0	5	0	24	83	440526	6810502	VUVU	TR	2
MSSA-WT04	17-Mar-14	AK	15:00	15:32	-2	-5	0	0	5	0	24	83	440748	6810175	VUVU	TR	1
MSSA-WT04	17-Mar-14	AK	15:00	15:32	-2	-5	0	0	5	0	24	83	440915	6810021	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	442252	6808189	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	441830	6808646	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	441306	6809272	LAMU	TR	2
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	441306	6809272	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	441263	6809321	VUVU	TR	2
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	441263	6809321	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	441263	6809321	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440979	6809633	VUVU	D	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440979	6809633	VUVU	TR	4
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440917	6809700	VUVU	TR	1
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440917	6809700	VUVU	TR	4

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MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440818	6809840	VUVU	TR	2
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440818	6809840	VUVU	TR	4
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440774	6809892	VUVU	TR	2
MSSA-WT05	Feb-25-2014	AK	14:50	16:10	-4	-11	5	0	0	0	120	86	440621	6810080	VUVU	TR	1
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	440307	6810389	VUVU	TR	3
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	440851	6819866	LAMU	TR	12
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	441192	6809363	VUVU	TR	1
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	441908	6808646	LAMU	TR	10
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	441908	6808646	MAAM	TR	2
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	442420	6808066	LAMU	TR	20
MSSA-WT05	3-Apr-14	TP/RM	9:20	9:50	-6	-12	5	0	0	0	150	88	442420	6808066	MAAM	TR	2
MSSA-WT05	4-Nov-14	TP/RM	13:34	14:25	-5	-12	5	20	0	0	48	49	442080	6808416	Lamu	TR	10
MSSA-WT05	4-Nov-14	TP/RM	13:34	14:25	-5	-12	5	20	0	0	48	49	442335	6808127	ALAL	TR	1
MSSA-WT05	4-Nov-14	TP/RM	13:34	14:25	-5	-12	5	20	0	0	48	49	442758	6807798	LAMU	O	2
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	444074	6805695	VUVU	TR	2
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	444159	6805562	LEAM	TR	3
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	444370	6805089	VUVU	TR	2
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	444370	6805089	LEAM	TR	4
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	444124	6805059	MAAM	TR	2
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	443723	6804752	MICR	TR	1
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	443723	6804752	LEAM	TR	10
MCSA-WT01	Jan-13-14	AK/TP	14:00	14:28	-22	-10	5	5	0	0	48	83	443723	6804752	TAHU	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444136	6805602	LEAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444168	6805552	MAAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444168	6805552	LEAM	TR	4
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444196	6805458	LEAM	TR	5

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MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444272	6805492	MAAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444272	6805492	LEAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444311	6805381	LEAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444353	6805353	LEAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444353	6805353	TAHU	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444367	6805281	LEAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444367	6805281	LYCA	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444239	6805143	LEAM	TR	5
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444143	6805069	LEAM	TR	2
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444143	6805069	TAHU	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444103	6805042	MAAM	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	444059	6805008	LEAM	TR	3
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	443929	6804920	LEAM	TR	2
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	443475	6804699	LAMU	TR	10
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	443730	6809472	VUVU	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	443649	6804247	TAHU	TR	1
MCSA-WT01	Feb-10-14	TP/RM	12:00	12:31	-20	-19	0	0	0	0	48	70	443582	6804156	ALAL	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444136	6805606	LYCA	TR	2
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444195	6805470	MAAM	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444289	6805398	MAAM	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444371	6805288	MAAM	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444252	6805154	LEAM	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444190	6805113	TAHU	TR	2
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444139	6805076	LEAM	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	444058	6805007	LEAM	TR	1
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	443691	6804677	LAMU	TR	20

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MCSA-WT01	11-Mar-14	TP/AK	14:15	14:45	-1	-1	5	5	0	5	12	78	443750	6804377	TAHU	TR	2
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444149	6805580	MAAM	T	1
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444322	6805440	TAHU	T	2
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444322	6805440	MAAM	T	1
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444318	6805379	ALAL	T	1
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444366	6805288	MAAM	T	2
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444227	6805140	LEAM	T	2
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444141	6805073	MAAM	T	2
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	444141	6805073	LEAM	T	6
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	443942	6804939	LEAM	T	4
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	443862	6804932	MICA	T	2
MCSA-WT01	1-Nov-14	TP/RM	10:58	11:37	-7	-5	5	10	0	0	48	27	443726	6804506	LEAM	T	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443591	6804112	LEAM	TR	3
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443591	6804112	VUVU	TR	2
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443585	6803836	ALAL	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443602	6803594	TAHU	TR	3
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443636	6803482	TAHU	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443636	6803482	ALAL	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443691	6803149	VUVU	TR	2
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443691	6803149	LEAM	TR	3
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443614	6802833	MICR	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443568	6802743	TAHU	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443692	6802490	MAAM	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443692	6802490	TAHU	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443472	6802287	VUVU	TR	1
MCSA-WT03	Jan-13-14	TP/AK	14:32	15:00	-22	-10	5	5	0	0	48	79	443343	6802450	TAHU	TR	1

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443559	6802925	LEAM	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443605	6803658	LEAM	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443602	6803582	ALAL	TR	4
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443685	6803512	LEAM	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443685	6803512	LYCA	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443201	6803108	LEAM	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443679	6802899	ALAL	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443675	6802837	LYCA	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443675	6802837	LEAM	TR	5
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443675	6802837	TAHU	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443575	6802785	MICR	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443566	6802768	MUER	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443566	6802768	LEAM	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443551	6802691	MUER	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443551	6802691	LEAM	D	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443587	6802557	ALAL	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443569	6803431	LAMU	TR	10
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443569	6803431	LYCA	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443569	6803431	MAAM	TR	2
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443569	6803431	TAHU	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443560	6802340	TAHU	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443560	6802340	LAMU	TR	20
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443475	6802292	ALAL	TR	1
MCSA-WT03	Feb-10-2014	TP/RM	12:31	13:11	-20	-19	0	0	0	0	48	68	443418	6802243	LEAM	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443587	6803834	TAHU	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443588	6803705	MICR	TR	1

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MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443603	6803625	MICR	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443603	6803625	TAHU	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443640	6803412	VUVU	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443636	6802847	MICR	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443577	6802783	TAHU	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443577	6802783	LEAM	TR	1
MCSA-WT03	11-Mar-14	TP/AK	14:45	15:13	-1	-1	5	5	10	5	12	79	443589	6802541	TAHU	TR	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443608	6803873	LEAM	T	2
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443582	6803737	LEAM	T	4
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443582	6803737	VUVU	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443582	6803737	MAAM	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443598	6803654	LEAM	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443598	6803654	MICR	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443612	6803552	LEAM	T	7
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443637	6803434	LEAM	T	2
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443701	6803119	VUVU	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443654	6802811	VUVU	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443584	6802508	LEAM	T	2
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443584	6802508	MAAM	T	1
MCSA-WT03	1-Nov-14	TP/RM	12:05	12:38	-7	-5	5	10	0	5	12	18	443435	6802257	MAAM	T	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450503	6812315	MUER	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450528	6812230	ALAL	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450533	6812354	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450541	6812400	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450541	6812400	TAHU	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450521	6812432	MAAM	TR	2

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PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450506	6812465	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450506	6812465	TAHU	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450489	6812515	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450485	6812554	RATA	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450485	6812554	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450459	6812624	ALAL	TR/BED	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450459	6812624	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450490	6812679	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450490	6812710	ALAL	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450492	6812749	RATA	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450492	6812749	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450498	6812832	RATA	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450498	6812832	RATA	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450505	6812874	MAAM	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450494	6812903	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450494	6812903	ALAL	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450494	6812903	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450494	6812925	ALAL	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450494	6812925	MAAM	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450491	6812960	ALAL	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450491	6812960	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450491	6812960	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450491	6812960	ALAL	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450491	6812960	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450486	6813011	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450486	6813011	ALAL	TR/BED	1

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450486	6813011	TAHU	TR	10
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450491	6813067	RATA	TR	4
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450451	6813149	TAHU	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450440	6813212	TAHU	TR	5
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450454	6813295	TAHU	TR	7
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450496	6813336	LEAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450512	6813356	TAHU	TR/DEN	10
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450556	6813413	MAAM	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450559	6813432	LEAM	TR	2
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450559	6813432	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450589	6813472	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450610	6813550	ALAL	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450610	6813550	TAHU	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450636	6813634	MAAM	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450639	6813675	LEAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450613	6813744	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450618	6813783	LEAM	TR	3
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450596	6813803	TAHU	TR	4
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450592	6813862	ALAL	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450573	6813915	RATA	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450573	6813915	MAAM	TR	1
PCSA-WT02	7-Feb-14	TP/RM	11:50	13:26	-19	-18	5	5	0	0	48	68	450573	6813915	LEAM	TR	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450495	6812310	MAAM	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450516	6812401	TAHU	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450516	6812401	MAAM	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450477	6812548	MAAM	T	2

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450451	6812625	MAAM	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450492	6812770	MAAM	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450494	6812799	MICR	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450496	6812955	MAAM	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450492	6813028	MUER	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450492	6813028	TAHU	T	4
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450465	6813117	TAHU	T	5
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450446	6813209	TAHU	T	10
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450515	6813355	TAHU	T	5
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450632	6813699	MAAM	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450594	6813821	TAHU	T	1
PCSA-WT02	24-Mar-14	RM/DB	14:50	16:45	-5	-5	0	0	3	0	30	74	450594	6813821	MAAM	T	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450574	6814033	LEAM	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450579	6813996	RATA	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450579	6813996	VUVU	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450562	6813952	LEAM	TR	2
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450597	6813823	VUVU	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450619	6813782	LEAM	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450572	6813434	VUVU	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450551	6813073	VUVU	TR	1
PCSA-WT02	28-Nov-14	TP/WK	12:45	14:10	-20	-26	5	5	0	0	48	26	450551	6813073	MAAM	TR	1
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450531	6812331	MUER	TR	1
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450509	6812461	MUER	TR	1
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450497	6813028	TAHU	TR	1
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450479	6813104	MAAM	TR	1
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450450	6813155	MAAM	TR	1

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450498	6813390	TAHU	TR	1
PCSA-WT02	6-Dec-14	RM/CH	13:40	15:30	-16	-15	5	5	0	0	55	31	450498	6813390	MAAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450691	6811317	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450711	6811336	MAAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450711	6811330	TAHU	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450720	6811372	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450718	6811413	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450718	6811413	TAHU	TR	4
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450724	6811452	ALAL	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450724	6811452	MAAM	TR	2
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450724	6811452	TAHU	TR	4
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450711	6811508	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450707	6811580	LEAM	TR	2
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450689	6811698	TAHU	TR	2
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450689	6811698	LEAM	TR	4
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450673	6811768	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450638	6811853	MAAM	TR	2
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450609	6811942	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450583	6812012	ALAL	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450583	6812012	LEAM	TR	1
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450558	6812001	LEAM	TR	3
PCSA-WT03	7-Feb-14	TP/RM	11:10	11:50	-19	-18	5	5	0	0	48	70	450538	6812108	ALAL	TR	1
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450678	6811326	LEAM	T	1
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450713	6811338	TAHU	T	2
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450719	6811404	LEAM	T	1
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450671	6811778	MAAM	T	1

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450671	6811778	TAHU	T	1
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450617	6811924	TAHU	T	1
PCSA-WT03	24-Mar-14	RM/DB	14:10	14:50	-5	-5	0	0	3	0	30	77	450541	6812115	MUER	T	1
PCSA-WT03	6-Dec-14	RM/CH	13:00	13:40	-15	-16	15	2	0	0	54	28	450644	6811857	MAAM	TR	1
PCSA-WT03	6-Dec-14	RM/CH	13:00	13:40	-15	-16	15	2	0	0	54	28	450517	681227	MAAM	TR	1
PCSA-WT03	6-Dec-14	RM/CH	13:00	13:40	-15	-16	15	2	0	0	54	28	450517	681227	MEUR	TR	1
PCSA-WT03	6-Dec-14	RM/CH	13:00	13:40	-15	-16	15	2	0	0	54	28	450493	6812301	MEUR	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450556	6814046	TAHU	TR	5
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450556	6814046	LEAM	TR	2
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450556	6814046	CALU	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450588	6814027	MAAM	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450588	6814027	LEAM	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450588	6814027	CALU	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450630	6814000	LEAM	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450643	6813987	ALAL	TR	1
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450706	6813940	TAHU	TR	10
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450756	6813936	MAAM	TR	2
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450794	6813945	TAHU	TR	10
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450794	6813945	LEAM	TR	2
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450839	6813938	ALAL	TR	2
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450887	6813949	LEAM	TR	2
PCSA-WT04	7-Feb-13	TP/RM	14:20	14:50	-19	-18	5	5	0	0	48	64	450927	6813945	ALAL	TR/bed	1
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450636	6814397	LEAM	T	15
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450636	6814397	TAHU	T	1
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450711	6814358	LEAM	T	2
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450711	6814358	TAHU	T	2

Transect ID	Date (d/m/y)	Samplers	Start time	End Time	Weather Day b/f count (°C)	Weather day of count (°C)	Wind b/f count (km/hr)	Wind day of count (km/hr)	Precip b/f count (cm)	Precip day of count (cm)	Time since last snowfall (hrs)	Average Transect Snow Depth (cm)	Easting	Northing	Species Code	Sign Type	# of Sign
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450787	6814313	LEAM	T	2
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450787	6814313	MICR	T	1
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450837	6814296	LEAM	T	1
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450871	6814271	MICR	T	4
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450885	6814257	LEAM	T	2
PCSA-WT04	16-Nov-14	AK/JO	13:50	14:25	-4	-8	5	0	0	0	48	20	450885	6814257	VUVU	T	1
PCSA-WT04	28-Nov-14	TP/WK	11:46	12:18	-20	-26	5	5	0	0	54	21	450829	6814296	CALU	T	1
PCSA-WT04	28-Nov-14	TP/WK	11:46	12:18	-20	-26	5	5	0	0	54	21	450847	6814283	LEAM	T	2
PCSA-WT04	28-Nov-14	TP/WK	11:46	12:18	-20	-26	5	5	0	0	54	21	450847	6814283	VUVU	T	1

Appendix C

Total Metals Levels in Vegetation – Summary Data

	Total Metals by ICPMS																														
Symbol	AL	Sb	As	Ba	Be	Bi	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Ni	P	K	Se	Ag	Na	Sr	Tl	Sn	Ti	U	V	Zn
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RDL	1	0.005	0.05	0.1	0.1	0.1	2	0.01	10	0.2	0.02	0.05	10	0.01	10	0.1	0.01	0.05	0.05	10	10	0.05	0.02	10	0.1	0.002	0.1	1	0.002	0.2	0.2
Lichen																															
MCRA 2 (new)																															
2014-MC6-CLAD-STN1(A)	48.6	0.0491	0.127	8.27	<0.10	<0.10	<2.0	0.178	663	<0.20	0.042	1.9	68	1.16	290	162	<0.010	0.053	0.306	631	1640	0.1	0.091	15	1.89	0.0024	<0.10	2.2	0.004	<0.20	41.6
2014-MC6-CLAD-STN2(A)	97.9	0.0785	0.186	16.9	<0.10	<0.10	<2.0	0.289	1240	<0.20	0.077	3.34	106	2.74	450	314	0.017	0.105	0.617	668	1320	0.1	0.364	21	4.23	0.0076	<0.10	3.3	0.0077	<0.20	64.2
2014-MC6-CLAD-STN3(A)	33.9	0.0376	0.095	14.5	<0.10	<0.10	<2.0	0.131	711	<0.20	0.035	1.7	52	0.912	210	116	<0.010	<0.050	0.41	413	942	0.074	0.056	<10	3.69	<0.0020	<0.10	1.4	0.0025	<0.20	41.7
2014-MC6-CLAD-STN5(A)	57.8	0.0477	0.103	24.5	<0.10	<0.10	<2.0	0.168	797	<0.20	0.071	1.9	72	1.09	235	161	<0.010	<0.050	0.583	505	993	0.07	0.163	<10	3.65	0.0025	<0.10	2.5	0.0034	<0.20	43.5
2014-MC6-CLAD-STN7(A)	34.1	0.0432	0.088	8.69	<0.10	<0.10	<2.0	0.213	338	<0.20	0.041	1.99	61	1.05	188	64.6	<0.010	<0.050	0.343	517	1210	0.098	0.027	35	1.66	0.0023	<0.10	1.8	0.0029	<0.20	28.1
2014-MC6-CLAD-STN8(A)	48.4	0.0554	0.12	16.7	<0.10	<0.10	<2.0	0.188	543	<0.20	0.065	2	73	1.43	300	127	<0.010	<0.050	0.476	520	1150	0.106	0.03	<10	2.79	0.0027	<0.10	2.5	0.0038	<0.20	34.1
2014-MC6-CLAD-STN9(A)	56.8	0.0265	0.07	18.8	<0.10	<0.10	<2.0	0.09	999	<0.20	0.037	1.39	101	0.862	175	88.7	0.011	<0.050	0.329	487	1060	0.071	0.126	<10	4.05	0.0025	<0.10	2.3	0.0036	<0.20	23.6
2014-MC6-CLAD-STN10(A)	56.3	0.0413	0.118	20.2	<0.10	<0.10	<2.0	0.196	541	<0.20	0.058	1.82	76	1.24	216	95	<0.010	<0.050	0.461	479	1030	0.091	0.058	<10	2.98	0.0028	<0.10	2.6	0.0044	<0.20	35.3
2014-MC6-CLAD-STN11(A)	45.4	0.032	0.101	13.4	<0.10	<0.10	<2.0	0.096	629	<0.20	0.041	1.5	64	0.915	184	103	<0.010	<0.050	0.41	399	853	0.066	0.026	<10	2.83	0.0021	<0.10	2	0.0035	<0.20	37.8
2014-MC6-CLAD-STN12(A)	42	0.0284	0.102	14.3	<0.10	<0.10	<2.0	0.137	498	0.54	0.058	1.23	68	0.84	209	102	<0.010	<0.050	0.713	436	887	0.075	<0.020	<10	2.19	0.0021	<0.10	2	0.0037	<0.20	27.1
MCRA																															
2014-MC1-CLAD-STN1(A)	795	1.1	2.6	40	<0.10	0.1	<2.0	2.55	546	3.63	0.613	26.5	1840	28.3	623	44.4	0.05	0.206	2.78	321	593	2.12	0.56	<10	2.75	0.0468	0.11	98.9	0.0755	2.78	260
2014-MC1-CLAD-STN2(A)	658	1.7	3.43	37.3	<0.10	<0.10	<2.0	3.53	553	2.73	0.547	33.6	1700	43.5	554	42.9	0.042	0.195	2.48	383	812	2.84	0.892	<10	2.56	0.0576	0.13	74.7	0.0693	2.26	345
2014-MC1-CLAD-STN3(A)	770	1.26	3.1	47.9	<0.10	0.1	<2.0	3.03	682	3.23	0.607	29.2	1790	32.9	730	67.3	0.035	0.204	2.95	371	846	2.62	0.75	<10	3.75	0.0478	0.11	88	0.0736	2.69	308
2014-MC1-CLAD-STN4(A)	832	1.45	2.99	32.6	<0.10	<0.10	<2.0	3.1	410	3.84	0.631	33.8	2110	30.3	613	37.3	0.04	0.212	2.93	278	537	2.58	0.778	<10	2.12	0.0524	0.14	111	0.0776	3.1	302
2014-MC1-CLAD-STN5(A)	435	1.64	2.83	23.3	<0.10	<0.10	<2.0	3.11	318	1.69	0.373	29.7	1180	37.9	375	33.1	0.03	0.177	1.51	392	881	2.58	0.807	<10	1.51	0.0462	0.13	45.3	0.0467	1.5	300
2014-MC1-CLAD-STN5(B)	1030	1.36	2.9	48.7	<0.10	0.12	<2.0	2.7	611	4.83	0.842	30.8	2580	27.7	831	57.4	0.066	0.274	3.87	401	788	2.28	0.673	<10	3.88	0.0536	0.12	134	0.107	4.11	277
2014-MC1-CLAD-STN5(C)	582	1.26	2.49	33.9	<0.10	0.1	<2.0	2.61	437	2.61	0.474	25.8	1480	27.1	541	48.3	0.041	0.196	2.21	376	702	2.28	0.597	12	2.35	0.0389	0.11	76	0.0574	2.07	267
2014-MC2-CLAD-STN4(A)	68.2	0.111	0.269	9.01	<0.10	<0.10	<2.0	0.297	1330	0.43	0.074	2.91	139	2.86	286	17.1	<0.010	0.079	0.293	357	1040	0.213	0.067	<10	0.71	0.0048	<0.10	6.3	0.0023	0.22	38
2014-MC3-CLAD-STN2(A)	77.3	0.236	0.445	23.7	<0.10	<0.10	<2.0	0.573	1240	0.29	0.102	5.03	168	4.2	340	253	<0.010	0.054	0.494	406	720	0.359	0.087	<10	3.22	0.0067	<0.10	5.8	0.005	<0.20	77.3
2014-MC3-CLAD-STN3(A)	160	0.146	0.276	41.4	<0.10	<0.10	<2.0	0.33	727	0.48	0.141	3.37	216	3.23	200	138	<0.010	<0.050	0.594	379	620	0.194	0.079	<10	4.69	0.0074	<0.10	11.4	0.0064	0.39	47
2014-MC4-CLAD-STN1(A)	100	0.164	0.348	13	<0.10	<0.10	<2.0	0.465	587	0.3	0.086	4.39	152	4.29	284	201	<0.010	<0.050	0.353	615	1400	0.288	0.065	<10	1.76	0.0059	<0.10	5.6	0.0049	0.21	50.9
2014-MC4-CLAD-STN2(A)	78.9	0.112	0.251	10.3	<0.10	<0.10	<2.0	0.369	590	0.24	0.071	3.08	126	3.36	192	48.2	<0.010	0.064	0.298	340	1060	0.239	0.051	<10	2.22	0.0054	<0.10	5.1	0.0041	<0.20	31.5
PCSA																															
2014-PC1-CLAD-STN1(A)	1330	0.329	1.26	468	<0.10	<0.10	<2.0	1.22	975	8.79	1.3	12.9	2920	11.3	1090	92.8	0.028	0.261	5.36	448	1200	0.743	0.153	11	5.49	0.04	<0.10	166	0.0583	5.12	130
2014-PC1-CLAD-STN3(A)	388	0.174	0.472	53.5	<0.10	<0.10	<2.0	0.633	466	3.81	0.381	5.82	808	4.97	454	84.4	0.011	0.092	2.32	310	623	0.435	0.235	<10	1.41	0.0181	<0.10	38.9	0.0235	1.36	68
2014-PC1-CLAD-STN4(A)	864	0.244	0.64	38.5	<0.10	<0.10	<2.0	0.705	6130	8.87	0.978	9.2	1470	5.79	1180	116	0.024	0.197	4.94	666	1710	0.446	0.122	12	7.9	0.0135	<0.10	87.8	0.0164	2.8	75.7
2014-PC2-CLAD-STN1(A)	485	0.0311	0.153	68.6	<0.10	<0.10	<2.0	0.204	1570	2.4	0.724	4.11	503	0.855	623	227	0.036	0.559	2.29	693	2350	0.075	0.349	52	7.79	0.005	<0.10	38.1	0.0108	1.09	19
2014-PC2-CLAD-STN2(A)	997	0.0672	0.25	19.7	<0.10	<0.10	<2.0	0.302	921	5.75	0.986	3.91	1370	1.59	875	75.1	<0.010	<0.050	3.35	328	798	0.14	0.057	<10	3.98	0.0049	<0.10	139	0.0165	2.79	33.5
2014-PC2-CLAD-STN2(B)	1240	0.0689	0.356	38.3	<0.10	<0.10	<2.0	0.515	1830	5.8	1.38	4.88	1740	1.98	1210	102	0.014	0.06	3.75	429	1000	0.18	0.035	11	7.75	0.0059	<0.10	150	0.0203	3.35	55.5
2014-PC2-CLAD-STN2(C)	1060	0.0423	0.294	28.7	<0.10	<0.10	<2.0	0.381	1640	5.28	1.21	4.97	1510	1.7	1150	99.6	0.016	0.066	3.59	494	1210	0.14	0.025	<10	6.5	0.0054	<0.10	140	0.0182	2.94	43.4
2014-PC4-CLAD-STN1(A)	1210	0.161	1.43	108	<0.10	<0.10	<2.0	0.519	1200	4.66	1.23	7.85	2660	3.91	813	150	0.026	0.341	5.2	359	856	0.254	0.045	<10	6.11	0.0191	<0.10	43.1	0.0846	3.54	58.6
2014-PC4-CLAD-STN2(A)	1470	0.226	1.64	111	<0.10	<0.10	<2.0	0.686	1340	6.62	1.44	9.17	3010	4.15	982	172	0.028	0.371	6.74	439	1140	0.269	0.065	<10	6.47	0.0202	<0.10	45.3	0.0997	4.15	80.7
2014-PC5-CLAD-STN1(A)	630	0.145	0.691	62.7	<0.10	<0.10	2.7	1.15	5070	3.74	1.01	5.79	1940	2.61	1910	186	0.031	0.206	3.94	278	629	0.225	0.026	<10	15.1	0.0122	<0.10	20.2	0.0878	1.92	74.8

	Total Metals by ICPMS																														
Symbol	AL	Sb	As	Ba	Be	Bi	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Ni	P	K	Se	Ag	Na	Sr	Tl	Sn	Ti	U	V	Zn
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RDL	1	0.005	0.05	0.1	0.1	0.1	2	0.01	10	0.2	0.02	0.05	10	0.01	10	0.1	0.01	0.05	0.05	10	10	0.05	0.02	10	0.1	0.002	0.1	1	0.002	0.2	0.2
2014-PC5-CLAD-STN2(A)	719	0.168	0.822	61.1	<0.10	<0.10	<2.0	1.25	4690	4.3	1.1	6.11	1990	2.8	2220	133	0.027	0.226	4.6	354	928	0.231	0.029	<10	15.3	0.0127	<0.10	22.3	0.0888	2.2	78.4
2014-PC6-CLAD-STN1(A)	130	0.0235	0.125	21.2	<0.10	<0.10	<2.0	0.299	1470	0.67	0.103	1.67	232	0.613	346	36.6	<0.010	0.09	0.646	298	861	0.071	<0.020	<10	6.21	0.0036	<0.10	4.4	0.0109	0.39	16.7
MSSA																															
2014-MS1-CLAD-STN1(A)	553	1.1	2.26	72.1	<0.10	<0.10	<2.0	2.33	334	1.94	0.446	24	1080	26.4	467	38	0.022	0.145	2.04	388	903	1.8	0.534	10	2.69	0.0319	0.12	45.5	0.0451	1.48	246
2014-MS1-CLAD-STN3(A)	1010	1.97	4.44	56.6	<0.10	0.16	<2.0	4.41	963	4.15	0.899	51.2	2250	46.8	943	133	0.078	0.288	3.84	512	1170	3.42	1.1	15	3.46	0.062	0.16	112	0.0858	3.5	475
2014-MS2-CLAD-STN1(A)	657	1.73	4.13	41.9	<0.10	0.1	<2.0	3.81	569	2.39	0.541	41.7	1620	49.8	556	67.7	0.046	0.184	2.35	420	1040	3.21	0.961	11	2.19	0.0544	0.15	60.1	0.0669	2.04	400
2014-MS2-CLAD-STN2(A)	411	2.39	5.59	35.3	<0.10	0.14	<2.0	5.27	834	1.35	0.448	56.4	1320	57.5	449	153	0.055	0.194	1.54	593	1210	4.19	1.23	13	3.8	0.0622	0.18	28.3	0.0328	0.84	552
2014-MS2-CLAD-STN5(A)	716	2.61	5.51	52.6	<0.10	0.13	<2.0	5.78	806	3.11	0.639	58.4	1840	62.9	644	93.5	0.11	0.267	2.98	509	1230	4.41	1.48	18	3.16	0.0738	0.2	68.1	0.0662	2.36	553
2014-MS3-CLAD-STN5(A)	419	0.396	0.653	22.4	<0.10	<0.10	<2.0	1.89	3240	1.99	0.502	9.33	751	7.66	989	85.3	0.015	0.091	1.37	606	1110	0.62	0.142	16	9.75	0.0104	<0.10	49	0.0126	1.22	121
2014-MS4-CLAD-STN1(A)	199	3.16	7.08	31.4	<0.10	0.13	<2.0	6.28	1350	0.6	0.365	68.3	1330	55.2	595	185	0.086	0.216	1.5	688	1280	5.5	1.67	22	3.93	0.0805	0.21	9.3	0.0323	0.41	695
2014-MS4-CLAD-STN2(A)	282	3.73	8.28	45.2	<0.10	0.27	<2.0	8.14	1900	0.95	0.455	88.2	1680	71.3	699	243	0.119	0.371	1.74	737	1240	6.66	1.95	<10	5.57	0.101	0.27	15.9	0.0494	0.72	839
2014-MS4-CLAD-STN2(B)	249	3.99	8.58	43.9	<0.10	0.18	<2.0	8.91	1430	0.77	0.461	92.3	1970	73.6	639	165	0.16	0.327	1.78	670	1080	8	2.04	<10	4.03	0.106	0.32	12.2	0.0405	0.5	935
2014-MS4-CLAD-STN2(C)	282	3.71	7.86	44.3	<0.10	0.18	<2.0	7.52	1200	0.58	0.372	72.6	1390	88.9	455	77.2	0.108	0.306	1.42	604	1210	6.2	2.02	<10	6.87	0.101	0.28	11	0.0674	0.56	745
2014-MS5-CLAD-STN1(A)	670	1.4	3.32	46.4	<0.10	<0.10	<2.0	3.19	578	2.7	0.579	36.1	1620	37.4	556	52.9	0.045	0.189	2.53	389	866	2.92	0.819	18	3.07	0.0478	0.13	73.8	0.0589	2.23	356
2014-MS6-CLAD-STN2(A)	1250	15.3	39.7	128	<0.10	0.96	<2.0	34.7	1660	2.62	1.71	367	8170	374	1060	59	0.666	1.57	5.37	558	1240	30.9	9.1	<10	8.96	0.466	1.26	58.4	0.348	2.29	3390
2014-MS6-CLAD-STN2(B)	1130	20.1	59.9	139	<0.10	0.98	<2.0	46.4	1680	2.92	2.33	538	11800	416	1110	66.4	0.925	2.21	5.37	545	1630	42.1	11.8	<10	8.89	0.578	1.4	51.8	0.276	2.3	4640
2014-MS6-CLAD-STN2(C)	1350	22.4	59.1	154	<0.10	0.97	<2.0	51.1	1970	2.97	2.46	550	13400	455	1080	70.5	0.983	2.76	5.8	605	1360	46.8	14	16	10.6	0.647	1.51	45.9	0.335	2.64	4720

Appendix D

Summary of Statistical Comparisons for Metals Levels in Vegetation

Statistical summary of the comparisons made for mean total metal concentrations found in Lichen (Cladina stellaris) between sampling periods for MCRA, using an Analysis of Variance (ANOVA) with 95% confidence.

	Comparison	α - value	F - value	P - value	F critical	Null Hypothesis
As	2010 vs 2011	0.05	*	*	*	*
	2010 vs 2014	0.05	12.82	0.002	4.41	Rejected
	2011 vs 2014	0.05	12.42	0.002	4.41	Rejected
Cd	2010 vs 2011	0.05	0.56	0.464	4.41	Accepted
	2010 vs 2014	0.05	13.02	0.002	4.41	Rejected
	2011 vs 2014	0.05	12.55	0.002	4.41	Rejected
Cu	2010 vs 2011	0.05	14.04	0.001	4.41	Rejected
	2010 vs 2014	0.05	12.49	0.002	4.41	Rejected
	2011 vs 2014	0.05	11.48	0.003	4.41	Rejected
Pb	2010 vs 2011	0.05	15.82	0.001	4.41	Rejected
	2010 vs 2014	0.05	12.59	0.002	4.41	Rejected
	2011 vs 2014	0.05	12.18	0.003	4.41	Rejected
Ni	2010 vs 2011	0.05	8.61	0.009	4.41	Rejected
	2010 vs 2014	0.05	7.71	0.012	4.41	Rejected
	2011 vs 2014	0.05	4.15	0.056	4.41	Accepted
Se	2010 vs 2011	0.05	2.91	0.105	4.41	Accepted
	2010 vs 2014	0.05	12.43	0.002	4.41	Rejected
	2011 vs 2014	0.05	12.21	0.003	4.41	Rejected
Zn	2010 vs 2011	0.05	1.65	0.215	4.41	Accepted
	2010 vs 2014	0.05	12.33	0.002	4.41	Rejected
	2011 vs 2014	0.05	11.61	0.003	4.41	Rejected

*The Reportable Detection Limit (RDL) differed slightly between years. Since the majority of values were at the detection limit, the "rejected' result was based on this difference, rather than an actual difference between mean metal concentrations.

Statistical summary of the comparisons made for mean total metal concentrations found in Lichen (*Cladina stellaris*) between sampling periods for PCSA, using an Analysis of Variance (ANOVA) with 95% confidence.

	Comparison	α - value	F-value	P-value	F critical	Null Hypothesis
As	2009/10 vs 2011	0.05	18.086	0.0002	4.183	Rejected
	2009/10 vs 2014	0.05	32.698	0.000003	4.183	Rejected
	2011 vs 2014	0.05	12.190	0.003	4.414	Rejected
Cd	2009/10 vs 2011	0.05	3.064	0.091	4.183	Accepted
	2009/10 vs 2014	0.05	50.520	0.0000001	4.183	Rejected
	2011 vs 2014	0.05	19.461	0.0003	4.414	Rejected
Cu	2009/10 vs 2011	0.05	9.328	0.005	4.183	Rejected
	2009/10 vs 2014	0.05	16.925	0.0007	4.414	Rejected
	2011 vs 2014	0.05	52.567	0.0000001	4.183	Rejected
Pb	2009/10 vs 2011	0.05	27.171	0.00001	4.183	Rejected

	2009/10 vs 2014	0.05	28.545	0.00001	4.183	Rejected
	2011 vs 2014	0.05	11.458	0.003	4.414	Rejected
Ni	2009/10 vs 2011	0.05	0.383	0.541	4.183	Accepted
	2009/10 vs 2014	0.05	19.986	0.0001	4.183	Rejected
	2011 vs 2014	0.05	21.963	0.0002	4.414	Rejected
Se	2009/10 vs 2011	0.05	*	*	*	*
	2009/10 vs 2014	0.05	33.656	0.000003	4.183	Rejected
	2011 vs 2014	0.05	12.931	0.002	4.414	Rejected
Zn	2009/10 vs 2011	0.05	7.436	0.011	4.183	Rejected
	2009/10 vs 2014	0.05	41.003	0.000001	4.183	Rejected
	2011 vs 2014	0.05	13.896	0.002	4.414	Rejected

*The Reportable Detection Limit (RDL) differed slightly between years. Since the majority of values were at the detection limit, the "rejected' result was based on this difference, rather than an actual difference between mean metal concentrations.

Statistical summary of the comparisons made for mean total metal concentrations found in Lichen (Cladina stellaris) between sampling periods for MSSA, using an Analysis of Variance (ANOVA) with 95% confidence.

	Comparison	α - value	F - value	P - value	F critical	Null Hypothesis
As	2009/10 vs 2011	0.05	4.254	0.051	4.301	Accepted
	2009/10 vs 2014	0.05	7.059	0.014	4.301	Rejected
	2011 vs 2014	0.05	4.601	0.046	4.414	Rejected
Cd	2009/10 vs 2011	0.05	3.069	0.094	4.301	Accepted
	2009/10 vs 2014	0.05	8.276	0.009	4.301	Rejected
	2011 vs 2014	0.05	5.447	0.031	4.414	Rejected
Cu	2009/10 vs 2011	0.05	3.844	0.063	4.301	Accepted
	2009/10 vs 2014	0.05	8.142	0.009	4.301	Rejected
	2011 vs 2014	0.05	5.053	0.037	4.414	Rejected
Pb	2009/10 vs 2011	0.05	4.671	0.042	4.301	Rejected
	2009/10 vs 2014	0.05	7.852	0.010	4.301	Rejected
	2011 vs 2014	0.05	5.025	0.038	4.414	Rejected
Ni	2009/10 vs 2011	0.05	0.686	0.416	4.301	Accepted
	2009/10 vs 2014	0.05	1.358	0.256	4.301	Accepted
	2011 vs 2014	0.05	8.984	0.008	4.414	Rejected
Se	2009/10 vs 2011	0.05	4.340	0.049	4.301	Rejected
	2009/10 vs 2014	0.05	7.287	0.013	4.301	Rejected
	2011 vs 2014	0.05	4.734	0.043	4.414	Rejected
Zn	2009/10 vs 2011	0.05	4.126	0.054	4.301	Accepted
	2009/10 vs 2014	0.05	8.642	0.008	4.301	Rejected
	2011 vs 2014	0.05	5.667	0.029	4.414	Rejected

Appendix E

Total Metals Levels in Small Mammals – Summary Data

	Total Metals by ICPMS																													
Symbol	AL	Sb	As	Ba	Be	Bi	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	K	Se	Ag	Na	Sr	Tl	Sn	Ti	U	V	Zn
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RDL	1	0.1	0.01	0.1	0.1	0.1	5	0.01	10	0.5	0.1	0.5	10	0.01	10	0.1	0.1	0.1	10	10	0.01	0.05	10	0.1	0.05	0.1	1	0.05	2	0.1
2011 Redback Vole (Whole Body)																														
2011-CLRU-MCRA04-05	10.5	<0.001	0.01	11.2	<0.02	<0.02	0.4	0.155	7630	0.05	0.035	2.67	79	0.029	400	12.1	0.14	0.1	6880	2930	0.3	<0.004	1220	4.34	0.0006	<0.02	0.8	0.0021	<0.04	25.2
2011-CLRU-MCRA04-07	2.6	0.002	0.02	6.77	<0.02	<0.02	0.5	0.112	6880	0.04	0.034	2.74	59	0.064	388	7.5	0.17	0.12	5930	2690	0.28	<0.004	1030	3.54	<0.0004	<0.02	0.5	<0.0004	<0.04	25.9
2011-CLRU-MCRA04-08	2.9	<0.001	0.03	14.3	<0.02	<0.02	1	0.104	7640	0.1	0.046	3.1	66	0.624	418	24.3	0.12	0.13	6700	3360	0.3	<0.004	1150	4.62	0.0007	<0.02	0.4	<0.0004	<0.04	27.9
2011-CLRU-MCRA04-10	5.1	0.002	0.02	6.14	<0.02	<0.02	0.6	0.118	4440	0.05	0.039	2.84	73	0.02	447	8.83	0.17	0.12	6620	2990	0.27	<0.004	1060	3.49	<0.0004	<0.02	0.3	0.0005	<0.04	29.7
2011-CLRU-MCRA04-11	3.9	<0.001	0.01	6.99	<0.02	<0.02	0.4	0.045	3530	0.09	0.031	2.62	59	<0.002	464	8.97	0.14	0.09	7340	3230	0.27	<0.004	1030	2.81	<0.0004	0.03	0.3	<0.0004	<0.04	32.8
2011-CLRU-MCRA04-12	23.6	0.002	0.02	24.9	<0.02	<0.02	<0.4	0.06	9500	0.2	0.068	2.14	98	0.047	520	8.59	0.14	0.15	8230	2700	0.2	<0.004	975	8.19	<0.0004	0.05	1.8	0.0043	<0.04	28.5
2011-CLRU-MCRA04-13	10.6	0.002	0.02	10.4	<0.02	<0.02	<0.4	0.02	8510	0.04	0.031	2.23	75	0.1	518	6.24	0.09	0.07	8060	2730	0.24	<0.004	936	2.77	<0.0004	0.03	0.8	0.0014	<0.04	30.1
2011-CLRU-MCRA04-14	4.3	0.002	0.02	14.1	<0.02	<0.02	<0.4	0.025	8640	0.07	0.031	2.34	72	0.011	467	5.48	0.11	0.06	8250	2690	0.29	<0.004	1020	3.29	<0.0004	0.05	0.5	0.0008	<0.04	29.8
2011-CLRU-MCRA04-18	14.1	0.002	0.06	9.44	<0.02	<0.02	0.6	0.075	6140	0.06	0.05	3.2	101	0.123	361	17.3	0.17	0.15	5540	3240	0.35	0.014	991	2.84	0.0006	<0.02	1.1	0.0042	<0.04	25.6
2011-CLRU-MCRA04-20	27.6	0.001	0.06	12.7	<0.02	<0.02	0.5	0.087	6530	0.21	0.069	2.91	106	0.061	426	20.5	0.15	0.18	6360	2980	0.26	<0.004	1080	4.25	0.0004	<0.02	1.6	0.0095	<0.04	28.3
2011-CLRU-MCRA04-23	26.6	0.001	0.03	12.5	<0.02	<0.02	0.8	0.067	4670	0.05	0.041	3.04	83	0.07	358	19.2	0.15	0.15	5310	2780	0.23	0.006	1150	3.86	0.0006	<0.02	1.2	0.0067	<0.04	24
2011-CLRU-MCRA04-24	3.4	0.001	0.02	13.7	<0.02	<0.02	<0.4	0.094	8830	<0.04	0.03	2.43	56	0.118	471	26.6	0.12	0.07	6760	3070	0.25	<0.004	1080	3.32	0.0005	<0.02	0.5	0.0005	<0.04	28
2011-CLRU-MCRA04-25	3.3	<0.001	0.02	8.39	<0.02	<0.02	0.9	0.227	5620	<0.04	0.038	3.01	80	0.065	429	13.1	0.22	0.11	6050	3120	0.3	<0.004	1150	2.91	0.0009	<0.02	0.2	<0.0004	<0.04	27
2011-CLRU-MCRA05-02	2.3	0.001	0.01	3.27	<0.02	<0.02	0.8	0.086	6160	<0.04	0.027	3.35	74	0.13	362	5.13	0.11	0.09	5670	2940	0.44	0.005	1080	2.08	0.0013	0.04	0.3	<0.0004	<0.04	26.1
2011-CLRU-MCRA05-03	3.6	0.001	0.02	3.81	<0.02	<0.02	0.8	0.063	6630	<0.04	0.039	2.58	76	0.07	344	15.2	0.09	0.13	5510	2520	0.38	0.009	1070	2.28	<0.0004	<0.02	0.6	<0.0004	<0.04	24.3
2011-CLRU-PCSA01-01	26.9	0.005	0.05	15	<0.02	<0.02	<0.4	0.024	6070	0.1	0.054	2.09	91	0.106	378	6.15	0.1	0.14	5850	2840	0.27	0.006	1070	3.09	0.004	<0.02	2.4	0.0023	0.05	22.9
2011-CLRU-PCSA01-02	11.6	0.002	0.03	8.76	<0.02	<0.02	<0.4	0.092	6310	<0.04	0.035	2.45	78	0.056	330	5.5	0.12	0.1	5300	2760	0.34	0.019	972	2.13	0.0033	0.03	1.1	0.0111	<0.04	25.1
2011-CLRU-PCSA01-04	18.7	0.001	0.04	8.07	<0.02	<0.02	<0.4	0.134	7340	0.11	0.074	2.89	101	0.054	413	7.36	0.09	0.13	6600	3290	0.34	0.042	1200	1.99	0.0027	0.02	1.6	0.0008	<0.04	28.8
2011-CLRU-PCSA01-08	12.9	0.002	0.05	10.7	<0.02	<0.02	<0.4	0.092	8590	0.07	0.053	3.32	86	0.078	416	5.02	0.15	0.13	6950	3200	0.5	0.111	1140	3.27	0.0172	0.03	1.4	0.002	<0.04	26.6
2011-CLRU-PCSA01-09	16.8	0.003	0.23	15.5	<0.02	<0.02	0.4	0.2	6240	0.06	0.056	2.82	99	0.073	351	8.14	0.15	0.15	5330	2960	0.97	0.026	1160	3.75	0.0136	<0.02	1.5	0.0025	<0.04	26.5
2011-CLRU-PCSA03-02	21.2	0.002	0.03	11.5	<0.02	<0.02	0.9	0.078	9070	0.16	0.066	3.42	99	0.07	472	21.9	0.19	0.24	7250	3220	0.2	0.004	1150	2.12	0.0009	<0.02	1.7	<0.0004	<0.04	30.4
2011-CLRU-PCSA03-04	12.5	0.003	0.05	13.1	<0.02	<0.02	1.4	0.035	6140	0.12	0.066	4.43	100	0.101	513	23.5	0.43	0.27	5610	3160	0.19	<0.004	1140	2.85	<0.0004	0.07	1.1	<0.0004	<0.04	24
2011-CLRU-PCSA03-05	5.4	<0.001	0.04	8.73	<0.02	<0.02	0.6	0.011	7500	<0.04	0.052	3.6	73	0.114	486	9.25	0.22	0.13	6560	3380	0.19	<0.004	1050	3.53	0.0005	0.03	0.6	<0.0004	<0.04	27.1
2011-CLRU-PCSA03-06	5.7	0.001	0.02	8.83	<0.02	<0.02	0.8	0.013	6590	0.09	0.046	3.08	85	0.051	450	11	0.13	0.19	6640	3360	0.16	<0.004	942	3.05	0.001	0.02	0.5	<0.0004	<0.04	25.4
2011-CLRU-PCSA03-07	8.7	0.001	0.02	8.49	<0.02	<0.02	1	0.015	8060	0.07	0.05	4.76	85	0.081	495	14.6	0.22	0.19	6730	3150	0.18	<0.004	1230	3.8	0.0007	0.06	0.8	<0.0004	<0.04	27
2011-CLRU-PCSA03-08	15.1	<0.001	0.02	15.2	<0.02	<0.02	1	0.093	8730	0.11	0.081	4.36	95	0.076	557	28	0.2	0.29	7350	3380	0.19	0.015	1150	3.61	0.0009	0.04	1.1	<0.0004	<0.04	38
2011-CLRU-PCSA03-09	14.7	<0.001	0.03	11.9	<0.02	<0.02	1.3	0.048	7670	0.1	0.065	3.34	96	0.081	496	12.8	0.3	0.21	6590	3410	0.19	<0.004	1140	3.15	0.0008	0.04	1.4	<0.0004	<0.04	29
2011-CLRU-PCSA06-01	1.4	0.001	<0.01	5.74	<0.02	<0.02	<0.4	0.063	6260	<0.04	0.026	2.71	82	0.043	331	4.99	0.06	0.06	5750	3000	0.56	0.007	1090	5.02	<0.0004	<0.02	0.5	0.0006	<0.04	24.7
2011-CLRU-PCSA06-02	4.5	0.002	<0.01	19.2	<0.02	<0.02	<0.4	0.069	9300	<0.04	0.029	2.28	71	0.057	397	12.2	0.13	0.08	7230	2510	0.34	<0.004	1180	5.94	0.0005	<0.02	0.7	0.0006	<0.04	27
2011-CLRU-MSSA01-02	17.4	0.002	0.04	7.89	<0.02	<0.02	0.7	0.066	6250	0.07	0.052	2.67	70	0.073	369	11.3	0.17	0.16	5670	3070	0.23	0.007	917	3.57	0.001	<0.02	1.6	0.001	<0.04	22.8
2011-CLRU-MSSA01-03	8.7	0.001	0.05	7.7	<0.02	<0.02	1	0.02	6470	0.05	0.046	2.52	71	0.161	365	10.2	0.15	0.11	5580	2930	0.21	<0.004	960	4.18	0.0008	0.03	0.8	<0.0004	<0.04	22.6
2011-CLRU-MSSA01-04	14.1	0.002	0.05	7.43	<0.02	<0.02	0.6	0.042	5560	0.07	0.052	2.71	67	0.06	360	14.3	0.12	0.13	5490	2970	0.18	0.01	973	3.79	0.0009	0.02	1.7	<0.0004	<0.04	25.6
2011-CLRU-MSSA01-07	18.5	0.003	0.05	7.37	<0.02	<0.02	0.8	0.03	9430	0.14	0.069	3.85	99	0.232	496	29.4	0.2	0.22	7040	3180	0.24	<0.004	1040	3.71	0.003	0.07	1.5	0.0005	<0.04	27
2011-CLRU-MSSA02-01	11.2	0.003	0.05	3.5	<0.02	<0.02	0.9	0.102	7630	0.07	0.052	3.3	98	0.255	429	5.71	0.28	0.11	6390	3030	0.44	<0.004	1180	3.49	<0.0004	0.14	1.1	<0.0004	<0.04	24.4
2011-CLRU-MSSA03-01	6.7	0.006	<0.01	9.69	<0.02	<0.02	0.4	0.032	5240	<0.04	0.045	3.31	89	0.122	390	25.5	0.19	0.15	5330	3010	0.2	0.006	1070	3.07	0.0038	<0.02	0.6	0.0005	<0.04	25.9
2011-CLRU-MSSA04-01	4.3	0.005	0.06	6.54	<0.02	<0.02	0.7	0.553	7520	0.05	0.043	3.17	67	0.247	418	10	0.2	0.15	6740	3020	0.36	0.012	1140	3.5	0.0053	0.04	0.4	<0.0004	<0.04	26.6
2011-CLRU-MSSA04-02	6.3	0.009	0.06	4.93	<0.02	<0.02	0.7	0.143	5600	<0.04	0.044	3.37	75	0.826	339	11.8	0.14	0.18	4970	2960	0.43	0.01	980	1.72	0.0042	0.02	0.5	0.0005	<0.04	25.2

2011-CLRU-MSSA04-03	7.5	0.006	0.06	5.84	<0.02	<0.02	0.7	0.5	5270	0.07	0.046	4.71	77	0.46	375	9.11	0.22	0.19	5030	3050	0.3	0.014	970	3.14	0.0054	<0.02	0.5	0.0022	<0.04	22.8
2011-CLRU-MSSA04-04	7.7	0.01	0.06	8.34	<0.02	<0.02	0.9	0.206	6570	<0.04	0.05	4.25	86	0.302	411	25.9	0.19	0.19	5910	3220	0.58	0.019	1070	3.36	0.0017	0.02	0.6	0.0011	<0.04	26
2011-CLRU-MSSA04-05	10.9	0.008	0.05	6.16	<0.02	<0.02	1.3	0.69	5160	0.05	0.057	4.33	93	0.346	454	13	0.2	0.53	5010	3080	0.74	0.041	1130	2.97	0.0018	0.03	0.4	0.0085	<0.04	35.1
2011-CLRU-MSSA04-06	8	0.01	0.05	7.28	<0.02	<0.02	1	0.086	6810	0.08	0.033	2.89	70	0.337	440	10	0.28	0.18	6360	2780	0.27	0.016	1250	4.24	0.0031	0.05	0.6	0.0023	<0.04	23.8
2011-CLRU-MSSA04-07	21	0.021	0.07	8.89	<0.02	<0.02	0.7	0.224	10000	0.08	0.05	3.4	94	0.257	475	18.7	0.2	0.28	7510	2930	0.38	0.038	1070	3.66	0.0021	0.02	1.6	0.0041	0.04	30.8
2011-CLRU-MSSA06-01	24.2	0.047	0.07	19.9	<0.02	<0.02	0.9	0.183	7690	0.19	0.108	3.44	108	2.37	418	11.7	0.25	0.25	5960	2940	0.67	0.047	1150	3.94	0.021	<0.02	1.8	0.0028	<0.04	31.5
2011-CLRU-MSSA06-02	14.8	0.036	0.05	12.9	<0.02	<0.02	0.6	0.1	4750	0.04	0.061	3.38	90	0.728	327	13.6	0.18	0.18	4920	3200	0.83	0.039	921	3.52	0.0615	<0.02	0.8	0.0016	<0.04	26.4
2014 Redback Vole (Whole Body)																														
MCRA																														
2014-CLRU-MCRA06-54	12.4	0.002	<0.010	8.92	<0.020	<0.020	<0.40	0.215	7470	0.047	0.022	2.91	59.3	0.03	352	5.65	0.141	0.117	5380	3020	0.199	0.0596	907	4.99	0.00123	<0.020	0.58	0.00101	<0.040	23.6
2014-CLRU-MCRA06-55	51.6	0.0031	0.017	16.9	<0.020	<0.020	<0.40	0.642	8410	0.193	0.061	3.83	146	0.146	473	26.9	0.164	0.286	6570	4000	0.203	0.196	1140	6.3	0.00216	0.066	4.14	0.00724	0.164	36.6
2014-CLRU-MCRA06-60	1.66	0.0016	0.057	13.5	<0.020	<0.020	<0.40	0.068	11300	0.09	0.036	2.52	70.8	0.015	629	8.74	0.192	0.155	7680	3300	0.153	0.0164	1140	6.86	0.00047	0.029	0.4	0.00217	<0.040	27.8
2014-CLRU-MCRA06-64	0.98	0.0015	<0.010	7.91	<0.020	<0.020	<0.40	0.262	9360	0.113	0.044	2.86	62	0.04	453	6.78	0.145	0.152	6750	3570	0.231	0.0263	1330	4.38	0.00222	0.048	0.26	<0.00040	<0.040	30.6
2014-CLRU-MCRA06-65	6.85	0.0015	<0.010	16.5	<0.020	<0.020	<0.40	0.244	7190	0.076	0.043	4.4	61.7	0.027	408	5.97	0.167	0.149	5720	3590	0.234	0.106	1280	5.79	0.00045	0.066	0.34	<0.00040	<0.040	26.5
2014-CLRU-MCRA06-66	2.01	0.0032	<0.010	4.99	<0.020	<0.020	<0.40	0.066	10100	0.107	0.048	3.04	64.6	0.099	442	3.08	0.133	0.155	7200	3540	0.254	0.0163	1270	1.3	0.00109	<0.020	0.37	<0.00040	<0.040	29.4
2014-CLRU-MCRA06-67	1.4	0.0011	<0.010	9.26	<0.020	<0.020	<0.40	0.152	7590	0.092	0.033	3.1	67.5	0.029	412	5.17	0.158	0.12	5580	3890	0.249	0.0781	1250	4.58	0.00142	0.034	0.24	<0.00040	<0.040	28.9
2014-CLRU-MCRA06-68	11.8	0.0012	<0.010	12.3	<0.020	<0.020	<0.40	0.099	8020	0.127	0.069	3.41	84.9	0.023	434	13.4	0.142	0.174	6100	3180	0.204	0.095	1130	6.12	0.00058	0.027	0.92	0.00062	<0.040	28.2
2014-CLRU-MCRA06-69	0.94	<0.0010	<0.010	13	<0.020	<0.020	<0.40	0.127	8950	0.07	0.027	3	54.6	0.081	411	4.96	0.103	0.107	6120	2910	0.312	0.0872	1050	4.43	0.00075	<0.020	0.26	<0.00040	<0.040	25.5
2014-CLRU-MCRA06-70	1.8	0.0018	<0.010	7.53	<0.020	<0.020	0.41	0.084	7200	0.088	0.021	3	64.1	0.018	431	6.53	0.146	0.163	5880	3480	0.209	0.158	1150	5.03	0.00096	0.037	0.26	<0.00040	<0.040	25.6
2014-CLRU-MCRA06-71	5.3	0.0017	<0.010	9.42	<0.020	<0.020	0.57	0.152	8710	0.054	0.05	3.43	66.8	0.046	508	8.7	0.157	0.17	6560	3220	0.205	0.0468	1310	5.46	0.00308	0.021	0.43	0.00082	<0.040	25.9
2014-CLRU-MCRA06-72	2.7	0.0016	<0.010	9.06	<0.020	<0.020	0.63	0.377	7470	0.159	0.07	3.49	68.3	0.032	441	7.91	0.153	0.198	5780	3560	0.27	0.0628	1410	4.25	0.00301	<0.020	0.23	<0.00040	<0.040	29.3
2014-CLRU-MCRA06-73	2.7	0.002	<0.010	11.5	<0.020	<0.020	<0.40	0.112	6520	0.101	0.028	2.74	66.8	0.029	373	7.42	0.128	0.159	5490	2980	0.208	0.0268	1300	4.75	0.0006	0.048	0.28	<0.00040	<0.040	26.1
2014-CLRU-MCRA06-74	10.8	0.0057	0.019	14.5	<0.020	<0.020	0.67	0.074	11500	0.113	0.041	2.97	76.8	0.105	517	9.18	0.164	0.206	8670	3580	0.221	0.0609	1340	7.91	0.00145	0.037	0.73	0.0022	<0.040	28
2014-CLRU-MCRA06-75	12	0.0015	<0.010	7.21	<0.020	<0.020	0.7	0.104	6040	0.154	0.034	2.87	70	0.032	414	8.67	0.164	0.19	5530	2910	0.188	0.016	1400	4.96	0.0007	<0.020	0.71	0.00187	<0.040	23.5
2014-CLRU-MCRA06-76	2.02	0.0025	<0.010	9.16	<0.020	<0.020	<0.40	0.077	6580	0.091	0.045	6.63	72.6	0.071	407	7.39	0.128	0.133	5930	3320	0.245	0.0215	1230	5.09	0.00231	0.096	0.26	0.00044	<0.040	24.8
MSSA																														
2014-CLRU-MSSA01-01	28	0.0258	0.069	15.1	<0.020	<0.020	0.71	0.134	9520	0.279	0.082	3.3	122	0.912	537	7.56	0.257	0.339	7460	3530	0.543	0.0213	1340	5.07	0.00241	0.049	2.61	0.00115	0.087	30.2
2014-CLRU-MSSA01-02	16.6	0.0165	0.034	6.35	<0.020	<0.020	<0.40	0.049	6690	0.12	0.04	2.97	88.1	0.415	393	10	0.201	0.14	5860	2950	0.526	0.0131	1170	2.96	0.00412	<0.020	1.56	0.00063	0.048	23.8
2014-CLRU-MSSA01-03	13.4	0.0154	0.034	6.6	<0.020	<0.020	0.43	0.038	7460	0.067	0.052	2.21	71.4	0.442	414	16.1	0.107	0.159	6270	3010	0.318	0.0114	1040	4.24	0.00442	<0.020	1.23	0.00051	<0.040	22.6
2014-CLRU-MSSA01-04	22.4	0.0091	0.019	13.8	<0.020	<0.020	<0.40	0.143	8490	0.165	0.087	2.77	93.8	0.787	441	24.5	0.132	0.18	6720	3370	0.32	0.0196	1030	4.46	0.00242	0.025	1.4	0.0007	0.045	27.1
2014-CLRU-MSSA06-09	25.5	0.39	0.964	10.6	<0.020	<0.020	<0.40	0.727	7270	0.221	0.072	8.96	212	9.87	403	7.13	0.157	0.233	6500	3530	3.05	0.166	1190	5.02	0.0225	0.032	1.46	0.00419	0.066	90.2
2014-CLRU-MSSA06-10	29.9	0.242	0.565	15.5	<0.020	0.023	0.55	0.492	10000	0.23	0.08	6.6	187	13	492	10.4	0.173	0.265	7750	3490	3.1	0.141	1310	5.22	0.0304	0.054	1.55	0.00512	0.097	71
2014-CLRU-MSSA06-11	19.8	0.222	0.554	12.1	<0.020	<0.020	<0.40	0.399	10300	0.142	0.068	5.68	173	9.61	435	6.28	0.12	0.178	7890	3450	3.01	0.109	1360	5.29	0.018	0.046	1.28	0.00447	0.05	61.2
2014-CLRU-MSSA06-12	11.4	0.129	0.395	14	<0.020	<0.020	<0.40	0.357	7980	0.126	0.087	5.49	122	5.99	410	7.66	0.122	0.175	6560	3140	2.18	0.444	1300	4.27	0.035	0.031	0.7	0.0019	<0.040	47.2
2014-CLRU-MSSA06-14	58.8	0.528	1.04	17.3	<0.020	0.059	<0.40	0.761	8560	0.372	0.118	8.94	269	19.2	459	19.8	0.154	0.366	6930	3290	3.04	0.338	1120	5	0.0326	0.075	3.54	0.0132	0.158	91.6
2014-CLRU-MSSA06-15	11.4	0.129	0.398	13.2	<0.020	<0.020	<0.40	0.3	8230	0.164	0.044	4.99	96.9	4.03	412	9.26	0.147	0.199	6810	3030	2.14	0.0965	1190	4.86	0.0214	0.104	0.83	0.00206	<0.040	49.9
2014-CLRU-MSSA06-16	16.6	0.145	0.413	10.9	<0.020	<0.020	<0.40	0.54	6610	0.234	0.062	5.85	121	5.09	349	8.41	0.157	0.244	5920	3280	2.05	0.187	1120	3.83	0.0151	0.123	0.93	0.00299	<0.040	49.4
2014-CLRU-MSSA06-17	40.3	0.321	0.832	12.8	<0.020	0.029	0.73	0.552	5160	0.181	0.082	6.83	187	12.9	406	13	0.168	0.281	4930	3190	2.09	0.373	1230	2.87	0.0243	0.046	2.36	0.00547	0.104	68.9
2014-CLRU-MSSA06-18	15.5	0.254	0.618	32.2	<0.020	<0.020	<0.40	0.511	18000	0.168	0.034	7.52	166	15.4	609	4.77	0.095	0.125	12400	3110	2.61	0.177	1440	9.95	0.0208	0.126	1.13	0.00269	0.04	85.1
2014-CLRU-MSSA04-19	22.3	0.188	0.403	13.7	<0.020	<0.020	0.47	0.583	9860	0.212	0.086	5.72	145	6.53	490	30.1	0.201	0.281	7910	3670	1.69	0.399	1510	5.45	0.0128	0.074	1.41	0.0056	0.074	54
2014-CLRU-MSSA04-20	19.3	0.0878	0.217	10	<0.020	<0.020	<0.40	0.237	10400	0.206	0.059	5.36	113	2.89	464	8.78	0.154	0.262	8330	3260	1.2	0.0653	1270	4.71	0.0079	0.036	1.27	0.00704	0.08	40.3
2014-CLRU-MSSA04-21	11.2	0.139	0.334	20.8	<0.020	<0.020	0.4	0.348	11400	0.284	0.052	5.62	114	3.45	498	21.4	0.137	0.285	8970	3580	1.4	0.0754	1260	5.93	0.0101	0.044	0.78	0.00186	<0.040	51

2014-CLRU-MSSA04-22	13.9	0.0868	0.191	10.5	<0.020	<0.020	<0.40	0.453	10700	0.18	0.051	4.3	106	3.48	480	15.1	0.196	0.226	8680	3350	1.3	0.062	1250	5.76	0.00875	0.063	0.98	0.00357	<0.040	38.1
2014-CLRU-MSSA04-23	19.4	0.0796	0.202	8.14	<0.020	<0.020	0.63	0.283	7300	0.196	0.048	3.95	97.5	2.98	434	12.1	0.157	0.292	6610	3420	1.25	0.0516	1300	3.34	0.00797	0.064	1.16	0.00806	0.057	38
2014-CLRU-MSSA04-24	15.7	0.0698	0.171	9.01	<0.020	<0.020	0.72	0.297	10300	0.249	0.048	3.72	116	2.77	551	7.65	0.166	0.338	8470	3650	1.15	0.0346	1350	5.33	0.00588	0.035	0.83	0.00359	0.044	36.3
2014-CLRU-MSSA04-25	9.62	0.0811	0.435	6.85	<0.020	<0.020	0.46	0.781	7700	0.21	0.053	4.33	97.5	2.43	452	6.07	0.174	0.236	7120	3200	1.78	0.0721	1300	4.67	0.00576	0.056	0.63	0.00235	<0.040	35.5
2014-CLRU-MSSA01-26	41.6	0.026	0.066	8.94	<0.020	<0.020	<0.40	0.072	8610	0.246	0.077	2.47	115	0.591	449	12	0.315	0.271	7190	3350	0.512	0.0345	1190	4.17	0.00325	0.076	2.83	0.0019	0.101	27.1
PCSA																														
2014-CLRU-PCSA01-31	38.1	0.0099	0.056	25.5	<0.020	<0.020	<0.40	0.069	6970	0.212	0.082	5.99	136	0.488	434	9.89	0.133	0.238	6190	3560	0.396	0.0363	1260	3.81	0.00527	<0.020	2.58	0.00364	0.116	27
2014-CLRU-PCSA01-32	22	0.0052	0.024	33.8	<0.020	<0.020	<0.40	0.155	7560	0.181	0.086	3.28	98.5	0.355	453	57	0.15	0.2	6240	3570	0.366	0.0665	1340	3.48	0.00875	<0.020	2.07	0.00111	0.072	32.2
2014-CLRU-PCSA01-33	23.1	0.0078	0.04	22.1	<0.020	<0.020	<0.40	0.064	9170	0.256	0.062	2.61	116	0.273	464	4.9	0.137	0.213	7330	3720	0.429	0.0177	1290	3.71	0.00417	<0.020	2.27	0.00126	0.089	28.3
2014-CLRU-PCSA01-34	64.2	0.0098	0.045	20.8	<0.020	<0.020	<0.40	0.226	8000	0.418	0.109	3.11	182	0.389	481	5.86	0.155	0.278	6290	3880	0.423	0.014	1210	3.63	0.00174	<0.020	4.78	0.00279	0.237	27.3
2014-CLRU-PCSA03-36	37.8	0.0027	0.018	11.3	<0.020	<0.020	0.84	0.046	8720	0.327	0.077	3.12	117	0.1	542	6.97	0.162	0.271	7120	3660	0.209	0.0064	1390	3.38	0.00071	<0.020	3.1	0.00098	0.118	31.4
2014-CLRU-PCSA03-37	17.4	0.0029	0.016	11.9	<0.020	<0.020	<0.40	0.025	10000	0.132	0.058	4.21	114	0.068	548	8.84	0.13	0.163	8350	3950	0.183	0.0067	1230	3.28	0.00068	<0.020	1.87	0.0004	0.059	30.2
2014-CLRU-PCSA03-38	23.1	0.0022	0.014	7.25	<0.020	<0.020	<0.40	0.022	7340	0.245	0.062	3.28	99.6	0.066	463	17.7	0.147	0.228	6600	3380	0.16	0.0047	1110	2.51	0.00118	<0.020	2.26	0.00048	0.068	24.8
2014-CLRU-PCSA03-39	22.8	0.002	0.016	8.58	<0.020	<0.020	0.49	0.04	8120	0.177	0.06	2.91	101	0.104	449	10.7	0.121	0.218	6200	3380	0.202	0.0068	1070	2.12	0.00058	<0.020	2.01	0.00058	0.08	28.7
2014-CLRU-PCSA03-40	20.4	0.0021	0.012	6.67	<0.020	<0.020	0.5	0.057	8000	0.183	0.058	4.61	109	0.061	533	6.55	0.152	0.199	7120	3720	0.177	0.0044	1220	1.82	<0.00040	<0.020	1.82	0.00065	0.061	28.1
2014-CLRU-PCSA03-41	48.2	0.0034	0.028	18.2	<0.020	<0.020	0.62	0.108	8110	0.273	0.102	3.76	136	0.122	529	28.5	0.157	0.306	6720	3720	0.201	0.0054	1110	2.08	0.00065	<0.020	4.45	0.0011	0.165	37.7
2014-CLRU-PCSA03-42	52.9	0.0063	0.027	6.35	<0.020	<0.020	0.66	0.065	7020	0.287	0.09	3.45	133	0.099	503	9.18	0.111	0.288	6400	3780	0.156	0.0045	1090	1.98	0.00077	<0.020	4.1	0.00163	0.159	24.4
2014-CLRU-PCSA01-43	48.3	0.0098	0.059	30.6	<0.020	<0.020	<0.40	0.069	7740	0.25	0.09	2.76	165	0.409	449	15.2	0.137	0.263	6410	3210	0.42	0.0057	1120	4.47	0.00311	<0.020	3.88	0.00293	0.168	27.4
2014-CLRU-PCSA01-44	18	0.0042	0.021	6.63	<0.020	<0.020	<0.40	0.05	7010	0.142	0.069	2.27	96.6	0.129	404	4.2	0.101	0.169	5420	2760	0.209	0.0042	910	3.84	0.00073	<0.020	1.29	0.00093	0.061	22.5
2014-CLRU-PCSA01-45	46.4	0.0113	0.044	17.6	<0.020	<0.020	0.51	0.21	6630	0.227	0.092	2.55	131	0.431	402	6.25	0.135	0.216	5630	2940	0.293	0.0057	1130	3.23	0.00147	<0.020	2.76	0.00297	0.183	23.4
2014-CLRU-PCSA03-46	44.2	0.0044	0.019	8.52	<0.020	<0.020	1	0.057	6720	0.283	0.096	2.94	125	0.099	503	7.69	0.141	0.315	6240	3510	0.153	0.0043	1070	1.82	0.00049	<0.020	4.15	0.00103	0.143	24.9
2014-CLRU-PCSA03-47	51	0.0041	0.03	10.2	<0.020	<0.020	0.63	0.039	9530	0.295	0.106	3.31	160	0.114	530	11.6	0.149	0.292	7550	3210	0.21	0.0043	1180	2.66	0.00083	<0.020	3.78	0.00134	0.167	29
2014-CLRU-PCSA03-48	56.5	0.0035	0.026	13.7	<0.020	<0.020	0.51	0.064	9690	0.306	0.097	3.45	150	0.1	505	10.7	0.151	0.262	7710	3210	0.16	<0.0040	1370	2.47	0.00189	<0.020	5.08	0.00123	0.177	31.9
2014-CLRU-PCSA03-49	54.6	0.0046	0.026	8.99	<0.020	<0.020	0.8	0.035	4770	0.282	0.103	3.64	149	0.132	447	15.5	0.141	0.298	5090	3450	0.174	0.0062	1170	1.66	0.00221	<0.020	3.04	0.0016	0.168	23.5
2014-CLRU-PCSA03-50	14.8	0.0035	0.015	7.7	<0.020	<0.020	<0.40	0.073	11200	0.196	0.056	4.26	105	0.054	547	6.85	0.152	0.245	8770	3290	0.234	0.0044	1330	2.63	0.00181	<0.020	1.51	<0.00040	0.049	34
2014-CLRU-PCSA03-51	11.6	0.0022	0.01	8.08	<0.020	<0.020	<0.40	0.123	8750	0.082	0.048	3.29	88.1	0.075	474	8	0.128	0.161	7040	3450	0.194	<0.0040	1260	2.17	0.0005	<0.020	1.31	<0.00040	<0.040	32.1

Appendix F

Summary of Statistical Comparisons for Metals Levels in Redback Voles

Statistical summary table comparing mean total metal concentrations found in the whole body of Redback Vole (Clethrionomys rutilus) between 2011 and 2014 sampling periods for each survey area (MSSA and PCSA), using an Analysis of Variance (ANOVA) with 95% confidence. Note that the reference area (MCRA) could not be compared bewteen sampling periods because the location was changed at the request of the Wildlife Technical Commitee.

	Comparison	α - value	F - value	P - value	F critical	Null Hypothesis
As	MSSA (2011 vs 2014)	0.05	17.502	0.0002	4.130	Rejected
	PCSA (2011 vs 2014)	0.05	1.908	0.177	4.149	Accepted
Cd	MSSA (2011 vs 2014)	0.05	6.129	0.018	4.130	Rejected
	PCSA (2011 vs 2014)	0.05	0.306	0.584	4.149	Accepted
Cu	MSSA (2011 vs 2014)	0.05	10.641	0.003	4.130	Rejected
	PCSA (2011 vs 2014)	0.05	0.415	0.524	4.149	Accepted
Pb	MSSA (2011 vs 2014)	0.05	14.536	0.001	4.130	Rejected
	PCSA (2011 vs 2014)	0.05	7.636	0.009	4.149	Rejected
Ni	MSSA (2011 vs 2014)	0.05	2.118	0.155	4.130	Accepted
	PCSA (2011 vs 2014)	0.05	14.316	0.001	4.149	Rejected
Se	MSSA (2011 vs 2014)	0.05	26.310	0.000	4.130	Rejected
	PCSA (2011 vs 2014)	0.05	2.157	0.152	4.149	Accepted
Zn	MSSA (2011 vs 2014)	0.05	16.856	0.000	4.130	Rejected
	PCSA (2011 vs 2014)	0.05	0.692	0.412	4.149	Accepted

Statistical summary table comparing mean total metal concentrations found in the whole body of Redback Vole (Clethrionomys rutilus) between survey areas (MSSA and PCSA) and the newly established control reference area (MCRA) for the 2014 sampling period, using an Analysis of Variance (ANOVA) with 95% confidence.

	Comparison	α - value	F - value	P - value	F critical	Null Hypothesis
As	MCRA vs PCSA	0.05	8.983	0.0051	4.130	Rejected
	MCRA vs MSSA	0.05	23.318	0.000	4.121	Rejected
Cd	MCRA vs PCSA*	0.05	7.262	0.011	4.130	Rejected
	MCRA vs MSSA	0.05	9.681	0.004	4.121	Rejected
Cu	MCRA vs PCSA	0.05	0.030	0.864	4.130	Accepted
	MCRA vs MSSA	0.05	10.656	0.002	4.121	Rejected
Pb	MCRA vs PCSA	0.05	12.371	0.001	4.130	Rejected
	MCRA vs MSSA	0.05	18.060	0.000	4.121	Rejected
Ni	MCRA vs PCSA	0.05	24.677	0.000	4.130	Rejected
	MCRA vs MSSA	0.05	16.218	0.000	4.121	Rejected
Se	MCRA vs PCSA	0.05	0.783	0.382	4.130	Accepted
	MCRA vs MSSA	0.05	37.827	0.000	4.121	Rejected
Zn	MCRA vs PCSA	0.05	0.565	0.457	4.130	Accepted
	MCRA vs MSSA	0.05	16.388	0.000	4.121	Rejected

*Significantly lower in Survey Area when compared to Reference Area

Appendix G

Maxxam Lab Reports for Vegetation and Small Metal Analysis

Maxxam
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Success Through Science®

Your P.O. #: 108376
Your C.O.C. #: 08397359

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/24
Report #: R1689102
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B482566
Received: 2014/09/17, 09:10

Sample Matrix: VEGETATION
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS (total) - Plant	9	2014/11/14	2014/11/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total) - Plant	1	2014/11/14	2014/11/24	BBY7SOP-00002	EPA 6020A R1 m
Moisture in Tissue	10	N/A	2014/11/20	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
This report has been generated and distributed using a secure automated process.
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Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B482566
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8202	KP8203	KP8204		
Sampling Date		2014/08/22 15:30	2014/08/22 15:40	2014/08/22 15:42		
COC Number		08397359	08397359	08397359		
	Units	**2014-MC6-CLAD-STN1(A)**	**2014-MC6-CLAD-STN2(A)**	**2014-MC6-CLAD-STN3(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	48.6	97.9	33.9	1.0	7719905
Total Antimony (Sb)	mg/kg	0.0491	0.0785	0.0376	0.0050	7719905
Total Arsenic (As)	mg/kg	0.127	0.186	0.095	0.050	7719905
Total Barium (Ba)	mg/kg	8.27	16.9	14.5	0.10	7719905
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7719905
Total Cadmium (Cd)	mg/kg	0.178	0.289	0.131	0.010	7719905
Total Calcium (Ca)	mg/kg	663	1240	711	10	7719905
Total Chromium (Cr)	mg/kg	<0.20	<0.20	<0.20	0.20	7719905
Total Cobalt (Co)	mg/kg	0.042	0.077	0.035	0.020	7719905
Total Copper (Cu)	mg/kg	1.90	3.34	1.70	0.050	7719905
Total Iron (Fe)	mg/kg	68	106	52	10	7719905
Total Lead (Pb)	mg/kg	1.16	2.74	0.912	0.010	7719905
Total Magnesium (Mg)	mg/kg	290	450	210	10	7719905
Total Manganese (Mn)	mg/kg	162	314	116	0.10	7719905
Total Mercury (Hg)	mg/kg	<0.010	0.017	<0.010	0.010	7719905
Total Molybdenum (Mo)	mg/kg	0.053	0.105	<0.050	0.050	7719905
Total Nickel (Ni)	mg/kg	0.306	0.617	0.410	0.050	7719905
Total Phosphorus (P)	mg/kg	631	668	413	10	7719905
Total Potassium (K)	mg/kg	1640	1320	942	10	7719905
Total Selenium (Se)	mg/kg	0.100	0.100	0.074	0.050	7719905
Total Silver (Ag)	mg/kg	0.091	0.364	0.056	0.020	7719905
Total Sodium (Na)	mg/kg	15	21	<10	10	7719905
Total Strontium (Sr)	mg/kg	1.89	4.23	3.69	0.10	7719905
Total Thallium (Tl)	mg/kg	0.0024	0.0076	<0.0020	0.0020	7719905
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Titanium (Ti)	mg/kg	2.2	3.3	1.4	1.0	7719905
Total Uranium (U)	mg/kg	0.0040	0.0077	0.0025	0.0020	7719905
Total Vanadium (V)	mg/kg	<0.20	<0.20	<0.20	0.20	7719905
Total Zinc (Zn)	mg/kg	41.6	64.2	41.7	0.20	7719905
RDL = Reportable Detection Limit						

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Maxxam Job #: B482566
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8205	KP8206	KP8207		
Sampling Date		2014/08/22 15:50	2014/08/22 15:55	2014/08/22 16:00		
COC Number		08397359	08397359	08397359		
	Units	**2014-MC6-CLAD-STN5(A)**	**2014-MC6-CLAD-STN7(A)**	**2014-MC6-CLAD-STN8(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	57.8	34.1	48.4	1.0	7719905
Total Antimony (Sb)	mg/kg	0.0477	0.0432	0.0554	0.0050	7719905
Total Arsenic (As)	mg/kg	0.103	0.088	0.120	0.050	7719905
Total Barium (Ba)	mg/kg	24.5	8.69	16.7	0.10	7719905
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7719905
Total Cadmium (Cd)	mg/kg	0.168	0.213	0.188	0.010	7719905
Total Calcium (Ca)	mg/kg	797	338	543	10	7719905
Total Chromium (Cr)	mg/kg	<0.20	<0.20	<0.20	0.20	7719905
Total Cobalt (Co)	mg/kg	0.071	0.041	0.065	0.020	7719905
Total Copper (Cu)	mg/kg	1.90	1.99	2.00	0.050	7719905
Total Iron (Fe)	mg/kg	72	61	73	10	7719905
Total Lead (Pb)	mg/kg	1.09	1.05	1.43	0.010	7719905
Total Magnesium (Mg)	mg/kg	235	188	300	10	7719905
Total Manganese (Mn)	mg/kg	161	64.6	127	0.10	7719905
Total Mercury (Hg)	mg/kg	<0.010	<0.010	<0.010	0.010	7719905
Total Molybdenum (Mo)	mg/kg	<0.050	<0.050	<0.050	0.050	7719905
Total Nickel (Ni)	mg/kg	0.583	0.343	0.476	0.050	7719905
Total Phosphorus (P)	mg/kg	505	517	520	10	7719905
Total Potassium (K)	mg/kg	993	1210	1150	10	7719905
Total Selenium (Se)	mg/kg	0.070	0.098	0.106	0.050	7719905
Total Silver (Ag)	mg/kg	0.163	0.027	0.030	0.020	7719905
Total Sodium (Na)	mg/kg	<10	35	<10	10	7719905
Total Strontium (Sr)	mg/kg	3.65	1.66	2.79	0.10	7719905
Total Thallium (Tl)	mg/kg	0.0025	0.0023	0.0027	0.0020	7719905
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Titanium (Ti)	mg/kg	2.5	1.8	2.5	1.0	7719905
Total Uranium (U)	mg/kg	0.0034	0.0029	0.0038	0.0020	7719905
Total Vanadium (V)	mg/kg	<0.20	<0.20	<0.20	0.20	7719905
Total Zinc (Zn)	mg/kg	43.5	28.1	34.1	0.20	7719905
RDL = Reportable Detection Limit						

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Maxxam Job #: B482566
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8208	KP8209	KP8210		
Sampling Date		2014/08/22 16:05	2014/08/22 16:07	2014/08/22 16:35		
COC Number		08397359	08397359	08397359		
	Units	**2014-MC6-CLAD-STN9(A)**	**2014-MC6-CLAD-STN10(A)**	**2014-MC6-CLAD-STN11(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	56.8	56.3	45.4	1.0	7719905
Total Antimony (Sb)	mg/kg	0.0265	0.0413	0.0320	0.0050	7719905
Total Arsenic (As)	mg/kg	0.070	0.118	0.101	0.050	7719905
Total Barium (Ba)	mg/kg	18.8	20.2	13.4	0.10	7719905
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7719905
Total Cadmium (Cd)	mg/kg	0.090	0.196	0.096	0.010	7719905
Total Calcium (Ca)	mg/kg	999	541	629	10	7719905
Total Chromium (Cr)	mg/kg	<0.20	<0.20	<0.20	0.20	7719905
Total Cobalt (Co)	mg/kg	0.037	0.058	0.041	0.020	7719905
Total Copper (Cu)	mg/kg	1.39	1.82	1.50	0.050	7719905
Total Iron (Fe)	mg/kg	101	76	64	10	7719905
Total Lead (Pb)	mg/kg	0.862	1.24	0.915	0.010	7719905
Total Magnesium (Mg)	mg/kg	175	216	184	10	7719905
Total Manganese (Mn)	mg/kg	88.7	95.0	103	0.10	7719905
Total Mercury (Hg)	mg/kg	0.011	<0.010	<0.010	0.010	7719905
Total Molybdenum (Mo)	mg/kg	<0.050	<0.050	<0.050	0.050	7719905
Total Nickel (Ni)	mg/kg	0.329	0.461	0.410	0.050	7719905
Total Phosphorus (P)	mg/kg	487	479	399	10	7719905
Total Potassium (K)	mg/kg	1060	1030	853	10	7719905
Total Selenium (Se)	mg/kg	0.071	0.091	0.066	0.050	7719905
Total Silver (Ag)	mg/kg	0.126	0.058	0.026	0.020	7719905
Total Sodium (Na)	mg/kg	<10	<10	<10	10	7719905
Total Strontium (Sr)	mg/kg	4.05	2.98	2.83	0.10	7719905
Total Thallium (Tl)	mg/kg	0.0025	0.0028	0.0021	0.0020	7719905
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7719905
Total Titanium (Ti)	mg/kg	2.3	2.6	2.0	1.0	7719905
Total Uranium (U)	mg/kg	0.0036	0.0044	0.0035	0.0020	7719905
Total Vanadium (V)	mg/kg	<0.20	<0.20	<0.20	0.20	7719905
Total Zinc (Zn)	mg/kg	23.6	35.3	37.8	0.20	7719905
RDL = Reportable Detection Limit						

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Maxxam Job #: B482566
Report Date: 2014/11/24

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ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8211		
Sampling Date		2014/08/22 16:40		
COC Number		08397359		
	Units	**2014-MC6-CLAD-STN12(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS				
Total Aluminum (Al)	mg/kg	42.0	1.0	7719905
Total Antimony (Sb)	mg/kg	0.0284	0.0050	7719905
Total Arsenic (As)	mg/kg	0.102	0.050	7719905
Total Barium (Ba)	mg/kg	14.3	0.10	7719905
Total Beryllium (Be)	mg/kg	<0.10	0.10	7719905
Total Bismuth (Bi)	mg/kg	<0.10	0.10	7719905
Total Boron (B)	mg/kg	<2.0	2.0	7719905
Total Cadmium (Cd)	mg/kg	0.137	0.010	7719905
Total Calcium (Ca)	mg/kg	498	10	7719905
Total Chromium (Cr)	mg/kg	0.54	0.20	7719905
Total Cobalt (Co)	mg/kg	0.058	0.020	7719905
Total Copper (Cu)	mg/kg	1.23	0.050	7719905
Total Iron (Fe)	mg/kg	68	10	7719905
Total Lead (Pb)	mg/kg	0.840	0.010	7719905
Total Magnesium (Mg)	mg/kg	209	10	7719905
Total Manganese (Mn)	mg/kg	102	0.10	7719905
Total Mercury (Hg)	mg/kg	<0.010	0.010	7719905
Total Molybdenum (Mo)	mg/kg	<0.050	0.050	7719905
Total Nickel (Ni)	mg/kg	0.713	0.050	7719905
Total Phosphorus (P)	mg/kg	436	10	7719905
Total Potassium (K)	mg/kg	887	10	7719905
Total Selenium (Se)	mg/kg	0.075	0.050	7719905
Total Silver (Ag)	mg/kg	<0.020	0.020	7719905
Total Sodium (Na)	mg/kg	<10	10	7719905
Total Strontium (Sr)	mg/kg	2.19	0.10	7719905
Total Thallium (Tl)	mg/kg	0.0021	0.0020	7719905
Total Tin (Sn)	mg/kg	<0.10	0.10	7719905
Total Titanium (Ti)	mg/kg	2.0	1.0	7719905
Total Uranium (U)	mg/kg	0.0037	0.0020	7719905
Total Vanadium (V)	mg/kg	<0.20	0.20	7719905
Total Zinc (Zn)	mg/kg	27.1	0.20	7719905
RDL = Reportable Detection Limit				

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Maxxam Job #: B482566
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

PHYSICAL TESTING (VEGETATION)

Maxxam ID		KP8202	KP8203	KP8204		
Sampling Date		2014/08/22 15:30	2014/08/22 15:40	2014/08/22 15:42		
COC Number		08397359	08397359	08397359		
	Units	2014-MC6-CLAD-STN1(A)	2014-MC6-CLAD-STN2(A)	2014-MC6-CLAD-STN3(A)	RDL	QC Batch
Physical Properties						
Moisture	%	62	65	63	0.30	7723356
RDL = Reportable Detection Limit						

Maxxam ID		KP8205	KP8206		KP8207		
Sampling Date		2014/08/22 15:50	2014/08/22 15:55		2014/08/22 16:00		
COC Number		08397359	08397359		08397359		
	Units	2014-MC6-CLAD-STN5(A)	2014-MC6-CLAD-STN7(A)	QC Batch	2014-MC6-CLAD-STN8(A)	RDL	QC Batch
Physical Properties							
Moisture	%	66	64	7723356	70	0.30	7723389
RDL = Reportable Detection Limit							

Maxxam ID		KP8208	KP8209	KP8210		
Sampling Date		2014/08/22 16:05	2014/08/22 16:07	2014/08/22 16:35		
COC Number		08397359	08397359	08397359		
	Units	2014-MC6-CLAD-STN9(A)	2014-MC6-CLAD-STN10(A)	2014-MC6-CLAD-STN11(A)	RDL	QC Batch
Physical Properties						
Moisture	%	48	66	61	0.30	7723356
RDL = Reportable Detection Limit						

Maxxam ID		KP8211		
Sampling Date		2014/08/22 16:40		
COC Number		08397359		
	Units	2014-MC6-CLAD-STN12(A)	RDL	QC Batch
Physical Properties				
Moisture	%	66	0.30	7723389
RDL = Reportable Detection Limit				

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Maxxam Job #: B482566
Report Date: 2014/11/24

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.0°C

Results relate only to the items tested.

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Report Date: 2014/11/24

QUALITY ASSURANCE REPORT

YUKON ZINC CORPORATION
Your P.O. #: 108376

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7719905	Total Aluminum (Al)	2014/11/21					<1.0	mg/kg	11	35	51	20 - 93
7719905	Total Antimony (Sb)	2014/11/21	101	75 - 125	110	75 - 125	<0.0050	mg/kg	15	35	92	75 - 125
7719905	Total Arsenic (As)	2014/11/21	101	75 - 125	98	75 - 125	<0.050	mg/kg	NC	35	106	75 - 125
7719905	Total Barium (Ba)	2014/11/21	NC	75 - 125	104	75 - 125	<0.10	mg/kg	6.1	35	94	75 - 125
7719905	Total Beryllium (Be)	2014/11/21	99	75 - 125	98	75 - 125	<0.10	mg/kg	NC	35		
7719905	Total Bismuth (Bi)	2014/11/21					<0.10	mg/kg	NC	35		
7719905	Total Boron (B)	2014/11/21					<2.0	mg/kg	NC	35	94	75 - 125
7719905	Total Cadmium (Cd)	2014/11/21	99	75 - 125	98	75 - 125	<0.010	mg/kg	3.3	35	97	75 - 125
7719905	Total Calcium (Ca)	2014/11/21					<10	mg/kg	3.9	35		
7719905	Total Chromium (Cr)	2014/11/21	95	75 - 125	98	75 - 125	<0.20	mg/kg	NC	35	45	28 - 97
7719905	Total Cobalt (Co)	2014/11/21	97	75 - 125	99	75 - 125	<0.020	mg/kg	NC	35	96	75 - 125
7719905	Total Copper (Cu)	2014/11/21	95	75 - 125	99	75 - 125	<0.050	mg/kg	12	35	93	75 - 125
7719905	Total Iron (Fe)	2014/11/21					<10	mg/kg	3.4	35	88	75 - 125
7719905	Total Lead (Pb)	2014/11/21	104	75 - 125	103	75 - 125	<0.010	mg/kg	6.7	35		
7719905	Total Magnesium (Mg)	2014/11/21					<10	mg/kg	10	35	92	75 - 125
7719905	Total Manganese (Mn)	2014/11/21	NC	75 - 125	97	75 - 125	<0.10	mg/kg	6.0	35	101	75 - 125
7719905	Total Mercury (Hg)	2014/11/21	101	75 - 125	119	75 - 125	<0.010	mg/kg	NC	35	101	75 - 125
7719905	Total Molybdenum (Mo)	2014/11/21	102	75 - 125	109	75 - 125	<0.050	mg/kg	NC	35	90	75 - 125
7719905	Total Nickel (Ni)	2014/11/21	98	75 - 125	98	75 - 125	<0.050	mg/kg	0.32	35	72	58 - 126
7719905	Total Phosphorus (P)	2014/11/21					<10	mg/kg	5.3	35		
7719905	Total Potassium (K)	2014/11/21					<10	mg/kg	6.1	35		
7719905	Total Selenium (Se)	2014/11/21	87	75 - 125	91	75 - 125	<0.050	mg/kg	NC	35	123	75 - 125
7719905	Total Silver (Ag)	2014/11/21	91	75 - 125	88	75 - 125	<0.020	mg/kg	NC	35		
7719905	Total Sodium (Na)	2014/11/21					<10	mg/kg	NC	35	89	75 - 125
7719905	Total Strontium (Sr)	2014/11/21	NC	75 - 125	103	75 - 125	<0.10	mg/kg	6.1	35	105	75 - 125
7719905	Total Thallium (Tl)	2014/11/21	94	75 - 125	94	75 - 125	<0.0020	mg/kg	NC	35		
7719905	Total Tin (Sn)	2014/11/21					<0.10	mg/kg	NC	35		
7719905	Total Titanium (Ti)	2014/11/21					<1.0	mg/kg	NC	35		
7719905	Total Uranium (U)	2014/11/21	98	75 - 125	100	75 - 125	<0.0020	mg/kg	NC	35		
7719905	Total Vanadium (V)	2014/11/21	96	75 - 125	95	75 - 125	<0.20	mg/kg	NC	35		
7719905	Total Zinc (Zn)	2014/11/21	NC	75 - 125	98	75 - 125	<0.20	mg/kg	8.5	35	93	75 - 125
7723356	Moisture	2014/11/20					<0.30	%	1.6	20		

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Maxxam Job #: B482566
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723389	Moisture	2014/11/20					<0.30	%	0.87	20		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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Maxxam Job #: B482566
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Rob Reinert, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

B482566

LAB USE ONLY
MAXXAM JOB #
08397359

ANALYSIS REQUEST

LAB USE ONLY
COC #

COMPANY NAME: Yukon Zinc Corporation	CLIENT PROJECT NO.:
COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8	TEL.: 604-682-5474 E-MAIL: YZC Group FAX: 604-682-5404
SAMPLER NAME (PRINT): T.P., C.J., and A.K.	PROJECT MANAGER: Robin McCall
LABORATORY CONTACT: Graham Rudkin	

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	Metals, Low Level (whole body)	% Moisture
1	2014-MC6-CLAD-Stn1(A)	KP8202					X	22/08/2014	15:30	1	X	X
2	2014-MC6-CLAD-Stn2(A)	KP8203					X	22/08/2014	15:40	1	X	X
3	2014-MC6-CLAD-Stn3(A)	KP8204					X	22/08/2014	15:42	1	X	X
4	2014-MC6-CLAD-Stn5(A)	KP8205					X	22/08/2014	15:50	1	X	X
5	2014-MC6-CLAD-Stn7(A)	KP8206					X	22/08/2014	15:55	1	X	X
6	2014-MC6-CLAD-Stn8(A)	KP8207					X	22/08/2014	16:00	1	X	X
7	2014-MC6-CLAD-Stn9(A)	KP8208					X	22/08/2014	16:05	1	X	X
8	2014-MC6-CLAD-Stn10(A)	KP8209					X	22/08/2014	16:07	1	X	X
9	2014-MC6-CLAD-Stn11(A)	KP8210					X	22/08/2014	16:35	1	X	X
10	2014-MC6-CLAD-Stn12(A)	KP8211					X	22/08/2014	16:40	1	X	X
11												
12												

B482566

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL
* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS

CUSTODY RECORD

PO NUMBER OR QUOTE NUMBER: 108376

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

CCME
CSR
AB TIER 1
OTHER

LAB USE ONLY
ARRIVAL TEMPERATURE °C: 7,9,8
DUE DATE:
LOG IN CHECK:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

JARS USED:

RELINQUINSHED BY SAMPLER: Robin McCall	DATE: DD/MM/YY 16/09/2014	TIME: 7:30	RECEIVED BY: REBECCA BANZON 2014/09/17 09:10
RELINQUINSHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY:
RELINQUINSHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY LABORATORY:

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Your P.O. #: 108376
Your C.O.C. #: 08397358

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/25
Report #: R1689809
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B482572
Received: 2014/09/17, 09:10

Sample Matrix: VEGETATION
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS (total) - Plant	12	2014/11/18	2014/11/24	BBY7SOP-00002	EPA 6020A R1 m
Moisture in Tissue	12	N/A	2014/11/20	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
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Maxxam Job #: B482572
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8228	KP8229	KP8230		
Sampling Date		2014/08/26	2014/08/26	2014/08/26		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC1-CLAD-STN1(A)**	**2014-MC1-CLAD-STN2(A)**	**2014-MC1-CLAD-STN3(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	795	658	770	1.0	7723454
Total Antimony (Sb)	mg/kg	1.10	1.70	1.26	0.0050	7723454
Total Arsenic (As)	mg/kg	2.60	3.43	3.10	0.050	7723454
Total Barium (Ba)	mg/kg	40.0	37.3	47.9	0.10	7723454
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Bismuth (Bi)	mg/kg	0.10	<0.10	0.10	0.10	7723454
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723454
Total Cadmium (Cd)	mg/kg	2.55	3.53	3.03	0.010	7723454
Total Calcium (Ca)	mg/kg	546	553	682	10	7723454
Total Chromium (Cr)	mg/kg	3.63	2.73	3.23	0.20	7723454
Total Cobalt (Co)	mg/kg	0.613	0.547	0.607	0.020	7723454
Total Copper (Cu)	mg/kg	26.5	33.6	29.2	0.050	7723454
Total Iron (Fe)	mg/kg	1840	1700	1790	10	7723454
Total Lead (Pb)	mg/kg	28.3	43.5	32.9	0.010	7723454
Total Magnesium (Mg)	mg/kg	623	554	730	10	7723454
Total Manganese (Mn)	mg/kg	44.4	42.9	67.3	0.10	7723454
Total Mercury (Hg)	mg/kg	0.050	0.042	0.035	0.010	7723454
Total Molybdenum (Mo)	mg/kg	0.206	0.195	0.204	0.050	7723454
Total Nickel (Ni)	mg/kg	2.78	2.48	2.95	0.050	7723454
Total Phosphorus (P)	mg/kg	321	383	371	10	7723454
Total Potassium (K)	mg/kg	593	812	846	10	7723454
Total Selenium (Se)	mg/kg	2.12	2.84	2.62	0.050	7723454
Total Silver (Ag)	mg/kg	0.560	0.892	0.750	0.020	7723454
Total Sodium (Na)	mg/kg	<10	<10	<10	10	7723454
Total Strontium (Sr)	mg/kg	2.75	2.56	3.75	0.10	7723454
Total Thallium (Tl)	mg/kg	0.0468	0.0576	0.0478	0.0020	7723454
Total Tin (Sn)	mg/kg	0.11	0.13	0.11	0.10	7723454
Total Titanium (Ti)	mg/kg	98.9	74.7	88.0	1.0	7723454
Total Uranium (U)	mg/kg	0.0755	0.0693	0.0736	0.0020	7723454
Total Vanadium (V)	mg/kg	2.78	2.26	2.69	0.20	7723454
Total Zinc (Zn)	mg/kg	260	345	308	0.20	7723454
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8231	KP8232	KP8233		
Sampling Date		2014/08/26	2014/08/26	2014/08/26		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC1-CLAD-STN4(A)**	**2014-MC1-CLAD-STN5(A)**	**2014-MC1-CLAD-STN5(B)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	832	435	1030	1.0	7723454
Total Antimony (Sb)	mg/kg	1.45	1.64	1.36	0.0050	7723454
Total Arsenic (As)	mg/kg	2.99	2.83	2.90	0.050	7723454
Total Barium (Ba)	mg/kg	32.6	23.3	48.7	0.10	7723454
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	0.12	0.10	7723454
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723454
Total Cadmium (Cd)	mg/kg	3.10	3.11	2.70	0.010	7723454
Total Calcium (Ca)	mg/kg	410	318	611	10	7723454
Total Chromium (Cr)	mg/kg	3.84	1.69	4.83	0.20	7723454
Total Cobalt (Co)	mg/kg	0.631	0.373	0.842	0.020	7723454
Total Copper (Cu)	mg/kg	33.8	29.7	30.8	0.050	7723454
Total Iron (Fe)	mg/kg	2110	1180	2580	10	7723454
Total Lead (Pb)	mg/kg	30.3	37.9	27.7	0.010	7723454
Total Magnesium (Mg)	mg/kg	613	375	831	10	7723454
Total Manganese (Mn)	mg/kg	37.3	33.1	57.4	0.10	7723454
Total Mercury (Hg)	mg/kg	0.040	0.030	0.066	0.010	7723454
Total Molybdenum (Mo)	mg/kg	0.212	0.177	0.274	0.050	7723454
Total Nickel (Ni)	mg/kg	2.93	1.51	3.87	0.050	7723454
Total Phosphorus (P)	mg/kg	278	392	401	10	7723454
Total Potassium (K)	mg/kg	537	881	788	10	7723454
Total Selenium (Se)	mg/kg	2.58	2.58	2.28	0.050	7723454
Total Silver (Ag)	mg/kg	0.778	0.807	0.673	0.020	7723454
Total Sodium (Na)	mg/kg	<10	<10	<10	10	7723454
Total Strontium (Sr)	mg/kg	2.12	1.51	3.88	0.10	7723454
Total Thallium (Tl)	mg/kg	0.0524	0.0462	0.0536	0.0020	7723454
Total Tin (Sn)	mg/kg	0.14	0.13	0.12	0.10	7723454
Total Titanium (Ti)	mg/kg	111	45.3	134	1.0	7723454
Total Uranium (U)	mg/kg	0.0776	0.0467	0.107	0.0020	7723454
Total Vanadium (V)	mg/kg	3.10	1.50	4.11	0.20	7723454
Total Zinc (Zn)	mg/kg	302	300	277	0.20	7723454
RDL = Reportable Detection Limit						

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Report Date: 2014/11/25

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ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8234	KP8235	KP8236		
Sampling Date		2014/08/26	2014/09/01	2014/09/01		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC1-CLAD-STN5(C)**	**2014-MC2-CLAD-STN4(A)**	**2014-MC3-CLAD-STN2(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	582	68.2	77.3	1.0	7723454
Total Antimony (Sb)	mg/kg	1.26	0.111	0.236	0.0050	7723454
Total Arsenic (As)	mg/kg	2.49	0.269	0.445	0.050	7723454
Total Barium (Ba)	mg/kg	33.9	9.01	23.7	0.10	7723454
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Bismuth (Bi)	mg/kg	0.10	<0.10	<0.10	0.10	7723454
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723454
Total Cadmium (Cd)	mg/kg	2.61	0.297	0.573	0.010	7723454
Total Calcium (Ca)	mg/kg	437	1330	1240	10	7723454
Total Chromium (Cr)	mg/kg	2.61	0.43	0.29	0.20	7723454
Total Cobalt (Co)	mg/kg	0.474	0.074	0.102	0.020	7723454
Total Copper (Cu)	mg/kg	25.8	2.91	5.03	0.050	7723454
Total Iron (Fe)	mg/kg	1480	139	168	10	7723454
Total Lead (Pb)	mg/kg	27.1	2.86	4.20	0.010	7723454
Total Magnesium (Mg)	mg/kg	541	286	340	10	7723454
Total Manganese (Mn)	mg/kg	48.3	17.1	253	0.10	7723454
Total Mercury (Hg)	mg/kg	0.041	<0.010	<0.010	0.010	7723454
Total Molybdenum (Mo)	mg/kg	0.196	0.079	0.054	0.050	7723454
Total Nickel (Ni)	mg/kg	2.21	0.293	0.494	0.050	7723454
Total Phosphorus (P)	mg/kg	376	357	406	10	7723454
Total Potassium (K)	mg/kg	702	1040	720	10	7723454
Total Selenium (Se)	mg/kg	2.28	0.213	0.359	0.050	7723454
Total Silver (Ag)	mg/kg	0.597	0.067	0.087	0.020	7723454
Total Sodium (Na)	mg/kg	12	<10	<10	10	7723454
Total Strontium (Sr)	mg/kg	2.35	0.71	3.22	0.10	7723454
Total Thallium (Tl)	mg/kg	0.0389	0.0048	0.0067	0.0020	7723454
Total Tin (Sn)	mg/kg	0.11	<0.10	<0.10	0.10	7723454
Total Titanium (Ti)	mg/kg	76.0	6.3	5.8	1.0	7723454
Total Uranium (U)	mg/kg	0.0574	0.0023	0.0050	0.0020	7723454
Total Vanadium (V)	mg/kg	2.07	0.22	<0.20	0.20	7723454
Total Zinc (Zn)	mg/kg	267	38.0	77.3	0.20	7723454
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8237	KP8238	KP8239		
Sampling Date		2014/09/01	2014/08/31	2014/08/31		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC3-CLAD-STN3(A)**	**2014-MC4-CLAD-STN1(A)**	**2014-MC4-CLAD-STN2(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	160	100	78.9	1.0	7723454
Total Antimony (Sb)	mg/kg	0.146	0.164	0.112	0.0050	7723454
Total Arsenic (As)	mg/kg	0.276	0.348	0.251	0.050	7723454
Total Barium (Ba)	mg/kg	41.4	13.0	10.3	0.10	7723454
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723454
Total Cadmium (Cd)	mg/kg	0.330	0.465	0.369	0.010	7723454
Total Calcium (Ca)	mg/kg	727	587	590	10	7723454
Total Chromium (Cr)	mg/kg	0.48	0.30	0.24	0.20	7723454
Total Cobalt (Co)	mg/kg	0.141	0.086	0.071	0.020	7723454
Total Copper (Cu)	mg/kg	3.37	4.39	3.08	0.050	7723454
Total Iron (Fe)	mg/kg	216	152	126	10	7723454
Total Lead (Pb)	mg/kg	3.23	4.29	3.36	0.010	7723454
Total Magnesium (Mg)	mg/kg	200	284	192	10	7723454
Total Manganese (Mn)	mg/kg	138	201	48.2	0.10	7723454
Total Mercury (Hg)	mg/kg	<0.010	<0.010	<0.010	0.010	7723454
Total Molybdenum (Mo)	mg/kg	<0.050	<0.050	0.064	0.050	7723454
Total Nickel (Ni)	mg/kg	0.594	0.353	0.298	0.050	7723454
Total Phosphorus (P)	mg/kg	379	615	340	10	7723454
Total Potassium (K)	mg/kg	620	1400	1060	10	7723454
Total Selenium (Se)	mg/kg	0.194	0.288	0.239	0.050	7723454
Total Silver (Ag)	mg/kg	0.079	0.065	0.051	0.020	7723454
Total Sodium (Na)	mg/kg	<10	<10	<10	10	7723454
Total Strontium (Sr)	mg/kg	4.69	1.76	2.22	0.10	7723454
Total Thallium (Tl)	mg/kg	0.0074	0.0059	0.0054	0.0020	7723454
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Titanium (Ti)	mg/kg	11.4	5.6	5.1	1.0	7723454
Total Uranium (U)	mg/kg	0.0064	0.0049	0.0041	0.0020	7723454
Total Vanadium (V)	mg/kg	0.39	0.21	<0.20	0.20	7723454
Total Zinc (Zn)	mg/kg	47.0	50.9	31.5	0.20	7723454
RDL = Reportable Detection Limit						

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PHYSICAL TESTING (VEGETATION)

Maxxam ID		KP8228	KP8229	KP8230		
Sampling Date		2014/08/26	2014/08/26	2014/08/26		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC1-CLAD-STN1(A)**	**2014-MC1-CLAD-STN2(A)**	**2014-MC1-CLAD-STN3(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	74	73	73	0.30	7723356
RDL = Reportable Detection Limit						

Maxxam ID		KP8231	KP8232	KP8233		
Sampling Date		2014/08/26	2014/08/26	2014/08/26		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC1-CLAD-STN4(A)**	**2014-MC1-CLAD-STN5(A)**	**2014-MC1-CLAD-STN5(B)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	70	71	70	0.30	7723356
RDL = Reportable Detection Limit						

Maxxam ID		KP8234	KP8235	KP8236		
Sampling Date		2014/08/26	2014/09/01	2014/09/01		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC1-CLAD-STN5(C)**	**2014-MC2-CLAD-STN4(A)**	**2014-MC3-CLAD-STN2(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	71	68	71	0.30	7723356
RDL = Reportable Detection Limit						

Maxxam ID		KP8237	KP8238	KP8239		
Sampling Date		2014/09/01	2014/08/31	2014/08/31		
COC Number		08397358	08397358	08397358		
	Units	**2014-MC3-CLAD-STN3(A)**	**2014-MC4-CLAD-STN1(A)**	**2014-MC4-CLAD-STN2(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	71	64	74	0.30	7723356
RDL = Reportable Detection Limit						

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

YUKON ZINC CORPORATION
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			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723356	Moisture	2014/11/20					<0.30	%	1.6	20		
7723454	Total Aluminum (Al)	2014/11/24					<1.0	mg/kg	7.1	35	34	20 - 93
7723454	Total Antimony (Sb)	2014/11/24	92	75 - 125	101	75 - 125	<0.0050	mg/kg	8.3	35	84	75 - 125
7723454	Total Arsenic (As)	2014/11/24	87	75 - 125	92	75 - 125	<0.050	mg/kg	12	35	88	75 - 125
7723454	Total Barium (Ba)	2014/11/24	NC	75 - 125	95	75 - 125	<0.10	mg/kg	6.1	35	83	75 - 125
7723454	Total Beryllium (Be)	2014/11/24	86	75 - 125	92	75 - 125	<0.10	mg/kg	NC	35		
7723454	Total Bismuth (Bi)	2014/11/24					<0.10	mg/kg	NC	35		
7723454	Total Boron (B)	2014/11/24					<2.0	mg/kg	NC	35	82	75 - 125
7723454	Total Cadmium (Cd)	2014/11/24	88	75 - 125	97	75 - 125	<0.010	mg/kg	2.1	35	89	75 - 125
7723454	Total Calcium (Ca)	2014/11/24					<10	mg/kg	0.20	35		
7723454	Total Chromium (Cr)	2014/11/24	85	75 - 125	90	75 - 125	<0.20	mg/kg	NC	35	49	28 - 97
7723454	Total Cobalt (Co)	2014/11/24	83	75 - 125	92	75 - 125	<0.020	mg/kg	10	35	79	75 - 125
7723454	Total Copper (Cu)	2014/11/24	NC	75 - 125	100	75 - 125	<0.050	mg/kg	3.7	35	79	75 - 125
7723454	Total Iron (Fe)	2014/11/24					<10	mg/kg	4.7	35	93	75 - 125
7723454	Total Lead (Pb)	2014/11/24	NC	75 - 125	97	75 - 125	<0.010	mg/kg	2.0	35		
7723454	Total Magnesium (Mg)	2014/11/24					<10	mg/kg	6.9	35	78	75 - 125
7723454	Total Manganese (Mn)	2014/11/24	NC	75 - 125	93	75 - 125	<0.10	mg/kg	4.0	35	85	75 - 125
7723454	Total Mercury (Hg)	2014/11/24	93	75 - 125	97	75 - 125	<0.010	mg/kg	NC	35	87	75 - 125
7723454	Total Molybdenum (Mo)	2014/11/24	99	75 - 125	100	75 - 125	<0.050	mg/kg	NC	35	83	75 - 125
7723454	Total Nickel (Ni)	2014/11/24	81	75 - 125	91	75 - 125	<0.050	mg/kg	1.8	35	65	58 - 126
7723454	Total Phosphorus (P)	2014/11/24					<10	mg/kg	4.5	35		
7723454	Total Potassium (K)	2014/11/24					<10	mg/kg	0.0031	35		
7723454	Total Selenium (Se)	2014/11/24	85	75 - 125	94	75 - 125	<0.050	mg/kg	NC	35	115	75 - 125
7723454	Total Silver (Ag)	2014/11/24	89	75 - 125	80	75 - 125	<0.020	mg/kg	NC	35		
7723454	Total Sodium (Na)	2014/11/24					<10	mg/kg	NC	35	77	75 - 125
7723454	Total Strontium (Sr)	2014/11/24	NC	75 - 125	100	75 - 125	<0.10	mg/kg	7.0	35	95	75 - 125
7723454	Total Thallium (Tl)	2014/11/24	86	75 - 125	87	75 - 125	<0.0020	mg/kg	NC	35		
7723454	Total Tin (Sn)	2014/11/24					<0.10	mg/kg	NC	35		
7723454	Total Titanium (Ti)	2014/11/24					<1.0	mg/kg	10	35		
7723454	Total Uranium (U)	2014/11/24	89	75 - 125	95	75 - 125	<0.0020	mg/kg	NC	35		
7723454	Total Vanadium (V)	2014/11/24	84	75 - 125	90	75 - 125	<0.20	mg/kg	NC	35		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723454	Total Zinc (Zn)	2014/11/24	NC	75 - 125	94	75 - 125	<0.20	mg/kg	6.4	35	80	75 - 125

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Rob Reinert, Data Validation Coordinator

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Maxxam Analytics Inc

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CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

B482572

LAB USE ONLY
08397358

ANALYSIS REQUEST

LAB USE ONLY
COC #

LAB USE ONLY

COMPANY NAME:	Yukon Zinc Corporation
CLIENT PROJECT NO.:	
COMPANY ADDRESS:	#410-700 West Pender Vancouver, BC V6C 1G8
TEL.:	604-682-5474
E-MAIL:	YZC Group
FAX:	604-682-5404
SAMPLER NAME (PRINT):	T.P., C.J., and A.K.
PROJECT MANAGER:	Robin McCall
LABORATORY CONTACT:	Graham Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	Metals, Low Level (whole body)	% Moisture
1	2014-MC1-CLAD-Stn1(A)	KP8228					X	26/08/2014		1	X	X
2	2014-MC1-CLAD-Stn2(A)	KP8229					X	26/08/2014		1	X	X
3	2014-MC1-CLAD-Stn3(A)	KP8230					X	26/08/2014		1	X	X
4	2014-MC1-CLAD-Stn4(A)	KP8231					X	26/08/2014		1	X	X
5	2014-MC1-CLAD-Stn5(A)	KP8232					X	26/08/2014		1	X	X
6	2014-MC1-CLAD-Stn5(B)	KP8233					X	26/08/2014		1	X	X
7	2014-MC1-CLAD-Stn5(C)	KP8234					X	26/08/2014		1	X	X
8	2014-MC2-CLAD-Stn4(A)	KP8235					X	01/09/2014		1	X	X
9	2014-MC3-CLAD-Stn2(A)	KP8236					X	01/09/2014		1	X	X
10	2014-MC3-CLAD-Stn3(A)	KP8237					X	01/09/2014		1	X	X
11	2014-MC4-CLAD-Stn1(A)	KP8238					X	31/08/2014		1	X	X
12	2014-MC4-CLAD-Stn2(A)	KP8239					X	31/08/2014		1	X	X

B482572

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL

* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS _____

PO NUMBER OR QUOTE NUMBER: 108376

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

CCME
CSR
AB TIER 1
OTHER

LAB USE ONLY
ARRIVAL TEMPERATURE °C: 7,9,8
DUE DATE:
LOG IN CHECK:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

JARS USED:

RELINQUISHED BY SAMPLER:	DATE: DD/MM/YY	TIME:	RECEIVED BY:
Robin McCall	16/09/2014	7:30	REBECCA BANTON 2014/09/17 09:10
RELINQUISHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY LABORATORY:

CUSTODY RECORD

Maxxam
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Success Through Science®

Your P.O. #: 108376
Your C.O.C. #: 08397356

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/25
Report #: R1689783
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B482582
Received: 2014/09/17, 09:10

Sample Matrix: VEGETATION
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS (total) - Plant	4	2014/11/18	2014/11/22	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total) - Plant	8	2014/11/18	2014/11/24	BBY7SOP-00002	EPA 6020A R1 m
Moisture in Tissue	12	N/A	2014/11/20	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8295	KP8296	KP8297		
Sampling Date		2014/08/25 12:20	2014/08/25 12:45	2014/08/25 11:12		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC1-CLAD-STN1(A)**	**2014-PC1-CLAD-STN3(A)**	**2014-PC1-CLAD-STN4(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	1330	388	864	1.0	7723454
Total Antimony (Sb)	mg/kg	0.329	0.174	0.244	0.0050	7723454
Total Arsenic (As)	mg/kg	1.26	0.472	0.640	0.050	7723454
Total Barium (Ba)	mg/kg	468	53.5	38.5	0.10	7723454
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723454
Total Cadmium (Cd)	mg/kg	1.22	0.633	0.705	0.010	7723454
Total Calcium (Ca)	mg/kg	975	466	6130	10	7723454
Total Chromium (Cr)	mg/kg	8.79	3.81	8.87	0.20	7723454
Total Cobalt (Co)	mg/kg	1.30	0.381	0.978	0.020	7723454
Total Copper (Cu)	mg/kg	12.9	5.82	9.20	0.050	7723454
Total Iron (Fe)	mg/kg	2920	808	1470	10	7723454
Total Lead (Pb)	mg/kg	11.3	4.97	5.79	0.010	7723454
Total Magnesium (Mg)	mg/kg	1090	454	1180	10	7723454
Total Manganese (Mn)	mg/kg	92.8	84.4	116	0.10	7723454
Total Mercury (Hg)	mg/kg	0.028	0.011	0.024	0.010	7723454
Total Molybdenum (Mo)	mg/kg	0.261	0.092	0.197	0.050	7723454
Total Nickel (Ni)	mg/kg	5.36	2.32	4.94	0.050	7723454
Total Phosphorus (P)	mg/kg	448	310	666	10	7723454
Total Potassium (K)	mg/kg	1200	623	1710	10	7723454
Total Selenium (Se)	mg/kg	0.743	0.435	0.446	0.050	7723454
Total Silver (Ag)	mg/kg	0.153	0.235	0.122	0.020	7723454
Total Sodium (Na)	mg/kg	11	<10	12	10	7723454
Total Strontium (Sr)	mg/kg	5.49	1.41	7.90	0.10	7723454
Total Thallium (Tl)	mg/kg	0.0400	0.0181	0.0135	0.0020	7723454
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Titanium (Ti)	mg/kg	166	38.9	87.8	1.0	7723454
Total Uranium (U)	mg/kg	0.0583	0.0235	0.0164	0.0020	7723454
Total Vanadium (V)	mg/kg	5.12	1.36	2.80	0.20	7723454
Total Zinc (Zn)	mg/kg	130	68.0	75.7	0.20	7723454
RDL = Reportable Detection Limit						

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8298	KP8299	KP8300		
Sampling Date		2014/08/25 10:30	2014/08/25 12:11	2014/08/25 12:11		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC2-CLAD-STN1(A)**	**2014-PC2-CLAD-STN2(A)**	**2014-PC2-CLAD-STN2(B)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	485	997	1240	1.0	7723454
Total Antimony (Sb)	mg/kg	0.0311	0.0672	0.0689	0.0050	7723454
Total Arsenic (As)	mg/kg	0.153	0.250	0.356	0.050	7723454
Total Barium (Ba)	mg/kg	68.6	19.7	38.3	0.10	7723454
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723454
Total Cadmium (Cd)	mg/kg	0.204	0.302	0.515	0.010	7723454
Total Calcium (Ca)	mg/kg	1570	921	1830	10	7723454
Total Chromium (Cr)	mg/kg	2.40	5.75	5.80	0.20	7723454
Total Cobalt (Co)	mg/kg	0.724	0.986	1.38	0.020	7723454
Total Copper (Cu)	mg/kg	4.11	3.91	4.88	0.050	7723454
Total Iron (Fe)	mg/kg	503	1370	1740	10	7723454
Total Lead (Pb)	mg/kg	0.855	1.59	1.98	0.010	7723454
Total Magnesium (Mg)	mg/kg	623	875	1210	10	7723454
Total Manganese (Mn)	mg/kg	227	75.1	102	0.10	7723454
Total Mercury (Hg)	mg/kg	0.036	<0.010	0.014	0.010	7723454
Total Molybdenum (Mo)	mg/kg	0.559	<0.050	0.060	0.050	7723454
Total Nickel (Ni)	mg/kg	2.29	3.35	3.75	0.050	7723454
Total Phosphorus (P)	mg/kg	693	328	429	10	7723454
Total Potassium (K)	mg/kg	2350	798	1000	10	7723454
Total Selenium (Se)	mg/kg	0.075	0.140	0.180	0.050	7723454
Total Silver (Ag)	mg/kg	0.349	0.057	0.035	0.020	7723454
Total Sodium (Na)	mg/kg	52	<10	11	10	7723454
Total Strontium (Sr)	mg/kg	7.79	3.98	7.75	0.10	7723454
Total Thallium (Tl)	mg/kg	0.0050	0.0049	0.0059	0.0020	7723454
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7723454
Total Titanium (Ti)	mg/kg	38.1	139	150	1.0	7723454
Total Uranium (U)	mg/kg	0.0108	0.0165	0.0203	0.0020	7723454
Total Vanadium (V)	mg/kg	1.09	2.79	3.35	0.20	7723454
Total Zinc (Zn)	mg/kg	19.0	33.5	55.5	0.20	7723454
RDL = Reportable Detection Limit						

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8301	KP8302		KP8303		
Sampling Date		2014/08/25 12:11	2014/08/20 16:20		2014/08/20 17:15		
COC Number		08397356	08397356		08397356		
	Units	**2014-PC2-CLAD-STN2(C)**	**2014-PC4-CLAD-STN1(A)**	**QC Batch**	**2014-PC4-CLAD-STN2(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS							
Total Aluminum (Al)	mg/kg	1060	1210	7723454	1470	1.0	7723485
Total Antimony (Sb)	mg/kg	0.0423	0.161	7723454	0.226	0.0050	7723485
Total Arsenic (As)	mg/kg	0.294	1.43	7723454	1.64	0.050	7723485
Total Barium (Ba)	mg/kg	28.7	108	7723454	111	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	7723454	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	7723454	<0.10	0.10	7723485
Total Boron (B)	mg/kg	<2.0	<2.0	7723454	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	0.381	0.519	7723454	0.686	0.010	7723485
Total Calcium (Ca)	mg/kg	1640	1200	7723454	1340	10	7723485
Total Chromium (Cr)	mg/kg	5.28	4.66	7723454	6.62	0.20	7723485
Total Cobalt (Co)	mg/kg	1.21	1.23	7723454	1.44	0.020	7723485
Total Copper (Cu)	mg/kg	4.97	7.85	7723454	9.17	0.050	7723485
Total Iron (Fe)	mg/kg	1510	2660	7723454	3010	10	7723485
Total Lead (Pb)	mg/kg	1.70	3.91	7723454	4.15	0.010	7723485
Total Magnesium (Mg)	mg/kg	1150	813	7723454	982	10	7723485
Total Manganese (Mn)	mg/kg	99.6	150	7723454	172	0.10	7723485
Total Mercury (Hg)	mg/kg	0.016	0.026	7723454	0.028	0.010	7723485
Total Molybdenum (Mo)	mg/kg	0.066	0.341	7723454	0.371	0.050	7723485
Total Nickel (Ni)	mg/kg	3.59	5.20	7723454	6.74	0.050	7723485
Total Phosphorus (P)	mg/kg	494	359	7723454	439	10	7723485
Total Potassium (K)	mg/kg	1210	856	7723454	1140	10	7723485
Total Selenium (Se)	mg/kg	0.140	0.254	7723454	0.269	0.050	7723485
Total Silver (Ag)	mg/kg	0.025	0.045	7723454	0.065	0.020	7723485
Total Sodium (Na)	mg/kg	<10	<10	7723454	<10	10	7723485
Total Strontium (Sr)	mg/kg	6.50	6.11	7723454	6.47	0.10	7723485
Total Thallium (Tl)	mg/kg	0.0054	0.0191	7723454	0.0202	0.0020	7723485
Total Tin (Sn)	mg/kg	<0.10	<0.10	7723454	<0.10	0.10	7723485
Total Titanium (Ti)	mg/kg	140	43.1	7723454	45.3	1.0	7723485
Total Uranium (U)	mg/kg	0.0182	0.0846	7723454	0.0997	0.0020	7723485
Total Vanadium (V)	mg/kg	2.94	3.54	7723454	4.15	0.20	7723485
Total Zinc (Zn)	mg/kg	43.4	58.6	7723454	80.7	0.20	7723485
RDL = Reportable Detection Limit							

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8304	KP8305	KP8306		
Sampling Date		2014/08/20 16:00	2014/08/20 16:08	2014/08/20 15:35		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC5-CLAD-STN1(A)**	**2014-PC5-CLAD-STN2(A)**	**2014-PC6-CLAD-STN1(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	630	719	130	1.0	7723485
Total Antimony (Sb)	mg/kg	0.145	0.168	0.0235	0.0050	7723485
Total Arsenic (As)	mg/kg	0.691	0.822	0.125	0.050	7723485
Total Barium (Ba)	mg/kg	62.7	61.1	21.2	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Boron (B)	mg/kg	2.7	<2.0	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	1.15	1.25	0.299	0.010	7723485
Total Calcium (Ca)	mg/kg	5070	4690	1470	10	7723485
Total Chromium (Cr)	mg/kg	3.74	4.30	0.67	0.20	7723485
Total Cobalt (Co)	mg/kg	1.01	1.10	0.103	0.020	7723485
Total Copper (Cu)	mg/kg	5.79	6.11	1.67	0.050	7723485
Total Iron (Fe)	mg/kg	1940	1990	232	10	7723485
Total Lead (Pb)	mg/kg	2.61	2.80	0.613	0.010	7723485
Total Magnesium (Mg)	mg/kg	1910	2220	346	10	7723485
Total Manganese (Mn)	mg/kg	186	133	36.6	0.10	7723485
Total Mercury (Hg)	mg/kg	0.031	0.027	<0.010	0.010	7723485
Total Molybdenum (Mo)	mg/kg	0.206	0.226	0.090	0.050	7723485
Total Nickel (Ni)	mg/kg	3.94	4.60	0.646	0.050	7723485
Total Phosphorus (P)	mg/kg	278	354	298	10	7723485
Total Potassium (K)	mg/kg	629	928	861	10	7723485
Total Selenium (Se)	mg/kg	0.225	0.231	0.071	0.050	7723485
Total Silver (Ag)	mg/kg	0.026	0.029	<0.020	0.020	7723485
Total Sodium (Na)	mg/kg	<10	<10	<10	10	7723485
Total Strontium (Sr)	mg/kg	15.1	15.3	6.21	0.10	7723485
Total Thallium (Tl)	mg/kg	0.0122	0.0127	0.0036	0.0020	7723485
Total Tin (Sn)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Titanium (Ti)	mg/kg	20.2	22.3	4.4	1.0	7723485
Total Uranium (U)	mg/kg	0.0878	0.0888	0.0109	0.0020	7723485
Total Vanadium (V)	mg/kg	1.92	2.20	0.39	0.20	7723485
Total Zinc (Zn)	mg/kg	74.8	78.4	16.7	0.20	7723485
RDL = Reportable Detection Limit						

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

PHYSICAL TESTING (VEGETATION)

Maxxam ID		KP8295	KP8296	KP8297		
Sampling Date		2014/08/25 12:20	2014/08/25 12:45	2014/08/25 11:12		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC1-CLAD-STN1(A)**	**2014-PC1-CLAD-STN3(A)**	**2014-PC1-CLAD-STN4(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	69	74	63	0.30	7723389
RDL = Reportable Detection Limit						

Maxxam ID		KP8298	KP8299	KP8300		
Sampling Date		2014/08/25 10:30	2014/08/25 12:11	2014/08/25 12:11		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC2-CLAD-STN1(A)**	**2014-PC2-CLAD-STN2(A)**	**2014-PC2-CLAD-STN2(B)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	66	66	67	0.30	7723389
RDL = Reportable Detection Limit						

Maxxam ID		KP8301	KP8302	KP8303		
Sampling Date		2014/08/25 12:11	2014/08/20 16:20	2014/08/20 17:15		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC2-CLAD-STN2(C)**	**2014-PC4-CLAD-STN1(A)**	**2014-PC4-CLAD-STN2(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	63	47	52	0.30	7723389
RDL = Reportable Detection Limit						

Maxxam ID		KP8304	KP8305	KP8306		
Sampling Date		2014/08/20 16:00	2014/08/20 16:08	2014/08/20 15:35		
COC Number		08397356	08397356	08397356		
	Units	**2014-PC5-CLAD-STN1(A)**	**2014-PC5-CLAD-STN2(A)**	**2014-PC6-CLAD-STN1(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	66	54	59	0.30	7723389
RDL = Reportable Detection Limit						

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.0°C

Results relate only to the items tested.

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Maxxam Job #: B482582
Report Date: 2014/11/25

QUALITY ASSURANCE REPORT

YUKON ZINC CORPORATION
Your P.O. #: 108376

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723389	Moisture	2014/11/20					<0.30	%	0.87	20		
7723454	Total Aluminum (Al)	2014/11/24					<1.0	mg/kg	7.1	35	34	20 - 93
7723454	Total Antimony (Sb)	2014/11/24	92	75 - 125	101	75 - 125	<0.0050	mg/kg	8.3	35	84	75 - 125
7723454	Total Arsenic (As)	2014/11/24	87	75 - 125	92	75 - 125	<0.050	mg/kg	12	35	88	75 - 125
7723454	Total Barium (Ba)	2014/11/24	NC	75 - 125	95	75 - 125	<0.10	mg/kg	6.1	35	83	75 - 125
7723454	Total Beryllium (Be)	2014/11/24	86	75 - 125	92	75 - 125	<0.10	mg/kg	NC	35		
7723454	Total Bismuth (Bi)	2014/11/24					<0.10	mg/kg	NC	35		
7723454	Total Boron (B)	2014/11/24					<2.0	mg/kg	NC	35	82	75 - 125
7723454	Total Cadmium (Cd)	2014/11/24	88	75 - 125	97	75 - 125	<0.010	mg/kg	2.1	35	89	75 - 125
7723454	Total Calcium (Ca)	2014/11/24					<10	mg/kg	0.20	35		
7723454	Total Chromium (Cr)	2014/11/24	85	75 - 125	90	75 - 125	<0.20	mg/kg	NC	35	49	28 - 97
7723454	Total Cobalt (Co)	2014/11/24	83	75 - 125	92	75 - 125	<0.020	mg/kg	10	35	79	75 - 125
7723454	Total Copper (Cu)	2014/11/24	NC	75 - 125	100	75 - 125	<0.050	mg/kg	3.7	35	79	75 - 125
7723454	Total Iron (Fe)	2014/11/24					<10	mg/kg	4.7	35	93	75 - 125
7723454	Total Lead (Pb)	2014/11/24	NC	75 - 125	97	75 - 125	<0.010	mg/kg	2.0	35		
7723454	Total Magnesium (Mg)	2014/11/24					<10	mg/kg	6.9	35	78	75 - 125
7723454	Total Manganese (Mn)	2014/11/24	NC	75 - 125	93	75 - 125	<0.10	mg/kg	4.0	35	85	75 - 125
7723454	Total Mercury (Hg)	2014/11/24	93	75 - 125	97	75 - 125	<0.010	mg/kg	NC	35	87	75 - 125
7723454	Total Molybdenum (Mo)	2014/11/24	99	75 - 125	100	75 - 125	<0.050	mg/kg	NC	35	83	75 - 125
7723454	Total Nickel (Ni)	2014/11/24	81	75 - 125	91	75 - 125	<0.050	mg/kg	1.8	35	65	58 - 126
7723454	Total Phosphorus (P)	2014/11/24					<10	mg/kg	4.5	35		
7723454	Total Potassium (K)	2014/11/24					<10	mg/kg	0.0031	35		
7723454	Total Selenium (Se)	2014/11/24	85	75 - 125	94	75 - 125	<0.050	mg/kg	NC	35	115	75 - 125
7723454	Total Silver (Ag)	2014/11/24	89	75 - 125	80	75 - 125	<0.020	mg/kg	NC	35		
7723454	Total Sodium (Na)	2014/11/24					<10	mg/kg	NC	35	77	75 - 125
7723454	Total Strontium (Sr)	2014/11/24	NC	75 - 125	100	75 - 125	<0.10	mg/kg	7.0	35	95	75 - 125
7723454	Total Thallium (Tl)	2014/11/24	86	75 - 125	87	75 - 125	<0.0020	mg/kg	NC	35		
7723454	Total Tin (Sn)	2014/11/24					<0.10	mg/kg	NC	35		
7723454	Total Titanium (Ti)	2014/11/24					<1.0	mg/kg	10	35		
7723454	Total Uranium (U)	2014/11/24	89	75 - 125	95	75 - 125	<0.0020	mg/kg	NC	35		
7723454	Total Vanadium (V)	2014/11/24	84	75 - 125	90	75 - 125	<0.20	mg/kg	NC	35		
7723454	Total Zinc (Zn)	2014/11/24	NC	75 - 125	94	75 - 125	<0.20	mg/kg	6.4	35	80	75 - 125

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723485	Total Aluminum (Al)	2014/11/21					<1.0	mg/kg	3.6	35	35	20 - 93
7723485	Total Antimony (Sb)	2014/11/21	104	75 - 125	109	75 - 125	<0.0050	mg/kg	1.3	35	80	75 - 125
7723485	Total Arsenic (As)	2014/11/21	99	75 - 125	103	75 - 125	<0.050	mg/kg	20	35	99	75 - 125
7723485	Total Barium (Ba)	2014/11/21	NC	75 - 125	110	75 - 125	<0.10	mg/kg	4.6	35	94	75 - 125
7723485	Total Beryllium (Be)	2014/11/21	104	75 - 125	111	75 - 125	<0.10	mg/kg	NC	35		
7723485	Total Bismuth (Bi)	2014/11/21					<0.10	mg/kg	NC	35		
7723485	Total Boron (B)	2014/11/21					<2.0	mg/kg	NC	35	92	75 - 125
7723485	Total Cadmium (Cd)	2014/11/21	102	75 - 125	107	75 - 125	<0.010	mg/kg	2.7	35	97	75 - 125
7723485	Total Calcium (Ca)	2014/11/21					<10	mg/kg	4.6	35		
7723485	Total Chromium (Cr)	2014/11/21	99	75 - 125	100	75 - 125	<0.20	mg/kg	2.4	35	55	28 - 97
7723485	Total Cobalt (Co)	2014/11/21	100	75 - 125	101	75 - 125	<0.020	mg/kg	4.5	35	95	75 - 125
7723485	Total Copper (Cu)	2014/11/21	NC	75 - 125	103	75 - 125	<0.050	mg/kg	4.8	35	95	75 - 125
7723485	Total Iron (Fe)	2014/11/21					<10	mg/kg	2.8	35	79	75 - 125
7723485	Total Lead (Pb)	2014/11/21	NC	75 - 125	108	75 - 125	<0.010	mg/kg	7.1	35		
7723485	Total Magnesium (Mg)	2014/11/21					<10	mg/kg	10	35	93	75 - 125
7723485	Total Manganese (Mn)	2014/11/21	NC	75 - 125	101	75 - 125	<0.10	mg/kg	6.2	35	93	75 - 125
7723485	Total Mercury (Hg)	2014/11/21	107	75 - 125	108	75 - 125	<0.010	mg/kg	NC	35	96	75 - 125
7723485	Total Molybdenum (Mo)	2014/11/21	110	75 - 125	109	75 - 125	<0.050	mg/kg	NC	35	91	75 - 125
7723485	Total Nickel (Ni)	2014/11/21	98	75 - 125	103	75 - 125	<0.050	mg/kg	2.7	35	82	58 - 126
7723485	Total Phosphorus (P)	2014/11/21					<10	mg/kg	7.5	35		
7723485	Total Potassium (K)	2014/11/21					<10	mg/kg	12	35		
7723485	Total Selenium (Se)	2014/11/21	97	75 - 125	98	75 - 125	<0.050	mg/kg	10	35	92	75 - 125
7723485	Total Silver (Ag)	2014/11/21	92	75 - 125	86	75 - 125	<0.020	mg/kg	21	35		
7723485	Total Sodium (Na)	2014/11/21					<10	mg/kg	NC	35	86	75 - 125
7723485	Total Strontium (Sr)	2014/11/21	NC	75 - 125	112	75 - 125	<0.10	mg/kg	5.4	35	102	75 - 125
7723485	Total Thallium (Tl)	2014/11/21	92	75 - 125	94	75 - 125	<0.0020	mg/kg	2.1	35		
7723485	Total Tin (Sn)	2014/11/21					<0.10	mg/kg	NC	35		
7723485	Total Titanium (Ti)	2014/11/21					<1.0	mg/kg	9.9	35		
7723485	Total Uranium (U)	2014/11/21	99	75 - 125	102	75 - 125	<0.0020	mg/kg	0.24	35		
7723485	Total Vanadium (V)	2014/11/21	100	75 - 125	99	75 - 125	<0.20	mg/kg	7.1	35		

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Maxxam Job #: B482582
Report Date: 2014/11/25

YUKON ZINC CORPORATION
Your P.O. #: 108376

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723485	Total Zinc (Zn)	2014/11/21	NC	75 - 125	106	75 - 125	<0.20	mg/kg	3.4	35	96	75 - 125

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Rob Reinert, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

B482582

LAB USE ONLY
MAXXAM JOB #
08397356

ANALYSIS REQUEST

LAB USE ONLY
COC #

COMPANY NAME: Yukon Zinc Corporation	CLIENT PROJECT NO.:
COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8	TEL.: 604-682-5474 E-MAIL: YZC Group FAX: 604-682-5404
SAMPLER NAME (PRINT): T.P., C.J., and A.K.	PROJECT MANAGER: Robin McCall
LABORATORY CONTACT: Graham Rudkin	

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	Metals, Low Level (whole body)	% Moisture
1	2014-PC1-CLAD-Stn1(A)	KP8295					X	25/08/2014	12:20	1	X	X
2	2014-PC1-CLAD-Stn3(A)	KP8296					X	25/08/2014	12:45	1	X	X
3	2014-PC1-CLAD-Stn4(A)	KP8297					X	25/08/2014	11:12	1	X	X
4	2014-PC2-CLAD-Stn1(A)	KP8298					X	25/08/2014	10:30	1	X	X
5	2014-PC2-CLAD-Stn2(A)	KP8299					X	25/08/2014	12:11	1	X	X
6	2014-PC2-CLAD-Stn2(B)	KP8300					X	25/08/2014	12:11	1	X	X
7	2014-PC2-CLAD-Stn2(C)	KP8301					X	25/08/2014	12:11	1	X	X
8	2014-PC4-CLAD-Stn1(A)	KP8302					X	20/08/2014	16:20	1	X	X
9	2014-PC4-CLAD-Stn2(A)	KP8303					X	20/08/2014	17:15	1	X	X
10	2014-PC5-CLAD-Stn1(A)	KP8304					X	20/08/2014	16:00	1	X	X
11	2014-PC5-CLAD-Stn2(A)	KP8305					X	20/08/2014	16:08	1	X	X
12	2014-PC6-CLAD-Stn1(A)	KP8306					X	20/08/2014	15:35	1	X	X

B482582

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL
* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS _____

PO NUMBER OR QUOTE NUMBER: 108376

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

CCME
CSR
AB TIER 1
OTHER

LAB USE ONLY
ARRIVAL TEMPERATURE °C: 7, 9, 8
DUE DATE:
LOG IN CHECK:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

JARS USED:

RELINQUINSHED BY SAMPLER: Robin McCall	DATE: DD/MM/YY 16/09/2014	TIME: 7:30	RECEIVED BY: REBECCA BANZON 2014/09/17 09:10
RELINQUINSHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY:
RELINQUINSHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY LABORATORY:

CUSTODY RECORD

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Your P.O. #: 108376
Your C.O.C. #: 08397357

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/24
Report #: R1689070
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B482605
Received: 2014/09/17, 09:10

Sample Matrix: VEGETATION
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS (total) - Plant	1	2014/11/18	2014/11/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total) - Plant	11	2014/11/18	2014/11/22	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total) - Plant	2	2014/11/18	2014/11/24	BBY7SOP-00002	EPA 6020A R1 m
Moisture in Tissue	14	N/A	2014/11/20	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8436	KP8437	KP8438		
Sampling Date		2014/08/25 14:33	2014/08/25 15:34	2014/08/27 14:40		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS1-CLAD-STN1(A)**	**2014-MS1-CLAD-STN3(A)**	**2014-MS2-CLAD-STN1(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	553	1010	657	1.0	7723485
Total Antimony (Sb)	mg/kg	1.10	1.97	1.73	0.0050	7723485
Total Arsenic (As)	mg/kg	2.26	4.44	4.13	0.050	7723485
Total Barium (Ba)	mg/kg	72.1	56.6	41.9	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	<0.10	0.16	0.10	0.10	7723485
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	2.33	4.41	3.81	0.010	7723485
Total Calcium (Ca)	mg/kg	334	963	569	10	7723485
Total Chromium (Cr)	mg/kg	1.94	4.15	2.39	0.20	7723485
Total Cobalt (Co)	mg/kg	0.446	0.899	0.541	0.020	7723485
Total Copper (Cu)	mg/kg	24.0	51.2	41.7	0.050	7723485
Total Iron (Fe)	mg/kg	1080	2250	1620	10	7723485
Total Lead (Pb)	mg/kg	26.4	46.8	49.8	0.010	7723485
Total Magnesium (Mg)	mg/kg	467	943	556	10	7723485
Total Manganese (Mn)	mg/kg	38.0	133	67.7	0.10	7723485
Total Mercury (Hg)	mg/kg	0.022	0.078	0.046	0.010	7723485
Total Molybdenum (Mo)	mg/kg	0.145	0.288	0.184	0.050	7723485
Total Nickel (Ni)	mg/kg	2.04	3.84	2.35	0.050	7723485
Total Phosphorus (P)	mg/kg	388	512	420	10	7723485
Total Potassium (K)	mg/kg	903	1170	1040	10	7723485
Total Selenium (Se)	mg/kg	1.80	3.42	3.21	0.050	7723485
Total Silver (Ag)	mg/kg	0.534	1.10	0.961	0.020	7723485
Total Sodium (Na)	mg/kg	10	15	11	10	7723485
Total Strontium (Sr)	mg/kg	2.69	3.46	2.19	0.10	7723485
Total Thallium (Tl)	mg/kg	0.0319	0.0620	0.0544	0.0020	7723485
Total Tin (Sn)	mg/kg	0.12	0.16	0.15	0.10	7723485
Total Titanium (Ti)	mg/kg	45.5	112	60.1	1.0	7723485
Total Uranium (U)	mg/kg	0.0451	0.0858	0.0669	0.0020	7723485
Total Vanadium (V)	mg/kg	1.48	3.50	2.04	0.20	7723485
Total Zinc (Zn)	mg/kg	246	475	400	0.20	7723485
RDL = Reportable Detection Limit						

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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8439	KP8440	KP8441		
Sampling Date		2014/08/27 14:45	2014/08/25 16:00	2014/08/25 16:10		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS2-CLAD-STN2(A)**	**2014-MS2-CLAD-STN5(A)**	**2014-MS3-CLAD-STN5(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	411	716	419	1.0	7723485
Total Antimony (Sb)	mg/kg	2.39	2.61	0.396	0.0050	7723485
Total Arsenic (As)	mg/kg	5.59	5.51	0.653	0.050	7723485
Total Barium (Ba)	mg/kg	35.3	52.6	22.4	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	0.14	0.13	<0.10	0.10	7723485
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	5.27	5.78	1.89	0.010	7723485
Total Calcium (Ca)	mg/kg	834	806	3240	10	7723485
Total Chromium (Cr)	mg/kg	1.35	3.11	1.99	0.20	7723485
Total Cobalt (Co)	mg/kg	0.448	0.639	0.502	0.020	7723485
Total Copper (Cu)	mg/kg	56.4	58.4	9.33	0.050	7723485
Total Iron (Fe)	mg/kg	1320	1840	751	10	7723485
Total Lead (Pb)	mg/kg	57.5	62.9	7.66	0.010	7723485
Total Magnesium (Mg)	mg/kg	449	644	989	10	7723485
Total Manganese (Mn)	mg/kg	153	93.5	85.3	0.10	7723485
Total Mercury (Hg)	mg/kg	0.055	0.110	0.015	0.010	7723485
Total Molybdenum (Mo)	mg/kg	0.194	0.267	0.091	0.050	7723485
Total Nickel (Ni)	mg/kg	1.54	2.98	1.37	0.050	7723485
Total Phosphorus (P)	mg/kg	593	509	606	10	7723485
Total Potassium (K)	mg/kg	1210	1230	1110	10	7723485
Total Selenium (Se)	mg/kg	4.19	4.41	0.620	0.050	7723485
Total Silver (Ag)	mg/kg	1.23	1.48	0.142	0.020	7723485
Total Sodium (Na)	mg/kg	13	18	16	10	7723485
Total Strontium (Sr)	mg/kg	3.80	3.16	9.75	0.10	7723485
Total Thallium (Tl)	mg/kg	0.0622	0.0738	0.0104	0.0020	7723485
Total Tin (Sn)	mg/kg	0.18	0.20	<0.10	0.10	7723485
Total Titanium (Ti)	mg/kg	28.3	68.1	49.0	1.0	7723485
Total Uranium (U)	mg/kg	0.0328	0.0662	0.0126	0.0020	7723485
Total Vanadium (V)	mg/kg	0.84	2.36	1.22	0.20	7723485
Total Zinc (Zn)	mg/kg	552	553	121	0.20	7723485
RDL = Reportable Detection Limit						

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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8442	KP8443	KP8444		
Sampling Date		2014/08/18 14:19	2014/08/18 14:27	2014/08/18 14:27		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS4-CLAD-STN1(A)**	**2014-MS4-CLAD-STN2(A)**	**2014-MS4-CLAD-STN2(B)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	199	282	249	1.0	7723485
Total Antimony (Sb)	mg/kg	3.16	3.73	3.99	0.0050	7723485
Total Arsenic (As)	mg/kg	7.08	8.28	8.58	0.050	7723485
Total Barium (Ba)	mg/kg	31.4	45.2	43.9	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	0.13	0.27	0.18	0.10	7723485
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	6.28	8.14	8.91	0.010	7723485
Total Calcium (Ca)	mg/kg	1350	1900	1430	10	7723485
Total Chromium (Cr)	mg/kg	0.60	0.95	0.77	0.20	7723485
Total Cobalt (Co)	mg/kg	0.365	0.455	0.461	0.020	7723485
Total Copper (Cu)	mg/kg	68.3	88.2	92.3	0.050	7723485
Total Iron (Fe)	mg/kg	1330	1680	1970	10	7723485
Total Lead (Pb)	mg/kg	55.2	71.3	73.6	0.010	7723485
Total Magnesium (Mg)	mg/kg	595	699	639	10	7723485
Total Manganese (Mn)	mg/kg	185	243	165	0.10	7723485
Total Mercury (Hg)	mg/kg	0.086	0.119	0.160	0.010	7723485
Total Molybdenum (Mo)	mg/kg	0.216	0.371	0.327	0.050	7723485
Total Nickel (Ni)	mg/kg	1.50	1.74	1.78	0.050	7723485
Total Phosphorus (P)	mg/kg	688	737	670	10	7723485
Total Potassium (K)	mg/kg	1280	1240	1080	10	7723485
Total Selenium (Se)	mg/kg	5.50	6.66	8.00	0.050	7723485
Total Silver (Ag)	mg/kg	1.67	1.95	2.04	0.020	7723485
Total Sodium (Na)	mg/kg	22	<10	<10	10	7723485
Total Strontium (Sr)	mg/kg	3.93	5.57	4.03	0.10	7723485
Total Thallium (Tl)	mg/kg	0.0805	0.101	0.106	0.0020	7723485
Total Tin (Sn)	mg/kg	0.21	0.27	0.32	0.10	7723485
Total Titanium (Ti)	mg/kg	9.3	15.9	12.2	1.0	7723485
Total Uranium (U)	mg/kg	0.0323	0.0494	0.0405	0.0020	7723485
Total Vanadium (V)	mg/kg	0.41	0.72	0.50	0.20	7723485
Total Zinc (Zn)	mg/kg	695	839	935	0.20	7723485
RDL = Reportable Detection Limit						

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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8445	KP8446	KP8447		
Sampling Date		2014/08/18 14:27	2014/08/27 11:23	2014/08/18 11:30		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS4-CLAD-STN2(C)**	**2014-MS5-CLAD-STN1(A)**	**2014-MS6-CLAD-STN2(A)**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	282	670	1250	1.0	7723485
Total Antimony (Sb)	mg/kg	3.71	1.40	15.3	0.0050	7723485
Total Arsenic (As)	mg/kg	7.86	3.32	39.7	0.050	7723485
Total Barium (Ba)	mg/kg	44.3	46.4	128	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	0.18	<0.10	0.96	0.10	7723485
Total Boron (B)	mg/kg	<2.0	<2.0	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	7.52	3.19	34.7	0.010	7723485
Total Calcium (Ca)	mg/kg	1200	578	1660	10	7723485
Total Chromium (Cr)	mg/kg	0.58	2.70	2.62	0.20	7723485
Total Cobalt (Co)	mg/kg	0.372	0.579	1.71	0.020	7723485
Total Copper (Cu)	mg/kg	72.6	36.1	367	0.050	7723485
Total Iron (Fe)	mg/kg	1390	1620	8170	10	7723485
Total Lead (Pb)	mg/kg	88.9	37.4	374	0.010	7723485
Total Magnesium (Mg)	mg/kg	455	556	1060	10	7723485
Total Manganese (Mn)	mg/kg	77.2	52.9	59.0	0.10	7723485
Total Mercury (Hg)	mg/kg	0.108	0.045	0.666	0.010	7723485
Total Molybdenum (Mo)	mg/kg	0.306	0.189	1.57	0.050	7723485
Total Nickel (Ni)	mg/kg	1.42	2.53	5.37	0.050	7723485
Total Phosphorus (P)	mg/kg	604	389	558	10	7723485
Total Potassium (K)	mg/kg	1210	866	1240	10	7723485
Total Selenium (Se)	mg/kg	6.20	2.92	30.9	0.050	7723485
Total Silver (Ag)	mg/kg	2.02	0.819	9.10	0.020	7723485
Total Sodium (Na)	mg/kg	<10	18	<10	10	7723485
Total Strontium (Sr)	mg/kg	6.87	3.07	8.96	0.10	7723485
Total Thallium (Tl)	mg/kg	0.101	0.0478	0.466	0.0020	7723485
Total Tin (Sn)	mg/kg	0.28	0.13	1.26	0.10	7723485
Total Titanium (Ti)	mg/kg	11.0	73.8	58.4	1.0	7723485
Total Uranium (U)	mg/kg	0.0674	0.0589	0.348	0.0020	7723485
Total Vanadium (V)	mg/kg	0.56	2.23	2.29	0.20	7723485
Total Zinc (Zn)	mg/kg	745	356	3390	0.20	7723485
RDL = Reportable Detection Limit						

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Report Date: 2014/11/24

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Your P.O. #: 108376

ELEMENTS BY ATOMIC SPECTROSCOPY - DRY WT (VEGETATION)

Maxxam ID		KP8448	KP8449		
Sampling Date		2014/08/18 11:30	2014/08/18 11:30		
COC Number		08397357	08397357		
	Units	**2014-MS6-CLAD-STN2(B)**	**2014-MS6-CLAD-STN1(C)**	**RDL**	**QC Batch**
Total Metals by ICPMS					
Total Aluminum (Al)	mg/kg	1130	1350	1.0	7723485
Total Antimony (Sb)	mg/kg	20.1	22.4	0.0050	7723485
Total Arsenic (As)	mg/kg	59.9	59.1	0.050	7723485
Total Barium (Ba)	mg/kg	139	154	0.10	7723485
Total Beryllium (Be)	mg/kg	<0.10	<0.10	0.10	7723485
Total Bismuth (Bi)	mg/kg	0.98	0.97	0.10	7723485
Total Boron (B)	mg/kg	<2.0	<2.0	2.0	7723485
Total Cadmium (Cd)	mg/kg	46.4	51.1	0.010	7723485
Total Calcium (Ca)	mg/kg	1680	1970	10	7723485
Total Chromium (Cr)	mg/kg	2.92	2.97	0.20	7723485
Total Cobalt (Co)	mg/kg	2.33	2.46	0.020	7723485
Total Copper (Cu)	mg/kg	538	550	0.050	7723485
Total Iron (Fe)	mg/kg	11800	13400	10	7723485
Total Lead (Pb)	mg/kg	416	455	0.010	7723485
Total Magnesium (Mg)	mg/kg	1110	1080	10	7723485
Total Manganese (Mn)	mg/kg	66.4	70.5	0.10	7723485
Total Mercury (Hg)	mg/kg	0.925	0.983	0.010	7723485
Total Molybdenum (Mo)	mg/kg	2.21	2.76	0.050	7723485
Total Nickel (Ni)	mg/kg	5.37	5.80	0.050	7723485
Total Phosphorus (P)	mg/kg	545	605	10	7723485
Total Potassium (K)	mg/kg	1630	1360	10	7723485
Total Selenium (Se)	mg/kg	42.1	46.8	0.050	7723485
Total Silver (Ag)	mg/kg	11.8	14.0	0.020	7723485
Total Sodium (Na)	mg/kg	<10	16	10	7723485
Total Strontium (Sr)	mg/kg	8.89	10.6	0.10	7723485
Total Thallium (Tl)	mg/kg	0.578	0.647	0.0020	7723485
Total Tin (Sn)	mg/kg	1.40	1.51	0.10	7723485
Total Titanium (Ti)	mg/kg	51.8	45.9	1.0	7723485
Total Uranium (U)	mg/kg	0.276	0.335	0.0020	7723485
Total Vanadium (V)	mg/kg	2.30	2.64	0.20	7723485
Total Zinc (Zn)	mg/kg	4640 (1)	4720 (2)	0.40	7723485

RDL = Reportable Detection Limit
(1) RDL raised due to sample matrix interference.
(2) RDL raised due to sample matrix interference

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Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

PHYSICAL TESTING (VEGETATION)

Maxxam ID		KP8436	KP8437	KP8438		
Sampling Date		2014/08/25 14:33	2014/08/25 15:34	2014/08/27 14:40		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS1-CLAD-STN1(A)**	**2014-MS1-CLAD-STN3(A)**	**2014-MS2-CLAD-STN1(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	70	72	68	0.30	7723342
RDL = Reportable Detection Limit						

Maxxam ID		KP8439	KP8440	KP8441		
Sampling Date		2014/08/27 14:45	2014/08/25 16:00	2014/08/25 16:10		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS2-CLAD-STN2(A)**	**2014-MS2-CLAD-STN5(A)**	**2014-MS3-CLAD-STN5(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	76	76	67	0.30	7723342
RDL = Reportable Detection Limit						

Maxxam ID		KP8442	KP8443	KP8444		
Sampling Date		2014/08/18 14:19	2014/08/18 14:27	2014/08/18 14:27		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS4-CLAD-STN1(A)**	**2014-MS4-CLAD-STN2(A)**	**2014-MS4-CLAD-STN2(B)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	67	67	66	0.30	7723342
RDL = Reportable Detection Limit						

Maxxam ID		KP8445	KP8446	KP8447		
Sampling Date		2014/08/18 14:27	2014/08/27 11:23	2014/08/18 11:30		
COC Number		08397357	08397357	08397357		
	Units	**2014-MS4-CLAD-STN2(C)**	**2014-MS5-CLAD-STN1(A)**	**2014-MS6-CLAD-STN2(A)**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	66	70	68	0.30	7723342
RDL = Reportable Detection Limit						

Maxxam ID		KP8448	KP8449		
Sampling Date		2014/08/18 11:30	2014/08/18 11:30		
COC Number		08397357	08397357		
	Units	**2014-MS6-CLAD-STN2(B)**	**2014-MS6-CLAD-STN1(C)**	**RDL**	**QC Batch**
Physical Properties					
Moisture	%	72	68	0.30	7723342
RDL = Reportable Detection Limit					

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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723342	Moisture	2014/11/20					<0.30	%	0.86	20		
7723485	Total Aluminum (Al)	2014/11/21					<1.0	mg/kg	3.6	35	35	20 - 93
7723485	Total Antimony (Sb)	2014/11/21	104	75 - 125	109	75 - 125	<0.0050	mg/kg	1.3	35	80	75 - 125
7723485	Total Arsenic (As)	2014/11/21	99	75 - 125	103	75 - 125	<0.050	mg/kg	20	35	99	75 - 125
7723485	Total Barium (Ba)	2014/11/21	NC	75 - 125	110	75 - 125	<0.10	mg/kg	4.6	35	94	75 - 125
7723485	Total Beryllium (Be)	2014/11/21	104	75 - 125	111	75 - 125	<0.10	mg/kg	NC	35		
7723485	Total Bismuth (Bi)	2014/11/21					<0.10	mg/kg	NC	35		
7723485	Total Boron (B)	2014/11/21					<2.0	mg/kg	NC	35	92	75 - 125
7723485	Total Cadmium (Cd)	2014/11/21	102	75 - 125	107	75 - 125	<0.010	mg/kg	2.7	35	97	75 - 125
7723485	Total Calcium (Ca)	2014/11/21					<10	mg/kg	4.6	35		
7723485	Total Chromium (Cr)	2014/11/21	99	75 - 125	100	75 - 125	<0.20	mg/kg	2.4	35	55	28 - 97
7723485	Total Cobalt (Co)	2014/11/21	100	75 - 125	101	75 - 125	<0.020	mg/kg	4.5	35	95	75 - 125
7723485	Total Copper (Cu)	2014/11/21	NC	75 - 125	103	75 - 125	<0.050	mg/kg	4.8	35	95	75 - 125
7723485	Total Iron (Fe)	2014/11/21					<10	mg/kg	2.8	35	79	75 - 125
7723485	Total Lead (Pb)	2014/11/21	NC	75 - 125	108	75 - 125	<0.010	mg/kg	7.1	35		
7723485	Total Magnesium (Mg)	2014/11/21					<10	mg/kg	10	35	93	75 - 125
7723485	Total Manganese (Mn)	2014/11/21	NC	75 - 125	101	75 - 125	<0.10	mg/kg	6.2	35	93	75 - 125
7723485	Total Mercury (Hg)	2014/11/21	107	75 - 125	108	75 - 125	<0.010	mg/kg	NC	35	96	75 - 125
7723485	Total Molybdenum (Mo)	2014/11/21	110	75 - 125	109	75 - 125	<0.050	mg/kg	NC	35	91	75 - 125
7723485	Total Nickel (Ni)	2014/11/21	98	75 - 125	103	75 - 125	<0.050	mg/kg	2.7	35	82	58 - 126
7723485	Total Phosphorus (P)	2014/11/21					<10	mg/kg	7.5	35		
7723485	Total Potassium (K)	2014/11/21					<10	mg/kg	12	35		
7723485	Total Selenium (Se)	2014/11/21	97	75 - 125	98	75 - 125	<0.050	mg/kg	10	35	92	75 - 125
7723485	Total Silver (Ag)	2014/11/21	92	75 - 125	86	75 - 125	<0.020	mg/kg	21	35		
7723485	Total Sodium (Na)	2014/11/21					<10	mg/kg	NC	35	86	75 - 125
7723485	Total Strontium (Sr)	2014/11/21	NC	75 - 125	112	75 - 125	<0.10	mg/kg	5.4	35	102	75 - 125
7723485	Total Thallium (Tl)	2014/11/21	92	75 - 125	94	75 - 125	<0.0020	mg/kg	2.1	35		
7723485	Total Tin (Sn)	2014/11/21					<0.10	mg/kg	NC	35		
7723485	Total Titanium (Ti)	2014/11/21					<1.0	mg/kg	9.9	35		
7723485	Total Uranium (U)	2014/11/21	99	75 - 125	102	75 - 125	<0.0020	mg/kg	0.24	35		
7723485	Total Vanadium (V)	2014/11/21	100	75 - 125	99	75 - 125	<0.20	mg/kg	7.1	35		

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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723485	Total Zinc (Zn)	2014/11/21	NC	75 - 125	106	75 - 125	<0.20	mg/kg	3.4	35	96	75 - 125

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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Maxxam Job #: B482605
Report Date: 2014/11/24

YUKON ZINC CORPORATION
Your P.O. #: 108376

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Andy Lu, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

13482605

LAB USE ONLY
MAXXAM JOB #
08397357

ANALYSIS REQUEST

LAB USE ONLY
COC #

COMPANY NAME: Yukon Zinc Corporation	CLIENT PROJECT NO.:
COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8	TEL.: 604-682-5474 E-MAIL: YZC Group FAX: 604-682-5404
SAMPLER NAME (PRINT): T.P., C.J., and A.K.	PROJECT MANAGER: Robin McCall
	LABORATORY CONTACT: Graham Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	Metals, Low Level (whole body)	% Moisture
1	2014-MS1-CLAD-Stn1(A)	KP8436					X	25/08/2014	14:33	1	X	X
2	2014-MS1-CLAD-Stn3(A)	KP8437					X	25/08/2014	15:31	1	X	X
3	2014-MS2-CLAD-Stn1(A)	KP8438					X	27/08/2014	14:40	1	X	X
4	2014-MS2-CLAD-Stn2(A)	KP8439					X	27/08/2014	14:45	1	X	X
5	2014-MS2-CLAD-Stn5(A)	KP8440					X	25/08/2014	16:00	1	X	X
6	2014-MS3-CLAD-Stn5(A)	KP8441					X	25/08/2014	16:10	1	X	X
7	2014-MS4-CLAD-Stn1(A)	KP8442					X	18/08/2014	14:19	1	X	X
8	2014-MS4-CLAD-Stn2(A)	KP8443					X	18/08/2014	14:27	1	X	X
9	2014-MS4-CLAD-Stn2(B)	KP8444					X	18/08/2014	14:27	1	X	X
10	2014-MS4-CLAD-Stn2(C)	KP8445					X	18/08/2014	14:27	1	X	X
11	2014-MS5-CLAD-Stn1(A)	KP8446					X	27/08/2014	11:23	1	X	X
12	2014-MS6-CLAD-Stn2(A)	KP8447					X	18/08/2014	11:30	1	X	X
13	2014-MS6-CLAD-Stn2(B)	KP8448					X	18/08/2014	11:30	1	X	X
14	2014-MS6-CLAD-Stn2(C)	KP8449					X	18/08/2014	11:30	1	X	X

B482605

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL

* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS _____

PO NUMBER OR QUOTE NUMBER: 108376

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

CCME
CSR
AB TIER 1
OTHER

LAB USE ONLY
ARRIVAL TEMPERATURE °C: 7.9, 8
DUE DATE:
LOG IN CHECK:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

JARS USED:

RELINQUINSHED BY SAMPLER: Robin McCall
DATE: DD/MM/YY 16/09/2014
TIME: 7:30

RECEIVED BY: REBECCA BANZON 2014/09/17 09:10

RELINQUINSHED BY:
DATE: DD/MM/YY
TIME:

RECEIVED BY:

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Your P.O. #: S115826
Your C.O.C. #: 08396158

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/19
Report #: R1686384
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B473738
Received: 2014/08/22, 08:40

Sample Matrix: TISSUE
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS - Tissue Wet Wt	16	2014/10/26	2014/10/28	BBY7SOP-00002, BBY7SOP -00013	EPA 6020a,200.3 R1 m
Moisture in Tissue	16	N/A	2014/11/19	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
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Maxxam Job #: B473738
Report Date: 2014/11/19

YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4787	KK4788	KK4789		
Sampling Date		2014/07/27	2014/07/27	2014/07/27		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-54**	**2014-CLRU-MCRA06-55**	**2014-CLRU-MCRA06-60**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	12.4	51.6	1.66	0.20	7693620
Total Antimony (Sb)	mg/kg	0.0020	0.0031	0.0016	0.0010	7693620
Total Arsenic (As)	mg/kg	<0.010	0.017	0.057	0.010	7693620
Total Barium (Ba)	mg/kg	8.92	16.9	13.5	0.020	7693620
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Boron (B)	mg/kg	<0.40	<0.40	<0.40	0.40	7693620
Total Cadmium (Cd)	mg/kg	0.215	0.642	0.0678	0.0020	7693620
Total Calcium (Ca)	mg/kg	7470	8410	11300	2.0	7693620
Total Chromium (Cr)	mg/kg	0.047	0.193	0.090	0.040	7693620
Total Cobalt (Co)	mg/kg	0.0217	0.0610	0.0358	0.0040	7693620
Total Copper (Cu)	mg/kg	2.91	3.83	2.52	0.010	7693620
Total Iron (Fe)	mg/kg	59.3	146	70.8	2.0	7693620
Total Lead (Pb)	mg/kg	0.0304	0.146	0.0145	0.0020	7693620
Total Magnesium (Mg)	mg/kg	352	473	629	2.0	7693620
Total Manganese (Mn)	mg/kg	5.65	26.9	8.74	0.020	7693620
Total Mercury (Hg)	mg/kg	0.0147	0.0140	0.0035	0.0020	7693620
Total Molybdenum (Mo)	mg/kg	0.141	0.164	0.192	0.010	7693620
Total Nickel (Ni)	mg/kg	0.117	0.286	0.155	0.010	7693620
Total Phosphorus (P)	mg/kg	5380	6570	7680	2.0	7693620
Total Potassium (K)	mg/kg	3020	4000	3300	2.0	7693620
Total Selenium (Se)	mg/kg	0.199	0.203	0.153	0.010	7693620
Total Silver (Ag)	mg/kg	0.0596	0.196	0.0164	0.0040	7693620
Total Sodium (Na)	mg/kg	907	1140	1140	2.0	7693620
Total Strontium (Sr)	mg/kg	4.99	6.30	6.86	0.020	7693620
Total Thallium (Tl)	mg/kg	0.00123	0.00216	0.00047	0.00040	7693620
Total Tin (Sn)	mg/kg	<0.020	0.066	0.029	0.020	7693620
Total Titanium (Ti)	mg/kg	0.58	4.14	0.40	0.20	7693620
Total Uranium (U)	mg/kg	0.00101	0.00724	0.00217	0.00040	7693620
Total Vanadium (V)	mg/kg	<0.040	0.164	<0.040	0.040	7693620
Total Zinc (Zn)	mg/kg	23.6	36.6	27.8	0.040	7693620
RDL = Reportable Detection Limit						

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Report Date: 2014/11/19

YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4790	KK4791	KK4792		
Sampling Date		2014/07/27	2014/07/27	2014/07/29		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-64**	**2014-CLRU-MCRA06-65**	**2014-CLRU-MCRA06-66**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	0.98	6.85	2.01	0.20	7693620
Total Antimony (Sb)	mg/kg	0.0015	0.0015	0.0032	0.0010	7693620
Total Arsenic (As)	mg/kg	<0.010	<0.010	<0.010	0.010	7693620
Total Barium (Ba)	mg/kg	7.91	16.5	4.99	0.020	7693620
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Boron (B)	mg/kg	<0.40	<0.40	<0.40	0.40	7693620
Total Cadmium (Cd)	mg/kg	0.262	0.244	0.0656	0.0020	7693620
Total Calcium (Ca)	mg/kg	9360	7190	10100	2.0	7693620
Total Chromium (Cr)	mg/kg	0.113	0.076	0.107	0.040	7693620
Total Cobalt (Co)	mg/kg	0.0438	0.0426	0.0479	0.0040	7693620
Total Copper (Cu)	mg/kg	2.86	4.40	3.04	0.010	7693620
Total Iron (Fe)	mg/kg	62.0	61.7	64.6	2.0	7693620
Total Lead (Pb)	mg/kg	0.0397	0.0266	0.0987	0.0020	7693620
Total Magnesium (Mg)	mg/kg	453	408	442	2.0	7693620
Total Manganese (Mn)	mg/kg	6.78	5.97	3.08	0.020	7693620
Total Mercury (Hg)	mg/kg	0.0493	0.0180	0.0416	0.0020	7693620
Total Molybdenum (Mo)	mg/kg	0.145	0.167	0.133	0.010	7693620
Total Nickel (Ni)	mg/kg	0.152	0.149	0.155	0.010	7693620
Total Phosphorus (P)	mg/kg	6750	5720	7200	2.0	7693620
Total Potassium (K)	mg/kg	3570	3590	3540	2.0	7693620
Total Selenium (Se)	mg/kg	0.231	0.234	0.254	0.010	7693620
Total Silver (Ag)	mg/kg	0.0263	0.106	0.0163	0.0040	7693620
Total Sodium (Na)	mg/kg	1330	1280	1270	2.0	7693620
Total Strontium (Sr)	mg/kg	4.38	5.79	1.30	0.020	7693620
Total Thallium (Tl)	mg/kg	0.00222	0.00045	0.00109	0.00040	7693620
Total Tin (Sn)	mg/kg	0.048	0.066	<0.020	0.020	7693620
Total Titanium (Ti)	mg/kg	0.26	0.34	0.37	0.20	7693620
Total Uranium (U)	mg/kg	<0.00040	<0.00040	<0.00040	0.00040	7693620
Total Vanadium (V)	mg/kg	<0.040	<0.040	<0.040	0.040	7693620
Total Zinc (Zn)	mg/kg	30.6	26.5	29.4	0.040	7693620
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4793	KK4794	KK4795		
Sampling Date		2014/07/29	2014/07/29	2014/07/29		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-67**	**2014-CLRU-MCRA06-68**	**2014-CLRU-MCRA06-69**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	1.40	11.8	0.94	0.20	7693620
Total Antimony (Sb)	mg/kg	0.0011	0.0012	<0.0010	0.0010	7693620
Total Arsenic (As)	mg/kg	<0.010	<0.010	<0.010	0.010	7693620
Total Barium (Ba)	mg/kg	9.26	12.3	13.0	0.020	7693620
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Boron (B)	mg/kg	<0.40	<0.40	<0.40	0.40	7693620
Total Cadmium (Cd)	mg/kg	0.152	0.0988	0.127	0.0020	7693620
Total Calcium (Ca)	mg/kg	7590	8020	8950	2.0	7693620
Total Chromium (Cr)	mg/kg	0.092	0.127	0.070	0.040	7693620
Total Cobalt (Co)	mg/kg	0.0329	0.0694	0.0270	0.0040	7693620
Total Copper (Cu)	mg/kg	3.10	3.41	3.00	0.010	7693620
Total Iron (Fe)	mg/kg	67.5	84.9	54.6	2.0	7693620
Total Lead (Pb)	mg/kg	0.0294	0.0229	0.0808	0.0020	7693620
Total Magnesium (Mg)	mg/kg	412	434	411	2.0	7693620
Total Manganese (Mn)	mg/kg	5.17	13.4	4.96	0.020	7693620
Total Mercury (Hg)	mg/kg	0.0350	0.0179	0.0355	0.0020	7693620
Total Molybdenum (Mo)	mg/kg	0.158	0.142	0.103	0.010	7693620
Total Nickel (Ni)	mg/kg	0.120	0.174	0.107	0.010	7693620
Total Phosphorus (P)	mg/kg	5580	6100	6120	2.0	7693620
Total Potassium (K)	mg/kg	3890	3180	2910	2.0	7693620
Total Selenium (Se)	mg/kg	0.249	0.204	0.312	0.010	7693620
Total Silver (Ag)	mg/kg	0.0781	0.0950	0.0872	0.0040	7693620
Total Sodium (Na)	mg/kg	1250	1130	1050	2.0	7693620
Total Strontium (Sr)	mg/kg	4.58	6.12	4.43	0.020	7693620
Total Thallium (Tl)	mg/kg	0.00142	0.00058	0.00075	0.00040	7693620
Total Tin (Sn)	mg/kg	0.034	0.027	<0.020	0.020	7693620
Total Titanium (Ti)	mg/kg	0.24	0.92	0.26	0.20	7693620
Total Uranium (U)	mg/kg	<0.00040	0.00062	<0.00040	0.00040	7693620
Total Vanadium (V)	mg/kg	<0.040	<0.040	<0.040	0.040	7693620
Total Zinc (Zn)	mg/kg	28.9	28.2	25.5	0.040	7693620
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4796	KK4797	KK4798		
Sampling Date		2014/07/29	2014/07/29	2014/07/29		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-70**	**2014-CLRU-MCRA06-71**	**2014-CLRU-MCRA06-72**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	1.80	5.30	2.70	0.20	7693620
Total Antimony (Sb)	mg/kg	0.0018	0.0017	0.0016	0.0010	7693620
Total Arsenic (As)	mg/kg	<0.010	<0.010	<0.010	0.010	7693620
Total Barium (Ba)	mg/kg	7.53	9.42	9.06	0.020	7693620
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Boron (B)	mg/kg	0.41	0.57	0.63	0.40	7693620
Total Cadmium (Cd)	mg/kg	0.0838	0.152	0.377	0.0020	7693620
Total Calcium (Ca)	mg/kg	7200	8710	7470	2.0	7693620
Total Chromium (Cr)	mg/kg	0.088	0.054	0.159	0.040	7693620
Total Cobalt (Co)	mg/kg	0.0209	0.0496	0.0700	0.0040	7693620
Total Copper (Cu)	mg/kg	3.00	3.43	3.49	0.010	7693620
Total Iron (Fe)	mg/kg	64.1	66.8	68.3	2.0	7693620
Total Lead (Pb)	mg/kg	0.0184	0.0458	0.0317	0.0020	7693620
Total Magnesium (Mg)	mg/kg	431	508	441	2.0	7693620
Total Manganese (Mn)	mg/kg	6.53	8.70	7.91	0.020	7693620
Total Mercury (Hg)	mg/kg	0.0156	0.0220	0.0408	0.0020	7693620
Total Molybdenum (Mo)	mg/kg	0.146	0.157	0.153	0.010	7693620
Total Nickel (Ni)	mg/kg	0.163	0.170	0.198	0.010	7693620
Total Phosphorus (P)	mg/kg	5880	6560	5780	2.0	7693620
Total Potassium (K)	mg/kg	3480	3220	3560	2.0	7693620
Total Selenium (Se)	mg/kg	0.209	0.205	0.270	0.010	7693620
Total Silver (Ag)	mg/kg	0.158	0.0468	0.0628	0.0040	7693620
Total Sodium (Na)	mg/kg	1150	1310	1410	2.0	7693620
Total Strontium (Sr)	mg/kg	5.03	5.46	4.25	0.020	7693620
Total Thallium (Tl)	mg/kg	0.00096	0.00308	0.00301	0.00040	7693620
Total Tin (Sn)	mg/kg	0.037	0.021	<0.020	0.020	7693620
Total Titanium (Ti)	mg/kg	0.26	0.43	0.23	0.20	7693620
Total Uranium (U)	mg/kg	<0.00040	0.00082	<0.00040	0.00040	7693620
Total Vanadium (V)	mg/kg	<0.040	<0.040	<0.040	0.040	7693620
Total Zinc (Zn)	mg/kg	25.6	25.9	29.3	0.040	7693620
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4799	KK4800	KK4801		
Sampling Date		2014/07/30	2014/07/30	2014/07/30		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-73**	**2014-CLRU-MCRA06-74**	**2014-CLRU-MCRA06-75**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	2.70	10.8	12.0	0.20	7693620
Total Antimony (Sb)	mg/kg	0.0020	0.0057	0.0015	0.0010	7693620
Total Arsenic (As)	mg/kg	<0.010	0.019	<0.010	0.010	7693620
Total Barium (Ba)	mg/kg	11.5	14.5	7.21	0.020	7693620
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693620
Total Boron (B)	mg/kg	<0.40	0.67	0.70	0.40	7693620
Total Cadmium (Cd)	mg/kg	0.112	0.0741	0.104	0.0020	7693620
Total Calcium (Ca)	mg/kg	6520	11500	6040	2.0	7693620
Total Chromium (Cr)	mg/kg	0.101	0.113	0.154	0.040	7693620
Total Cobalt (Co)	mg/kg	0.0282	0.0405	0.0341	0.0040	7693620
Total Copper (Cu)	mg/kg	2.74	2.97	2.87	0.010	7693620
Total Iron (Fe)	mg/kg	66.8	76.8	70.0	2.0	7693620
Total Lead (Pb)	mg/kg	0.0287	0.105	0.0320	0.0020	7693620
Total Magnesium (Mg)	mg/kg	373	517	414	2.0	7693620
Total Manganese (Mn)	mg/kg	7.42	9.18	8.67	0.020	7693620
Total Mercury (Hg)	mg/kg	0.0116	0.0221	0.0109	0.0020	7693620
Total Molybdenum (Mo)	mg/kg	0.128	0.164	0.164	0.010	7693620
Total Nickel (Ni)	mg/kg	0.159	0.206	0.190	0.010	7693620
Total Phosphorus (P)	mg/kg	5490	8670	5530	2.0	7693620
Total Potassium (K)	mg/kg	2980	3580	2910	2.0	7693620
Total Selenium (Se)	mg/kg	0.208	0.221	0.188	0.010	7693620
Total Silver (Ag)	mg/kg	0.0268	0.0609	0.0160	0.0040	7693620
Total Sodium (Na)	mg/kg	1300	1340	1400	2.0	7693620
Total Strontium (Sr)	mg/kg	4.75	7.91	4.96	0.020	7693620
Total Thallium (Tl)	mg/kg	0.00060	0.00145	0.00070	0.00040	7693620
Total Tin (Sn)	mg/kg	0.048	0.037	<0.020	0.020	7693620
Total Titanium (Ti)	mg/kg	0.28	0.73	0.71	0.20	7693620
Total Uranium (U)	mg/kg	<0.00040	0.00220	0.00187	0.00040	7693620
Total Vanadium (V)	mg/kg	<0.040	<0.040	<0.040	0.040	7693620
Total Zinc (Zn)	mg/kg	26.1	28.0	23.5	0.040	7693620
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4802		
Sampling Date		2014/07/30		
COC Number		08396158		
	Units	**2014-CLRU-MCRA06-76**	**RDL**	**QC Batch**
Total Metals by ICPMS				
Total Aluminum (Al)	mg/kg	2.02	0.20	7693620
Total Antimony (Sb)	mg/kg	0.0025	0.0010	7693620
Total Arsenic (As)	mg/kg	<0.010	0.010	7693620
Total Barium (Ba)	mg/kg	9.16	0.020	7693620
Total Beryllium (Be)	mg/kg	<0.020	0.020	7693620
Total Bismuth (Bi)	mg/kg	<0.020	0.020	7693620
Total Boron (B)	mg/kg	<0.40	0.40	7693620
Total Cadmium (Cd)	mg/kg	0.0773	0.0020	7693620
Total Calcium (Ca)	mg/kg	6580	2.0	7693620
Total Chromium (Cr)	mg/kg	0.091	0.040	7693620
Total Cobalt (Co)	mg/kg	0.0445	0.0040	7693620
Total Copper (Cu)	mg/kg	6.63	0.010	7693620
Total Iron (Fe)	mg/kg	72.6	2.0	7693620
Total Lead (Pb)	mg/kg	0.0713	0.0020	7693620
Total Magnesium (Mg)	mg/kg	407	2.0	7693620
Total Manganese (Mn)	mg/kg	7.39	0.020	7693620
Total Mercury (Hg)	mg/kg	0.0316	0.0020	7693620
Total Molybdenum (Mo)	mg/kg	0.128	0.010	7693620
Total Nickel (Ni)	mg/kg	0.133	0.010	7693620
Total Phosphorus (P)	mg/kg	5930	2.0	7693620
Total Potassium (K)	mg/kg	3320	2.0	7693620
Total Selenium (Se)	mg/kg	0.245	0.010	7693620
Total Silver (Ag)	mg/kg	0.0215	0.0040	7693620
Total Sodium (Na)	mg/kg	1230	2.0	7693620
Total Strontium (Sr)	mg/kg	5.09	0.020	7693620
Total Thallium (Tl)	mg/kg	0.00231	0.00040	7693620
Total Tin (Sn)	mg/kg	0.096	0.020	7693620
Total Titanium (Ti)	mg/kg	0.26	0.20	7693620
Total Uranium (U)	mg/kg	0.00044	0.00040	7693620
Total Vanadium (V)	mg/kg	<0.040	0.040	7693620
Total Zinc (Zn)	mg/kg	24.8	0.040	7693620
RDL = Reportable Detection Limit				

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PHYSICAL TESTING (TISSUE)

Maxxam ID		KK4787	KK4788	KK4789		
Sampling Date		2014/07/27	2014/07/27	2014/07/27		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-54**	**2014-CLRU-MCRA06-55**	**2014-CLRU-MCRA06-60**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	75	75	70	0.30	7723278
RDL = Reportable Detection Limit						

Maxxam ID		KK4790	KK4791	KK4792		
Sampling Date		2014/07/27	2014/07/27	2014/07/29		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-64**	**2014-CLRU-MCRA06-65**	**2014-CLRU-MCRA06-66**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	77	76	72	0.30	7723278
RDL = Reportable Detection Limit						

Maxxam ID		KK4793	KK4794	KK4795		
Sampling Date		2014/07/29	2014/07/29	2014/07/29		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-67**	**2014-CLRU-MCRA06-68**	**2014-CLRU-MCRA06-69**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	74	75	75	0.30	7723278
RDL = Reportable Detection Limit						

Maxxam ID		KK4796	KK4797	KK4798		
Sampling Date		2014/07/29	2014/07/29	2014/07/29		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-70**	**2014-CLRU-MCRA06-71**	**2014-CLRU-MCRA06-72**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	75	74	77	0.30	7723278
RDL = Reportable Detection Limit						

Maxxam ID		KK4799	KK4800	KK4801		
Sampling Date		2014/07/30	2014/07/30	2014/07/30		
COC Number		08396158	08396158	08396158		
	Units	**2014-CLRU-MCRA06-73**	**2014-CLRU-MCRA06-74**	**2014-CLRU-MCRA06-75**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	73	73	73	0.30	7723278
RDL = Reportable Detection Limit						

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Maxxam Job #: B473738
Report Date: 2014/11/19

YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

PHYSICAL TESTING (TISSUE)

Maxxam ID		KK4802		
Sampling Date		2014/07/30		
COC Number		08396158		
	Units	**2014-CLRU-MCRA06-76**	**RDL**	**QC Batch**
Physical Properties				
Moisture	%	74	0.30	7723278
RDL = Reportable Detection Limit				

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Maxxam Job #: B473738
Report Date: 2014/11/19

YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7693620	Total Aluminum (Al)	2014/10/28					<0.20	mg/kg	0.13	35		
7693620	Total Antimony (Sb)	2014/10/28					<0.0010	mg/kg	NC	35		
7693620	Total Arsenic (As)	2014/10/28	81	75 - 125	99	75 - 125	<0.010	mg/kg	NC	35	112	75 - 125
7693620	Total Barium (Ba)	2014/10/28	NC	75 - 125	103	75 - 125	<0.020	mg/kg	3.6	35		
7693620	Total Beryllium (Be)	2014/10/28	86	75 - 125	104	75 - 125	<0.020	mg/kg	NC	35		
7693620	Total Bismuth (Bi)	2014/10/28					<0.020	mg/kg	NC	35		
7693620	Total Boron (B)	2014/10/28					<0.40	mg/kg	NC	35		
7693620	Total Cadmium (Cd)	2014/10/28	86	75 - 125	105	75 - 125	<0.0020	mg/kg	4.8	35	103	75 - 125
7693620	Total Calcium (Ca)	2014/10/28					<2.0	mg/kg	6.0	35		
7693620	Total Chromium (Cr)	2014/10/28	84	75 - 125	110	75 - 125	<0.040	mg/kg	NC	35	92	75 - 125
7693620	Total Cobalt (Co)	2014/10/28	87	75 - 125	110	75 - 125	<0.0040	mg/kg	4.1	35		
7693620	Total Copper (Cu)	2014/10/28	NC	75 - 125	114	75 - 125	<0.010	mg/kg	7.6	35	103	75 - 125
7693620	Total Iron (Fe)	2014/10/28					<2.0	mg/kg	0.077	35	102	75 - 125
7693620	Total Lead (Pb)	2014/10/28	82	75 - 125	102	75 - 125	<0.0020	mg/kg	7.2	35	101	75 - 125
7693620	Total Magnesium (Mg)	2014/10/28					<2.0	mg/kg	1.9	35		
7693620	Total Manganese (Mn)	2014/10/28	NC	75 - 125	109	75 - 125	<0.020	mg/kg	0.55	35	99	75 - 125
7693620	Total Mercury (Hg)	2014/10/28	NC	75 - 125	124	75 - 125	<0.0020	mg/kg	25	35	102	75 - 125
7693620	Total Molybdenum (Mo)	2014/10/28					<0.010	mg/kg	5.7	35	99	75 - 125
7693620	Total Nickel (Ni)	2014/10/28	83	75 - 125	114	75 - 125	<0.010	mg/kg	13	35	102	75 - 125
7693620	Total Phosphorus (P)	2014/10/28					<2.0	mg/kg	1.6	35		
7693620	Total Potassium (K)	2014/10/28					<2.0	mg/kg	3.7	35		
7693620	Total Selenium (Se)	2014/10/28	79	75 - 125	95	75 - 125	<0.010	mg/kg	4.3	35	89	75 - 125
7693620	Total Silver (Ag)	2014/10/28	NC	75 - 125	95	75 - 125	<0.0040	mg/kg	20	35		
7693620	Total Sodium (Na)	2014/10/28					<2.0	mg/kg	4.7	35		
7693620	Total Strontium (Sr)	2014/10/28	NC	75 - 125	102	75 - 125	<0.020	mg/kg	2.6	35	100	75 - 125
7693620	Total Thallium (Tl)	2014/10/28	87	75 - 125	110	75 - 125	<0.00040	mg/kg	NC	35		
7693620	Total Tin (Sn)	2014/10/28					<0.020	mg/kg	NC	35		
7693620	Total Titanium (Ti)	2014/10/28					<0.20	mg/kg	NC	35		
7693620	Total Uranium (U)	2014/10/28	85	75 - 125	106	75 - 125	<0.00040	mg/kg	NC	35		
7693620	Total Vanadium (V)	2014/10/28	90	75 - 125	108	75 - 125	<0.040	mg/kg	NC	35	103	75 - 125
7693620	Total Zinc (Zn)	2014/10/28	NC	75 - 125	109	75 - 125	<0.040	mg/kg	8.1	35	104	75 - 125

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Report Date: 2014/11/19

QUALITY ASSURANCE REPORT(CONT'D)

YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723278	Moisture	2014/11/19					<0.30	%	0.67	20		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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YUKON ZINC CORPORATION
Your P.O. #: S115826
Sampler Initials: TP

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Rob Reinert, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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08396158

Maxxam Analytics Inc

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Toll-Free: 1-800-665-8566

CHAIN-OF CUST... QUEST

PAGE 1 OF 1

LAB USE ONLY
MAXXAM JOB #: B473738

ANALYSIS REQUEST

LAB USE ONLY
COC #

COMPANY NAME: Yukon Zinc Corporation

CLIENT PROJECT NO.:

COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8

TEL.: 604-682-5474
E-MAIL: YZC Group
FAX: 604-682-5404

SAMPLER NAME (PRINT): TP, CJ, AK, and RM

PROJECT MANAGER: Robin McCall

LABORATORY CONTACT: Grahm Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE (DD/MM/YY)	TIME	# CONTAINERS	% moisture	metals, low level (whole body)
1	2014-CLRU-MCRA06-54	KK4787				X		27/07/2014		1	X	X
2	2014-CLRU-MCRA06-55	KK4788				X		27/07/2014		1	X	X
3	2014-CLRU-MCRA06-60	KK4789				X		27/07/2014		1	X	X
4	2014-CLRU-MCRA06-64	KK4790				X		27/07/2014		1	X	X
5	2014-CLRU-MCRA06-65	KK4791				X		27/07/2014		1	X	X
6	2014-CLRU-MCRA06-66	KK4792				X		29/07/2014		1	X	X
7	2014-CLRU-MCRA06-67	KK4793				X		29/07/2014		1	X	X
8	2014-CLRU-MCRA06-68	KK4794				X		29/07/2014		1	X	X
9	2014-CLRU-MCRA06-69	KK4795				X		29/07/2014		1	X	X
10	2014-CLRU-MCRA06-70	KK4796				X		29/07/2014		1	X	X
11	2014-CLRU-MCRA06-71	KK4797				X		29/07/2014		1	X	X
12	2014-CLRU-MCRA06-72	KK4798				X		29/07/2014		1	X	X
13	2014-CLRU-MCRA06-73	KK4799				X		30/07/2014		1	X	X
14	2014-CLRU-MCRA06-74	KK4800				X		30/07/2014		1	X	X
15	2014-CLRU-MCRA06-75	KK4801				X		30/07/2014		1	X	X
16	2014-CLRU-MCRA06-76	KK4802				X		30/07/2014		1	X	X
17												

B473738

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL
* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS

PO NUMBER OR QUOTE NUMBER: S115826

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

COME
CSR
AB TIER 1
OTHER

JARS USED:

LAB USE ONLY
ARRIVAL TEMPERATURE °C: 11,11,13 CS:NA
DUE DATE:
LOG IN CHECK:

RELINQUISHED BY SAMPLER: Robin McCall
DATE: DD/MM/YY 21/08/2014
TIME: 7:30
RECEIVED BY:

RELINQUISHED BY:
DATE: DD/MM/YY
TIME:
RECEIVED BY:

RELINQUISHED BY:
DATE: DD/MM/YY
TIME:
RECEIVED BY LABORATORY: Laurel Berthier 2014/08/22 08:40

CUSTODY RECORD

CCCFORM - BC - 3/07/2012

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Your P.O. #: S115826
Your C.O.C. #: 08396172, 08396173

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/20
Report #: R1687115
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B473743
Received: 2014/08/22, 08:40

Sample Matrix: TISSUE
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS - Tissue Wet Wt	17	2014/10/26	2014/10/27	BBY7SOP-00002, BBY7SOP -00013	EPA 6020a,200.3 R1 m
Elements by CRC ICPMS - Tissue Wet Wt	3	2014/10/26	2014/10/28	BBY7SOP-00002, BBY7SOP -00013	EPA 6020a,200.3 R1 m
Moisture in Tissue	20	N/A	2014/11/19	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
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Maxxam Job #: B473743
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4845	KK4846	KK4847		
Sampling Date		2014/07/22	2014/07/22	2014/07/22		
COC Number		08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA01-31**	**2014-CLRU-PCSA01-32**	**2014-CLRU-PCSA01-33**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	38.1	22.0	23.1	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0099	0.0052	0.0078	0.0010	7693694
Total Arsenic (As)	mg/kg	0.056	0.024	0.040	0.010	7693694
Total Barium (Ba)	mg/kg	25.5	33.8	22.1	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	<0.40	<0.40	<0.40	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.0694	0.155	0.0636	0.0020	7693694
Total Calcium (Ca)	mg/kg	6970	7560	9170	2.0	7693694
Total Chromium (Cr)	mg/kg	0.212	0.181	0.256	0.040	7693694
Total Cobalt (Co)	mg/kg	0.0815	0.0856	0.0624	0.0040	7693694
Total Copper (Cu)	mg/kg	5.99	3.28	2.61	0.010	7693694
Total Iron (Fe)	mg/kg	136	98.5	116	2.0	7693694
Total Lead (Pb)	mg/kg	0.488	0.355	0.273	0.0020	7693694
Total Magnesium (Mg)	mg/kg	434	453	464	2.0	7693694
Total Manganese (Mn)	mg/kg	9.89	57.0	4.90	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0354	0.0572	0.0327	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.133	0.150	0.137	0.010	7693694
Total Nickel (Ni)	mg/kg	0.238	0.200	0.213	0.010	7693694
Total Phosphorus (P)	mg/kg	6190	6240	7330	2.0	7693694
Total Potassium (K)	mg/kg	3560	3570	3720	2.0	7693694
Total Selenium (Se)	mg/kg	0.396	0.366	0.429	0.010	7693694
Total Silver (Ag)	mg/kg	0.0363	0.0665	0.0177	0.0040	7693694
Total Sodium (Na)	mg/kg	1260	1340	1290	2.0	7693694
Total Strontium (Sr)	mg/kg	3.81	3.48	3.71	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00527	0.00875	0.00417	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	2.58	2.07	2.27	0.20	7693694
Total Uranium (U)	mg/kg	0.00364	0.00111	0.00126	0.00040	7693694
Total Vanadium (V)	mg/kg	0.116	0.072	0.089	0.040	7693694
Total Zinc (Zn)	mg/kg	27.0	32.2	28.3	0.040	7693694
RDL = Reportable Detection Limit						

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Maxxam Job #: B473743
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4848	KK4849	KK4850		
Sampling Date		2014/07/22	2014/07/22	2014/07/22		
COC Number		08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA01-34**	**2014-CLRU-PCSA03-36**	**2014-CLRU-PCSA03-37**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	64.2	37.8	17.4	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0098	0.0027	0.0029	0.0010	7693694
Total Arsenic (As)	mg/kg	0.045	0.018	0.016	0.010	7693694
Total Barium (Ba)	mg/kg	20.8	11.3	11.9	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	<0.40	0.84	<0.40	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.226	0.0455	0.0245	0.0020	7693694
Total Calcium (Ca)	mg/kg	8000	8720	10000	2.0	7693694
Total Chromium (Cr)	mg/kg	0.418	0.327	0.132	0.040	7693694
Total Cobalt (Co)	mg/kg	0.109	0.0766	0.0575	0.0040	7693694
Total Copper (Cu)	mg/kg	3.11	3.12	4.21	0.010	7693694
Total Iron (Fe)	mg/kg	182	117	114	2.0	7693694
Total Lead (Pb)	mg/kg	0.389	0.0996	0.0682	0.0020	7693694
Total Magnesium (Mg)	mg/kg	481	542	548	2.0	7693694
Total Manganese (Mn)	mg/kg	5.86	6.97	8.84	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0384	0.0385	0.0437	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.155	0.162	0.130	0.010	7693694
Total Nickel (Ni)	mg/kg	0.278	0.271	0.163	0.010	7693694
Total Phosphorus (P)	mg/kg	6290	7120	8350	2.0	7693694
Total Potassium (K)	mg/kg	3880	3660	3950	2.0	7693694
Total Selenium (Se)	mg/kg	0.423	0.209	0.183	0.010	7693694
Total Silver (Ag)	mg/kg	0.0140	0.0064	0.0067	0.0040	7693694
Total Sodium (Na)	mg/kg	1210	1390	1230	2.0	7693694
Total Strontium (Sr)	mg/kg	3.63	3.38	3.28	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00174	0.00071	0.00068	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	4.78	3.10	1.87	0.20	7693694
Total Uranium (U)	mg/kg	0.00279	0.00098	0.00040	0.00040	7693694
Total Vanadium (V)	mg/kg	0.237	0.118	0.059	0.040	7693694
Total Zinc (Zn)	mg/kg	27.3	31.4	30.2	0.040	7693694
RDL = Reportable Detection Limit						

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Maxxam Job #: B473743
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4851	KK4852	KK4853		
Sampling Date		2014/07/22	2014/07/22	2014/07/22		
COC Number		08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA03-38**	**2014-CLRU-PCSA03-39**	**2014-CLRU-PCSA03-40**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	23.1	22.8	20.4	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0022	0.0020	0.0021	0.0010	7693694
Total Arsenic (As)	mg/kg	0.014	0.016	0.012	0.010	7693694
Total Barium (Ba)	mg/kg	7.25	8.58	6.67	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	<0.40	0.49	0.50	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.0221	0.0395	0.0567	0.0020	7693694
Total Calcium (Ca)	mg/kg	7340	8120	8000	2.0	7693694
Total Chromium (Cr)	mg/kg	0.245	0.177	0.183	0.040	7693694
Total Cobalt (Co)	mg/kg	0.0621	0.0596	0.0581	0.0040	7693694
Total Copper (Cu)	mg/kg	3.28	2.91	4.61	0.010	7693694
Total Iron (Fe)	mg/kg	99.6	101	109	2.0	7693694
Total Lead (Pb)	mg/kg	0.0662	0.104	0.0612	0.0020	7693694
Total Magnesium (Mg)	mg/kg	463	449	533	2.0	7693694
Total Manganese (Mn)	mg/kg	17.7	10.7	6.55	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0332	0.0419	0.0447	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.147	0.121	0.152	0.010	7693694
Total Nickel (Ni)	mg/kg	0.228	0.218	0.199	0.010	7693694
Total Phosphorus (P)	mg/kg	6600	6200	7120	2.0	7693694
Total Potassium (K)	mg/kg	3380	3380	3720	2.0	7693694
Total Selenium (Se)	mg/kg	0.160	0.202	0.177	0.010	7693694
Total Silver (Ag)	mg/kg	0.0047	0.0068	0.0044	0.0040	7693694
Total Sodium (Na)	mg/kg	1110	1070	1220	2.0	7693694
Total Strontium (Sr)	mg/kg	2.51	2.12	1.82	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00118	0.00058	<0.00040	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	2.26	2.01	1.82	0.20	7693694
Total Uranium (U)	mg/kg	0.00048	0.00058	0.00065	0.00040	7693694
Total Vanadium (V)	mg/kg	0.068	0.080	0.061	0.040	7693694
Total Zinc (Zn)	mg/kg	24.8	28.7	28.1	0.040	7693694
RDL = Reportable Detection Limit						

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Maxxam Job #: B473743
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4854	KK4855	KK4856		
Sampling Date		2014/07/22	2014/07/22	2014/07/22		
COC Number		08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA03-41**	**2014-CLRU-PCSA03-42**	**2014-CLRU-PCSA01-43**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	48.2	52.9	48.3	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0034	0.0063	0.0098	0.0010	7693694
Total Arsenic (As)	mg/kg	0.028	0.027	0.059	0.010	7693694
Total Barium (Ba)	mg/kg	18.2	6.35	30.6	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	0.62	0.66	<0.40	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.108	0.0645	0.0689	0.0020	7693694
Total Calcium (Ca)	mg/kg	8110	7020	7740	2.0	7693694
Total Chromium (Cr)	mg/kg	0.273	0.287	0.250	0.040	7693694
Total Cobalt (Co)	mg/kg	0.102	0.0898	0.0904	0.0040	7693694
Total Copper (Cu)	mg/kg	3.76	3.45	2.76	0.010	7693694
Total Iron (Fe)	mg/kg	136	133	165	2.0	7693694
Total Lead (Pb)	mg/kg	0.122	0.0992	0.409	0.0020	7693694
Total Magnesium (Mg)	mg/kg	529	503	449	2.0	7693694
Total Manganese (Mn)	mg/kg	28.5	9.18	15.2	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0261	0.0459	0.0295	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.157	0.111	0.137	0.010	7693694
Total Nickel (Ni)	mg/kg	0.306	0.288	0.263	0.010	7693694
Total Phosphorus (P)	mg/kg	6720	6400	6410	2.0	7693694
Total Potassium (K)	mg/kg	3720	3780	3210	2.0	7693694
Total Selenium (Se)	mg/kg	0.201	0.156	0.420	0.010	7693694
Total Silver (Ag)	mg/kg	0.0054	0.0045	0.0057	0.0040	7693694
Total Sodium (Na)	mg/kg	1110	1090	1120	2.0	7693694
Total Strontium (Sr)	mg/kg	2.08	1.98	4.47	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00065	0.00077	0.00311	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	4.45	4.10	3.88	0.20	7693694
Total Uranium (U)	mg/kg	0.00110	0.00163	0.00293	0.00040	7693694
Total Vanadium (V)	mg/kg	0.165	0.159	0.168	0.040	7693694
Total Zinc (Zn)	mg/kg	37.7	24.4	27.4	0.040	7693694
RDL = Reportable Detection Limit						

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YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4857	KK4858	KK4859		
Sampling Date		2014/07/24	2014/07/24	2014/07/24		
COC Number		08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA01-44**	**2014-CLRU-PCSA01-45**	**2014-CLRU-PCSA03-46**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	18.0	46.4	44.2	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0042	0.0113	0.0044	0.0010	7693694
Total Arsenic (As)	mg/kg	0.021	0.044	0.019	0.010	7693694
Total Barium (Ba)	mg/kg	6.63	17.6	8.52	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	<0.40	0.51	1.00	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.0504	0.210	0.0572	0.0020	7693694
Total Calcium (Ca)	mg/kg	7010	6630	6720	2.0	7693694
Total Chromium (Cr)	mg/kg	0.142	0.227	0.283	0.040	7693694
Total Cobalt (Co)	mg/kg	0.0694	0.0919	0.0958	0.0040	7693694
Total Copper (Cu)	mg/kg	2.27	2.55	2.94	0.010	7693694
Total Iron (Fe)	mg/kg	96.6	131	125	2.0	7693694
Total Lead (Pb)	mg/kg	0.129	0.431	0.0987	0.0020	7693694
Total Magnesium (Mg)	mg/kg	404	402	503	2.0	7693694
Total Manganese (Mn)	mg/kg	4.20	6.25	7.69	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0023	0.0336	0.0370	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.101	0.135	0.141	0.010	7693694
Total Nickel (Ni)	mg/kg	0.169	0.216	0.315	0.010	7693694
Total Phosphorus (P)	mg/kg	5420	5630	6240	2.0	7693694
Total Potassium (K)	mg/kg	2760	2940	3510	2.0	7693694
Total Selenium (Se)	mg/kg	0.209	0.293	0.153	0.010	7693694
Total Silver (Ag)	mg/kg	0.0042	0.0057	0.0043	0.0040	7693694
Total Sodium (Na)	mg/kg	910	1130	1070	2.0	7693694
Total Strontium (Sr)	mg/kg	3.84	3.23	1.82	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00073	0.00147	0.00049	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	1.29	2.76	4.15	0.20	7693694
Total Uranium (U)	mg/kg	0.00093	0.00297	0.00103	0.00040	7693694
Total Vanadium (V)	mg/kg	0.061	0.183	0.143	0.040	7693694
Total Zinc (Zn)	mg/kg	22.5	23.4	24.9	0.040	7693694
RDL = Reportable Detection Limit						

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YUKON ZINC CORPORATION
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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4860	KK4861	KK4891		
Sampling Date		2014/07/24	2014/07/24	2014/07/24		
COC Number		08396172	08396172	08396173		
	Units	**2014-CLRU-PCSA03-47**	**2014-CLRU-PCSA03-48**	**2014-CLRU-PCSA03-49**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	51.0	56.5	54.6	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0041	0.0035	0.0046	0.0010	7693694
Total Arsenic (As)	mg/kg	0.030	0.026	0.026	0.010	7693694
Total Barium (Ba)	mg/kg	10.2	13.7	8.99	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	0.63	0.51	0.80	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.0387	0.0644	0.0349	0.0020	7693694
Total Calcium (Ca)	mg/kg	9530	9690	4770	2.0	7693694
Total Chromium (Cr)	mg/kg	0.295	0.306	0.282	0.040	7693694
Total Cobalt (Co)	mg/kg	0.106	0.0974	0.103	0.0040	7693694
Total Copper (Cu)	mg/kg	3.31	3.45	3.64	0.010	7693694
Total Iron (Fe)	mg/kg	160	150	149	2.0	7693694
Total Lead (Pb)	mg/kg	0.114	0.100	0.132	0.0020	7693694
Total Magnesium (Mg)	mg/kg	530	505	447	2.0	7693694
Total Manganese (Mn)	mg/kg	11.6	10.7	15.5	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0437	0.0463	0.0488	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.149	0.151	0.141	0.010	7693694
Total Nickel (Ni)	mg/kg	0.292	0.262	0.298	0.010	7693694
Total Phosphorus (P)	mg/kg	7550	7710	5090	2.0	7693694
Total Potassium (K)	mg/kg	3210	3210	3450	2.0	7693694
Total Selenium (Se)	mg/kg	0.210	0.160	0.174	0.010	7693694
Total Silver (Ag)	mg/kg	0.0043	<0.0040	0.0062	0.0040	7693694
Total Sodium (Na)	mg/kg	1180	1370	1170	2.0	7693694
Total Strontium (Sr)	mg/kg	2.66	2.47	1.66	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00083	0.00189	0.00221	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	3.78	5.08	3.04	0.20	7693694
Total Uranium (U)	mg/kg	0.00134	0.00123	0.00160	0.00040	7693694
Total Vanadium (V)	mg/kg	0.167	0.177	0.168	0.040	7693694
Total Zinc (Zn)	mg/kg	29.0	31.9	23.5	0.040	7693694
RDL = Reportable Detection Limit						

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Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4892	KK4893		
Sampling Date		2014/07/24	2014/07/24		
COC Number		08396173	08396173		
	Units	**2014-CLRU-PCSA03-50**	**2014-CLRU-PCSA03-51**	**RDL**	**QC Batch**
Total Metals by ICPMS					
Total Aluminum (Al)	mg/kg	14.8	11.6	0.20	7693694
Total Antimony (Sb)	mg/kg	0.0035	0.0022	0.0010	7693694
Total Arsenic (As)	mg/kg	0.015	0.010	0.010	7693694
Total Barium (Ba)	mg/kg	7.70	8.08	0.020	7693694
Total Beryllium (Be)	mg/kg	<0.020	<0.020	0.020	7693694
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	0.020	7693694
Total Boron (B)	mg/kg	<0.40	<0.40	0.40	7693694
Total Cadmium (Cd)	mg/kg	0.0733	0.123	0.0020	7693694
Total Calcium (Ca)	mg/kg	11200	8750	2.0	7693694
Total Chromium (Cr)	mg/kg	0.196	0.082	0.040	7693694
Total Cobalt (Co)	mg/kg	0.0560	0.0477	0.0040	7693694
Total Copper (Cu)	mg/kg	4.26	3.29	0.010	7693694
Total Iron (Fe)	mg/kg	105	88.1	2.0	7693694
Total Lead (Pb)	mg/kg	0.0536	0.0746	0.0020	7693694
Total Magnesium (Mg)	mg/kg	547	474	2.0	7693694
Total Manganese (Mn)	mg/kg	6.85	8.00	0.020	7693694
Total Mercury (Hg)	mg/kg	0.0412	0.0272	0.0020	7693694
Total Molybdenum (Mo)	mg/kg	0.152	0.128	0.010	7693694
Total Nickel (Ni)	mg/kg	0.245	0.161	0.010	7693694
Total Phosphorus (P)	mg/kg	8770	7040	2.0	7693694
Total Potassium (K)	mg/kg	3290	3450	2.0	7693694
Total Selenium (Se)	mg/kg	0.234	0.194	0.010	7693694
Total Silver (Ag)	mg/kg	0.0044	<0.0040	0.0040	7693694
Total Sodium (Na)	mg/kg	1330	1260	2.0	7693694
Total Strontium (Sr)	mg/kg	2.63	2.17	0.020	7693694
Total Thallium (Tl)	mg/kg	0.00181	0.00050	0.00040	7693694
Total Tin (Sn)	mg/kg	<0.020	<0.020	0.020	7693694
Total Titanium (Ti)	mg/kg	1.51	1.31	0.20	7693694
Total Uranium (U)	mg/kg	<0.00040	<0.00040	0.00040	7693694
Total Vanadium (V)	mg/kg	0.049	<0.040	0.040	7693694
Total Zinc (Zn)	mg/kg	34.0	32.1	0.040	7693694
RDL = Reportable Detection Limit					

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PHYSICAL TESTING (TISSUE)

Maxxam ID		KK4845	KK4846	KK4847	KK4848		
Sampling Date		2014/07/22	2014/07/22	2014/07/22	2014/07/22		
COC Number		08396172	08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA01-31**	**2014-CLRU-PCSA01-32**	**2014-CLRU-PCSA01-33**	**2014-CLRU-PCSA01-34**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	76	73	75	75	0.30	7723250
RDL = Reportable Detection Limit							

Maxxam ID		KK4849	KK4850	KK4851	KK4852		
Sampling Date		2014/07/22	2014/07/22	2014/07/22	2014/07/22		
COC Number		08396172	08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA03-36**	**2014-CLRU-PCSA03-37**	**2014-CLRU-PCSA03-38**	**2014-CLRU-PCSA03-39**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	72	77	71	73	0.30	7723250
RDL = Reportable Detection Limit							

Maxxam ID		KK4853		KK4854		KK4855		
Sampling Date		2014/07/22		2014/07/22		2014/07/22		
COC Number		08396172		08396172		08396172		
	Units	**2014-CLRU-PCSA03-40**	**QC Batch**	**2014-CLRU-PCSA03-41**	**QC Batch**	**2014-CLRU-PCSA03-42**	**RDL**	**QC Batch**
Physical Properties								
Moisture	%	73	7723250	74	7723278	76	0.30	7723250
RDL = Reportable Detection Limit								

Maxxam ID		KK4856	KK4857	KK4858	KK4859		
Sampling Date		2014/07/22	2014/07/24	2014/07/24	2014/07/24		
COC Number		08396172	08396172	08396172	08396172		
	Units	**2014-CLRU-PCSA01-43**	**2014-CLRU-PCSA01-44**	**2014-CLRU-PCSA01-45**	**2014-CLRU-PCSA03-46**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	73	77	75	74	0.30	7723250
RDL = Reportable Detection Limit							

Maxxam ID		KK4860	KK4861	KK4891	KK4892		
Sampling Date		2014/07/24	2014/07/24	2014/07/24	2014/07/24		
COC Number		08396172	08396172	08396173	08396173		
	Units	**2014-CLRU-PCSA03-47**	**2014-CLRU-PCSA03-48**	**2014-CLRU-PCSA03-49**	**2014-CLRU-PCSA03-50**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	73	71	71	73	0.30	7723250
RDL = Reportable Detection Limit							

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YUKON ZINC CORPORATION
Your P.O. #: S115826

PHYSICAL TESTING (TISSUE)

Maxxam ID		KK4893		
Sampling Date		2014/07/24		
COC Number		08396173		
	Units	**2014-CLRU-PCSA03-51**	**RDL**	**QC Batch**
Physical Properties				
Moisture	%	74	0.30	7723250
RDL = Reportable Detection Limit				

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Report Date: 2014/11/20

YUKON ZINC CORPORATION
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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

YUKON ZINC CORPORATION
Your P.O. #: S115826

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7693694	Total Aluminum (Al)	2014/10/27					<0.20	mg/kg	1.1	35		
7693694	Total Antimony (Sb)	2014/10/27					<0.0010	mg/kg	10	35		
7693694	Total Arsenic (As)	2014/10/27	102	75 - 125	103	75 - 125	<0.010	mg/kg	NC	35	109	75 - 125
7693694	Total Barium (Ba)	2014/10/27	NC	75 - 125	99	75 - 125	<0.020	mg/kg	13	35		
7693694	Total Beryllium (Be)	2014/10/27	96	75 - 125	101	75 - 125	<0.020	mg/kg	NC	35		
7693694	Total Bismuth (Bi)	2014/10/27					<0.020	mg/kg	NC	35		
7693694	Total Boron (B)	2014/10/27					<0.40	mg/kg	NC	35		
7693694	Total Cadmium (Cd)	2014/10/27	97	75 - 125	101	75 - 125	<0.0020	mg/kg	5.7	35	97	75 - 125
7693694	Total Calcium (Ca)	2014/10/27					<2.0	mg/kg	18	35		
7693694	Total Chromium (Cr)	2014/10/27	103	75 - 125	105	75 - 125	<0.040	mg/kg	NC	35	81	75 - 125
7693694	Total Cobalt (Co)	2014/10/27	100	75 - 125	103	75 - 125	<0.0040	mg/kg	3.1	35		
7693694	Total Copper (Cu)	2014/10/27	NC	75 - 125	103	75 - 125	<0.010	mg/kg	2.5	35	95	75 - 125
7693694	Total Iron (Fe)	2014/10/27					<2.0	mg/kg	5.2	35	98	75 - 125
7693694	Total Lead (Pb)	2014/10/27	90	75 - 125	99	75 - 125	<0.0020	mg/kg	5.9	35	96	75 - 125
7693694	Total Magnesium (Mg)	2014/10/27					<2.0	mg/kg	10	35		
7693694	Total Manganese (Mn)	2014/10/27	NC	75 - 125	103	75 - 125	<0.020	mg/kg	12	35	94	75 - 125
7693694	Total Mercury (Hg)	2014/10/27	NC	75 - 125	106	75 - 125	<0.0020	mg/kg	2.3	35	93	75 - 125
7693694	Total Molybdenum (Mo)	2014/10/27					<0.010	mg/kg	5.0	35	96	75 - 125
7693694	Total Nickel (Ni)	2014/10/27	102	75 - 125	106	75 - 125	<0.010	mg/kg	4.2	35	97	75 - 125
7693694	Total Phosphorus (P)	2014/10/27					<2.0	mg/kg	13	35		
7693694	Total Potassium (K)	2014/10/27					<2.0	mg/kg	2.4	35		
7693694	Total Selenium (Se)	2014/10/27	99	75 - 125	104	75 - 125	<0.010	mg/kg	4.5	35	95	75 - 125
7693694	Total Silver (Ag)	2014/10/27	NC	75 - 125	91	75 - 125	<0.0040	mg/kg	26	35		
7693694	Total Sodium (Na)	2014/10/27					<2.0	mg/kg	1.5	35		
7693694	Total Strontium (Sr)	2014/10/27	NC	75 - 125	99	75 - 125	<0.020	mg/kg	15	35	94	75 - 125
7693694	Total Thallium (Tl)	2014/10/27	92	75 - 125	102	75 - 125	<0.00040	mg/kg	6.7	35		
7693694	Total Tin (Sn)	2014/10/27					<0.020	mg/kg	NC	35		
7693694	Total Titanium (Ti)	2014/10/27					<0.20	mg/kg	8.1	35		
7693694	Total Uranium (U)	2014/10/27	98	75 - 125	98	75 - 125	<0.00040	mg/kg	NC	35		
7693694	Total Vanadium (V)	2014/10/27	104	75 - 125	103	75 - 125	<0.040	mg/kg	NC	35	96	75 - 125
7693694	Total Zinc (Zn)	2014/10/27	NC	75 - 125	102	75 - 125	<0.040	mg/kg	2.2	35	99	75 - 125
7723250	Moisture	2014/11/19					<0.30	%	1.8	20		

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Maxxam Job #: B473743
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723278	Moisture	2014/11/19					<0.30	%	0.67	20		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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Maxxam Job #: B473743
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Andy Lu, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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08396172

Maxxam Analytics Inc

6 Canada Way
naby, BC V5G 1K5
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Fax.: (604) 630-0110
Toll-Free: 1-800-665-8566

CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

LAB USE ONLY
MAXXAM JOB #: B473743

ANALYSIS REQUEST

LAB USE ONLY
COC #

LAB USE ONLY

COMPANY NAME: Yukon Zinc Corporation

CLIENT PROJECT NO.:

COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8

TEL.: 604-682-5474
E-MAIL: YZC Group
FAX: 604-682-5404

SAMPLER NAME (PRINT): TP, CJ, AK, and RM

PROJECT MANAGER: Robin McCall

LABORATORY CONTACT: Grahm Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE (DD/MM/YY)	TIME	# CONTAINERS	% moisture	metals, low level (whole body)
1	2014-CLRU-PCSA01-31	KK4845					X	22/07/2014	n/a	1	X	X
2	2014-CLRU-PCSA01-32	KK4846					X	22/07/2014	n/a	1	X	X
3	2014-CLRU-PCSA01-33	KK4847					X	22/07/2014	n/a	1	X	X
4	2014-CLRU-PCSA01-34	KK4848					X	22/07/2014	n/a	1	X	X
5	2014-CLRU-PCSA03-36	KK4850					X	22/07/2014	n/a	1	X	X
6	2014-CLRU-PCSA03-37	KK4851					X	22/07/2014	n/a	1	X	X
7	2014-CLRU-PCSA03-38	KK4852					X	22/07/2014	n/a	1	X	X
8	2014-CLRU-PCSA03-39	KK4853					X	22/07/2014	n/a	1	X	X
9	2014-CLRU-PCSA03-40	KK4854					X	22/07/2014	n/a	1	X	X
10	2014-CLRU-PCSA03-41	KK4855					X	22/07/2014	n/a	1	X	X
11	2014-CLRU-PCSA03-42	KK4856					X	22/07/2014	n/a	1	X	X
12	2014-CLRU-PCSA01-43	KK4857					X	24/07/2014	n/a	1	X	X
13	2014-CLRU-PCSA01-44	KK4858					X	24/07/2014	n/a	1	X	X
14	2014-CLRU-PCSA01-45	KK4859					X	24/07/2014	n/a	1	X	X
15	2014-CLRU-PCSA03-46	KK4860					X	24/07/2014	n/a	1	X	X
16	2014-CLRU-PCSA03-47	KK4861					X	24/07/2014	n/a	1	X	X
17	2014-CLRU-PCSA03-48	KK4862					X	24/07/2014	n/a	1	X	X

B473743

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL
* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS

PO NUMBER OR QUOTE NUMBER: S115826

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

RELINQUISHED BY SAMPLER: Robin McCall — DATE: DD/MM/YY 21/08/2014 — TIME: 7:30

RELINQUISHED BY: — DATE: DD/MM/YY — TIME:

RELINQUISHED BY: — DATE: DD/MM/YY — TIME:

LAB USE ONLY

CCME
CSR
AB TIER 1
OTHER

JARS USED:

ARRIVAL TEMPERATURE °C: 11, 11, 13 CS: NA

DUE DATE:

LOG IN CHECK:

RECEIVED BY:

RECEIVED BY:

RECEIVED BY LABORATORY: Laurel Berthier 2014/08/22 08:40

CUSTODY RECORD

COCFORM - BC - 2007/08/22

08396173

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6 Canada Way
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CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

PAGE 2 OF 2

LAB USE ONLY
MAXXAM JOB #: B473743

ANALYSIS REQUEST

LAB USE ONLY
COC #

COMPANY NAME: Yukon Zinc Corporation

CLIENT PROJECT NO.:

COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8

TEL.: 604-682-5474
E-MAIL: YZC Group
FAX: 604-682-5404

SAMPLER NAME (PRINT): TP, CJ, AK, and RM

PROJECT MANAGER: Robin McCall

LABORATORY CONTACT: Grahm Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	% moisture	metals, low level (whole body)
1	2014-CLRU-PCSA03-49	KK4891				X		24/07/2014		1	X	X
2	2014-CLRU-PCSA03-50	KK4892				X		24/07/2014		1	X	X
3	2014-CLRU-PCSA03-51	KK4893				X		24/07/2014		1	X	X
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												

B473743

TAT (Turnaround Time)
LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL
* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS

PO NUMBER OR QUOTE NUMBER: S115826

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

CCME
CSR
AB TIER 1
OTHER
JARS USED:

LAB USE ONLY
ARRIVAL TEMPERATURE °C: 11,11,13 CS NA
DUE DATE:
LOG IN CHECK:

	DATE: DD/MM/YY	TIME:	RECEIVED BY:
RELINQUISHED BY SAMPLER: Robin McCall	21/08/2014	7:30	
RELINQUISHED BY:			RECEIVED BY:
RELINQUISHED BY:			RECEIVED BY: Michaure Bertier 2014/08/22 08:40

CUSTODY RECORD

COFORM - BC - 20070822

Maxxam
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Your P.O. #: S115826
Your C.O.C. #: 08396170, 08396171

Attention:Robin McCall

YUKON ZINC CORPORATION
PO Box 57
Whitehorse, YT
CANADA Y1A 5X9

Report Date: 2014/11/20
Report #: R1687088
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B473752
Received: 2014/08/22, 08:40

Sample Matrix: TISSUE
Samples Received: 21

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by CRC ICPMS - Tissue Wet Wt	21	2014/10/26	2014/10/28	BBY7SOP-00002, BBY7SOP -00013	EPA 6020a,200.3 R1 m
Moisture in Tissue	21	N/A	2014/11/19	BBY8SOP-00017	OMOE E3139 3.1 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Graham Rudkin, Project Manager, Environmental
Email: GRudkin@maxxam.ca
Phone# (604)638-5926 Ext:5926
==========
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Maxxam Job #: B473752
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4918	KK4919	KK4920		
Sampling Date		2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA01-01**	**2014-CLRU-MSSA01-02**	**2014-CLRU-MSSA01-03**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	28.0	16.6	13.4	0.20	7693810
Total Antimony (Sb)	mg/kg	0.0258	0.0165	0.0154	0.0010	7693810
Total Arsenic (As)	mg/kg	0.069	0.034	0.034	0.010	7693810
Total Barium (Ba)	mg/kg	15.1	6.35	6.60	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Boron (B)	mg/kg	0.71	<0.40	0.43	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.134	0.0490	0.0378	0.0020	7693810
Total Calcium (Ca)	mg/kg	9520	6690	7460	2.0	7693810
Total Chromium (Cr)	mg/kg	0.279	0.120	0.067	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0817	0.0397	0.0518	0.0040	7693810
Total Copper (Cu)	mg/kg	3.30	2.97	2.21	0.010	7693810
Total Iron (Fe)	mg/kg	122	88.1	71.4	2.0	7693810
Total Lead (Pb)	mg/kg	0.912	0.415	0.442	0.0020	7693810
Total Magnesium (Mg)	mg/kg	537	393	414	2.0	7693810
Total Manganese (Mn)	mg/kg	7.56	10.0	16.1	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0373	0.0287	0.0397	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.257	0.201	0.107	0.010	7693810
Total Nickel (Ni)	mg/kg	0.339	0.140	0.159	0.010	7693810
Total Phosphorus (P)	mg/kg	7460	5860	6270	2.0	7693810
Total Potassium (K)	mg/kg	3530	2950	3010	2.0	7693810
Total Selenium (Se)	mg/kg	0.543	0.526	0.318	0.010	7693810
Total Silver (Ag)	mg/kg	0.0213	0.0131	0.0114	0.0040	7693810
Total Sodium (Na)	mg/kg	1340	1170	1040	2.0	7693810
Total Strontium (Sr)	mg/kg	5.07	2.96	4.24	0.020	7693810
Total Thallium (Tl)	mg/kg	0.00241	0.00412	0.00442	0.00040	7693810
Total Tin (Sn)	mg/kg	0.049	<0.020	<0.020	0.020	7693810
Total Titanium (Ti)	mg/kg	2.61	1.56	1.23	0.20	7693810
Total Uranium (U)	mg/kg	0.00115	0.00063	0.00051	0.00040	7693810
Total Vanadium (V)	mg/kg	0.087	0.048	<0.040	0.040	7693810
Total Zinc (Zn)	mg/kg	30.2	23.8	22.6	0.040	7693810
RDL = Reportable Detection Limit						

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Maxxam Job #: B473752
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4921	KK4922	KK4923		
Sampling Date		2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA01-04**	**2014-CLRU-MSSA06-09**	**2014-CLRU-MSSA06-10**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	22.4	25.5	29.9	0.20	7693810
Total Antimony (Sb)	mg/kg	0.0091 (1)	0.390	0.242	0.0010	7693810
Total Arsenic (As)	mg/kg	0.019	0.964	0.565	0.010	7693810
Total Barium (Ba)	mg/kg	13.8	10.6	15.5	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	0.023	0.020	7693810
Total Boron (B)	mg/kg	<0.40	<0.40	0.55	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.143	0.727	0.492	0.0020	7693810
Total Calcium (Ca)	mg/kg	8490	7270	10000	2.0	7693810
Total Chromium (Cr)	mg/kg	0.165	0.221	0.230	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0874	0.0717	0.0798	0.0040	7693810
Total Copper (Cu)	mg/kg	2.77	8.96	6.60	0.010	7693810
Total Iron (Fe)	mg/kg	93.8	212	187	2.0	7693810
Total Lead (Pb)	mg/kg	0.787	9.87	13.0	0.0020	7693810
Total Magnesium (Mg)	mg/kg	441	403	492	2.0	7693810
Total Manganese (Mn)	mg/kg	24.5	7.13	10.4	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0484	0.0417	0.0367	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.132	0.157	0.173	0.010	7693810
Total Nickel (Ni)	mg/kg	0.180	0.233	0.265	0.010	7693810
Total Phosphorus (P)	mg/kg	6720	6500	7750	2.0	7693810
Total Potassium (K)	mg/kg	3370	3530	3490	2.0	7693810
Total Selenium (Se)	mg/kg	0.320	3.05	3.10	0.010	7693810
Total Silver (Ag)	mg/kg	0.0196	0.166	0.141	0.0040	7693810
Total Sodium (Na)	mg/kg	1030	1190	1310	2.0	7693810
Total Strontium (Sr)	mg/kg	4.46	5.02	5.22	0.020	7693810
Total Thallium (Tl)	mg/kg	0.00242	0.0225	0.0304	0.00040	7693810
Total Tin (Sn)	mg/kg	0.025	0.032	0.054	0.020	7693810
Total Titanium (Ti)	mg/kg	1.40	1.46	1.55	0.20	7693810
Total Uranium (U)	mg/kg	0.00070	0.00419	0.00512	0.00040	7693810
Total Vanadium (V)	mg/kg	0.045	0.066	0.097	0.040	7693810
Total Zinc (Zn)	mg/kg	27.1	90.2	71.0	0.040	7693810

RDL = Reportable Detection Limit

(1) Duplicate RPD for (Antimony) above control limit - Non-homogenous sample - Increased variability of results. Re-analysis yields similar results.

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Maxxam Job #: B473752
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4924	KK4925	KK4926		
Sampling Date		2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA06-11**	**2014-CLRU-MSSA06-12**	**2014-CLRU-MSSA06-14**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	19.8	11.4	58.8	0.20	7693810
Total Antimony (Sb)	mg/kg	0.222	0.129	0.528	0.0010	7693810
Total Arsenic (As)	mg/kg	0.554	0.395	1.04	0.010	7693810
Total Barium (Ba)	mg/kg	12.1	14.0	17.3	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	0.059	0.020	7693810
Total Boron (B)	mg/kg	<0.40	<0.40	<0.40	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.399	0.357	0.761	0.0020	7693810
Total Calcium (Ca)	mg/kg	10300	7980	8560	2.0	7693810
Total Chromium (Cr)	mg/kg	0.142	0.126	0.372	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0681	0.0872	0.118	0.0040	7693810
Total Copper (Cu)	mg/kg	5.68	5.49	8.94	0.010	7693810
Total Iron (Fe)	mg/kg	173	122	269	2.0	7693810
Total Lead (Pb)	mg/kg	9.61	5.99	19.2	0.0020	7693810
Total Magnesium (Mg)	mg/kg	435	410	459	2.0	7693810
Total Manganese (Mn)	mg/kg	6.28	7.66	19.8	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0446	0.0364	0.0562	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.120	0.122	0.154	0.010	7693810
Total Nickel (Ni)	mg/kg	0.178	0.175	0.366	0.010	7693810
Total Phosphorus (P)	mg/kg	7890	6560	6930	2.0	7693810
Total Potassium (K)	mg/kg	3450	3140	3290	2.0	7693810
Total Selenium (Se)	mg/kg	3.01	2.18	3.04	0.010	7693810
Total Silver (Ag)	mg/kg	0.109	0.444	0.338	0.0040	7693810
Total Sodium (Na)	mg/kg	1360	1300	1120	2.0	7693810
Total Strontium (Sr)	mg/kg	5.29	4.27	5.00	0.020	7693810
Total Thallium (Tl)	mg/kg	0.0180	0.0350	0.0326	0.00040	7693810
Total Tin (Sn)	mg/kg	0.046	0.031	0.075	0.020	7693810
Total Titanium (Ti)	mg/kg	1.28	0.70	3.54	0.20	7693810
Total Uranium (U)	mg/kg	0.00447	0.00190	0.0132	0.00040	7693810
Total Vanadium (V)	mg/kg	0.050	<0.040	0.158	0.040	7693810
Total Zinc (Zn)	mg/kg	61.2	47.2	91.6	0.040	7693810
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B473752
Report Date: 2014/11/20

YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4927	KK4928	KK4929		
Sampling Date		2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA06-15**	**2014-CLRU-MSSA06-16**	**2014-CLRU-MSSA06-17**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	11.4	16.6	40.3	0.20	7693810
Total Antimony (Sb)	mg/kg	0.129	0.145	0.321	0.0010	7693810
Total Arsenic (As)	mg/kg	0.398	0.413	0.832	0.010	7693810
Total Barium (Ba)	mg/kg	13.2	10.9	12.8	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	0.029	0.020	7693810
Total Boron (B)	mg/kg	<0.40	<0.40	0.73	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.300	0.540	0.552	0.0020	7693810
Total Calcium (Ca)	mg/kg	8230	6610	5160	2.0	7693810
Total Chromium (Cr)	mg/kg	0.164	0.234	0.181	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0440	0.0623	0.0818	0.0040	7693810
Total Copper (Cu)	mg/kg	4.99	5.85	6.83	0.010	7693810
Total Iron (Fe)	mg/kg	96.9	121	187	2.0	7693810
Total Lead (Pb)	mg/kg	4.03	5.09	12.9	0.0020	7693810
Total Magnesium (Mg)	mg/kg	412	349	406	2.0	7693810
Total Manganese (Mn)	mg/kg	9.26	8.41	13.0	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0341	0.0400	0.0511	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.147	0.157	0.168	0.010	7693810
Total Nickel (Ni)	mg/kg	0.199	0.244	0.281	0.010	7693810
Total Phosphorus (P)	mg/kg	6810	5920	4930	2.0	7693810
Total Potassium (K)	mg/kg	3030	3280	3190	2.0	7693810
Total Selenium (Se)	mg/kg	2.14	2.05	2.09	0.010	7693810
Total Silver (Ag)	mg/kg	0.0965	0.187	0.373	0.0040	7693810
Total Sodium (Na)	mg/kg	1190	1120	1230	2.0	7693810
Total Strontium (Sr)	mg/kg	4.86	3.83	2.87	0.020	7693810
Total Thallium (Tl)	mg/kg	0.0214	0.0151	0.0243	0.00040	7693810
Total Tin (Sn)	mg/kg	0.104	0.123	0.046	0.020	7693810
Total Titanium (Ti)	mg/kg	0.83	0.93	2.36	0.20	7693810
Total Uranium (U)	mg/kg	0.00206	0.00299	0.00547	0.00040	7693810
Total Vanadium (V)	mg/kg	<0.040	<0.040	0.104	0.040	7693810
Total Zinc (Zn)	mg/kg	49.9	49.4	68.9	0.040	7693810
RDL = Reportable Detection Limit						

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YUKON ZINC CORPORATION
Your P.O. #: S115826

ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4930	KK4931	KK4932		
Sampling Date		2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA06-18**	**2014-CLRU-MSSA04-19**	**2014-CLRU-MSSA04-20**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	15.5	22.3	19.3	0.20	7693810
Total Antimony (Sb)	mg/kg	0.254	0.188	0.0878	0.0010	7693810
Total Arsenic (As)	mg/kg	0.618	0.403	0.217	0.010	7693810
Total Barium (Ba)	mg/kg	32.2	13.7	10.0	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Boron (B)	mg/kg	<0.40	0.47	<0.40	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.511	0.583	0.237	0.0020	7693810
Total Calcium (Ca)	mg/kg	18000	9860	10400	2.0	7693810
Total Chromium (Cr)	mg/kg	0.168	0.212	0.206	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0339	0.0859	0.0587	0.0040	7693810
Total Copper (Cu)	mg/kg	7.52	5.72	5.36	0.010	7693810
Total Iron (Fe)	mg/kg	166	145	113	2.0	7693810
Total Lead (Pb)	mg/kg	15.4	6.53	2.89	0.0020	7693810
Total Magnesium (Mg)	mg/kg	609	490	464	2.0	7693810
Total Manganese (Mn)	mg/kg	4.77	30.1	8.78	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0568	0.0582	0.0300	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.095	0.201	0.154	0.010	7693810
Total Nickel (Ni)	mg/kg	0.125	0.281	0.262	0.010	7693810
Total Phosphorus (P)	mg/kg	12400	7910	8330	2.0	7693810
Total Potassium (K)	mg/kg	3110	3670	3260	2.0	7693810
Total Selenium (Se)	mg/kg	2.61	1.69	1.20	0.010	7693810
Total Silver (Ag)	mg/kg	0.177	0.399	0.0653	0.0040	7693810
Total Sodium (Na)	mg/kg	1440	1510	1270	2.0	7693810
Total Strontium (Sr)	mg/kg	9.95	5.45	4.71	0.020	7693810
Total Thallium (Tl)	mg/kg	0.0208	0.0128	0.00790	0.00040	7693810
Total Tin (Sn)	mg/kg	0.126	0.074	0.036	0.020	7693810
Total Titanium (Ti)	mg/kg	1.13	1.41	1.27	0.20	7693810
Total Uranium (U)	mg/kg	0.00269	0.00560	0.00704	0.00040	7693810
Total Vanadium (V)	mg/kg	0.040	0.074	0.080	0.040	7693810
Total Zinc (Zn)	mg/kg	85.1	54.0	40.3	0.040	7693810
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4933	KK4934	KK4941		
Sampling Date		2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396171		
	Units	**2014-CLRU-MSSA04-21**	**2014-CLRU-MSSA04-22**	**2014-CLRU-MSSA04-23**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	11.2	13.9	19.4	0.20	7693810
Total Antimony (Sb)	mg/kg	0.139	0.0868	0.0796	0.0010	7693810
Total Arsenic (As)	mg/kg	0.334	0.191	0.202	0.010	7693810
Total Barium (Ba)	mg/kg	20.8	10.5	8.14	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Boron (B)	mg/kg	0.40	<0.40	0.63	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.348	0.453	0.283	0.0020	7693810
Total Calcium (Ca)	mg/kg	11400	10700	7300	2.0	7693810
Total Chromium (Cr)	mg/kg	0.284	0.180	0.196	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0517	0.0512	0.0484	0.0040	7693810
Total Copper (Cu)	mg/kg	5.62	4.30	3.95	0.010	7693810
Total Iron (Fe)	mg/kg	114	106	97.5	2.0	7693810
Total Lead (Pb)	mg/kg	3.45	3.48	2.98	0.0020	7693810
Total Magnesium (Mg)	mg/kg	498	480	434	2.0	7693810
Total Manganese (Mn)	mg/kg	21.4	15.1	12.1	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0304	0.0283	0.0265	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.137	0.196	0.157	0.010	7693810
Total Nickel (Ni)	mg/kg	0.285	0.226	0.292	0.010	7693810
Total Phosphorus (P)	mg/kg	8970	8680	6610	2.0	7693810
Total Potassium (K)	mg/kg	3580	3350	3420	2.0	7693810
Total Selenium (Se)	mg/kg	1.40	1.30	1.25	0.010	7693810
Total Silver (Ag)	mg/kg	0.0754	0.0620	0.0516	0.0040	7693810
Total Sodium (Na)	mg/kg	1260	1250	1300	2.0	7693810
Total Strontium (Sr)	mg/kg	5.93	5.76	3.34	0.020	7693810
Total Thallium (Tl)	mg/kg	0.0101	0.00875	0.00797	0.00040	7693810
Total Tin (Sn)	mg/kg	0.044	0.063	0.064	0.020	7693810
Total Titanium (Ti)	mg/kg	0.78	0.98	1.16	0.20	7693810
Total Uranium (U)	mg/kg	0.00186	0.00357	0.00806	0.00040	7693810
Total Vanadium (V)	mg/kg	<0.040	<0.040	0.057	0.040	7693810
Total Zinc (Zn)	mg/kg	51.0	38.1	38.0	0.040	7693810
RDL = Reportable Detection Limit						

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ELEMENTS BY ATOMIC SPECTROSCOPY - WET WT (TISSUE)

Maxxam ID		KK4942	KK4943	KK4944		
Sampling Date		2014/07/19	2014/07/19	2014/07/20		
COC Number		08396171	08396171	08396171		
	Units	**2014-CLRU-MSSA04-24**	**2014-CLRU-MSSA04-25**	**2014-CLRU-MSSA01-26**	**RDL**	**QC Batch**
Total Metals by ICPMS						
Total Aluminum (Al)	mg/kg	15.7	9.62	41.6	0.20	7693810
Total Antimony (Sb)	mg/kg	0.0698	0.0811	0.0260	0.0010	7693810
Total Arsenic (As)	mg/kg	0.171	0.435	0.066	0.010	7693810
Total Barium (Ba)	mg/kg	9.01	6.85	8.94	0.020	7693810
Total Beryllium (Be)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Bismuth (Bi)	mg/kg	<0.020	<0.020	<0.020	0.020	7693810
Total Boron (B)	mg/kg	0.72	0.46	<0.40	0.40	7693810
Total Cadmium (Cd)	mg/kg	0.297	0.781	0.0719	0.0020	7693810
Total Calcium (Ca)	mg/kg	10300	7700	8610	2.0	7693810
Total Chromium (Cr)	mg/kg	0.249	0.210	0.246	0.040	7693810
Total Cobalt (Co)	mg/kg	0.0484	0.0527	0.0765	0.0040	7693810
Total Copper (Cu)	mg/kg	3.72	4.33	2.47	0.010	7693810
Total Iron (Fe)	mg/kg	116	97.5	115	2.0	7693810
Total Lead (Pb)	mg/kg	2.77	2.43	0.591	0.0020	7693810
Total Magnesium (Mg)	mg/kg	551	452	449	2.0	7693810
Total Manganese (Mn)	mg/kg	7.65	6.07	12.0	0.020	7693810
Total Mercury (Hg)	mg/kg	0.0295	0.0222	0.0348	0.0020	7693810
Total Molybdenum (Mo)	mg/kg	0.166	0.174	0.315	0.010	7693810
Total Nickel (Ni)	mg/kg	0.338	0.236	0.271	0.010	7693810
Total Phosphorus (P)	mg/kg	8470	7120	7190	2.0	7693810
Total Potassium (K)	mg/kg	3650	3200	3350	2.0	7693810
Total Selenium (Se)	mg/kg	1.15	1.78	0.512	0.010	7693810
Total Silver (Ag)	mg/kg	0.0346	0.0721	0.0345	0.0040	7693810
Total Sodium (Na)	mg/kg	1350	1300	1190	2.0	7693810
Total Strontium (Sr)	mg/kg	5.33	4.67	4.17	0.020	7693810
Total Thallium (Tl)	mg/kg	0.00588	0.00576	0.00325	0.00040	7693810
Total Tin (Sn)	mg/kg	0.035	0.056	0.076	0.020	7693810
Total Titanium (Ti)	mg/kg	0.83	0.63	2.83	0.20	7693810
Total Uranium (U)	mg/kg	0.00359	0.00235	0.00190	0.00040	7693810
Total Vanadium (V)	mg/kg	0.044	<0.040	0.101	0.040	7693810
Total Zinc (Zn)	mg/kg	36.3	35.5	27.1	0.040	7693810
RDL = Reportable Detection Limit						

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PHYSICAL TESTING (TISSUE)

Maxxam ID		KK4918	KK4919	KK4920	KK4921		
Sampling Date		2014/07/19	2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA01-01**	**2014-CLRU-MSSA01-02**	**2014-CLRU-MSSA01-03**	**2014-CLRU-MSSA01-04**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	91	76	73	74	0.30	7723236
RDL = Reportable Detection Limit							

Maxxam ID		KK4922		KK4923	KK4924		
Sampling Date		2014/07/19		2014/07/19	2014/07/19		
COC Number		08396170		08396170	08396170		
	Units	**2014-CLRU-MSSA06-09**	**QC Batch**	**2014-CLRU-MSSA06-10**	**2014-CLRU-MSSA06-11**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	71	7723250	72	73	0.30	7723236
RDL = Reportable Detection Limit							

Maxxam ID		KK4925	KK4926	KK4927	KK4928		
Sampling Date		2014/07/19	2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA06-12**	**2014-CLRU-MSSA06-14**	**2014-CLRU-MSSA06-15**	**2014-CLRU-MSSA06-16**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	76	76	74	72	0.30	7723236
RDL = Reportable Detection Limit							

Maxxam ID		KK4929	KK4930	KK4931	KK4932		
Sampling Date		2014/07/19	2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396170	08396170		
	Units	**2014-CLRU-MSSA06-17**	**2014-CLRU-MSSA06-18**	**2014-CLRU-MSSA04-19**	**2014-CLRU-MSSA04-20**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	72	68	74	73	0.30	7723236
RDL = Reportable Detection Limit							

Maxxam ID		KK4933	KK4934	KK4941	KK4942		
Sampling Date		2014/07/19	2014/07/19	2014/07/19	2014/07/19		
COC Number		08396170	08396170	08396171	08396171		
	Units	**2014-CLRU-MSSA04-21**	**2014-CLRU-MSSA04-22**	**2014-CLRU-MSSA04-23**	**2014-CLRU-MSSA04-24**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	72	71	72	71	0.30	7723236
RDL = Reportable Detection Limit							

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PHYSICAL TESTING (TISSUE)

Maxxam ID		KK4943	KK4944		
Sampling Date		2014/07/19	2014/07/20		
COC Number		08396171	08396171		
	Units	**2014-CLRU-MSSA04-25**	**2014-CLRU-MSSA01-26**	**RDL**	**QC Batch**
Physical Properties					
Moisture	%	72	74	0.30	7723236
RDL = Reportable Detection Limit					

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

YUKON ZINC CORPORATION
Your P.O. #: S115826

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7693810	Total Aluminum (Al)	2014/10/28					<0.20	mg/kg	17	35		
7693810	Total Antimony (Sb)	2014/10/28					<0.0010	mg/kg	NC	35		
7693810	Total Arsenic (As)	2014/10/28	98	75 - 125	106	75 - 125	<0.010	mg/kg	NC	35	111	75 - 125
7693810	Total Barium (Ba)	2014/10/28	NC	75 - 125	102	75 - 125	<0.020	mg/kg	16	35		
7693810	Total Beryllium (Be)	2014/10/28	92	75 - 125	102	75 - 125	<0.020	mg/kg	NC	35		
7693810	Total Bismuth (Bi)	2014/10/28					<0.020	mg/kg	NC	35		
7693810	Total Boron (B)	2014/10/28					<0.40	mg/kg	NC	35		
7693810	Total Cadmium (Cd)	2014/10/28	96	75 - 125	103	75 - 125	<0.0020	mg/kg	3.5	35	94	75 - 125
7693810	Total Calcium (Ca)	2014/10/28					<2.0	mg/kg	22	35		
7693810	Total Chromium (Cr)	2014/10/28	94	75 - 125	105	75 - 125	<0.040	mg/kg	NC	35	78	75 - 125
7693810	Total Cobalt (Co)	2014/10/28	93	75 - 125	104	75 - 125	<0.0040	mg/kg	3.7	35		
7693810	Total Copper (Cu)	2014/10/28	NC	75 - 125	104	75 - 125	<0.010	mg/kg	1.3	35	94	75 - 125
7693810	Total Iron (Fe)	2014/10/28					<2.0	mg/kg	0.46	35	98	75 - 125
7693810	Total Lead (Pb)	2014/10/28	NC	75 - 125	101	75 - 125	<0.0020	mg/kg	15	35	99	75 - 125
7693810	Total Magnesium (Mg)	2014/10/28					<2.0	mg/kg	6.4	35		
7693810	Total Manganese (Mn)	2014/10/28	NC	75 - 125	101	75 - 125	<0.020	mg/kg	17	35	93	75 - 125
7693810	Total Mercury (Hg)	2014/10/28	NC	75 - 125	107	75 - 125	<0.0020	mg/kg	25	35	92	75 - 125
7693810	Total Molybdenum (Mo)	2014/10/28					<0.010	mg/kg	2.3	35	94	75 - 125
7693810	Total Nickel (Ni)	2014/10/28	94	75 - 125	105	75 - 125	<0.010	mg/kg	1.2	35	95	75 - 125
7693810	Total Phosphorus (P)	2014/10/28					<2.0	mg/kg	10	35		
7693810	Total Potassium (K)	2014/10/28					2.6, RDL=2.0	mg/kg	7.8	35		
7693810	Total Selenium (Se)	2014/10/28	106	75 - 125	111	75 - 125	<0.010	mg/kg	15	35	94	75 - 125
7693810	Total Silver (Ag)	2014/10/28	106	75 - 125	96	75 - 125	<0.0040	mg/kg	NC	35		
7693810	Total Sodium (Na)	2014/10/28					<2.0	mg/kg	10	35		
7693810	Total Strontium (Sr)	2014/10/28	NC	75 - 125	103	75 - 125	<0.020	mg/kg	19	35	96	75 - 125
7693810	Total Thallium (Tl)	2014/10/28	95	75 - 125	107	75 - 125	<0.00040	mg/kg	12	35		
7693810	Total Tin (Sn)	2014/10/28					<0.020	mg/kg	NC	35		
7693810	Total Titanium (Ti)	2014/10/28					<0.20	mg/kg	25	35		
7693810	Total Uranium (U)	2014/10/28	95	75 - 125	100	75 - 125	<0.00040	mg/kg	NC	35		
7693810	Total Vanadium (V)	2014/10/28	99	75 - 125	101	75 - 125	<0.040	mg/kg	NC	35	98	75 - 125
7693810	Total Zinc (Zn)	2014/10/28	NC	75 - 125	103	75 - 125	<0.040	mg/kg	6.1	35	96	75 - 125
7723236	Moisture	2014/11/19					<0.30	%	2.1	20		

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Report Date: 2014/11/20

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Your P.O. #: S115826

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits	% Recovery	QC Limits
7723250	Moisture	2014/11/19					<0.30	%	1.8	20		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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Your P.O. #: S115826

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Rob Reinert, Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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08396170

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CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

PAGE 1 OF 2

LAB USE ONLY: MAXXAM JOB #: B473752

ANALYSIS REQUEST

LAB USE ONLY: COC #

COMPANY NAME: Yukon Zinc Corporation

CLIENT PROJECT NO.:

COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8

TEL.: 604-682-5474

E-MAIL: YZC Group

FAX: 604-682-5404

SAMPLER NAME (PRINT): TP, CJ, AK, and RM

PROJECT MANAGER: Robin McCall

LABORATORY CONTACT: Grahm Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	% moisture	metals, low level (whole body)
1	2014-CLRU-MSSA01-01	KK4918					X	19/07/2014		1	X	X
2	2014-CLRU-MSSA01-02	KK4919					X	19/07/2014		1	X	X
3	2014-CLRU-MSSA01-03	KK4920					X	19/07/2014		1	X	X
4	2014-CLRU-MSSA01-04	KK4921					X	19/07/2014		1	X	X
5	2014-CLRU-MSSA06-09	KK4922					X	19/07/2014		1	X	X
6	2014-CLRU-MSSA06-10	KK4923					X	19/07/2014		1	X	X
7	2014-CLRU-MSSA06-11	KK4924					X	19/07/2014		1	X	X
8	2014-CLRU-MSSA06-12	KK4925					X	19/07/2014		1	X	X
9	2014-CLRU-MSSA06-14	KK4926					X	19/07/2014		1	X	X
10	2014-CLRU-MSSA06-15	KK4927					X	19/07/2014		1	X	X
11	2014-CLRU-MSSA06-16	KK4928					X	19/07/2014		1	X	X
12	2014-CLRU-MSSA06-17	KK4929					X	19/07/2014		1	X	X
13	2014-CLRU-MSSA06-18	KK4930					X	19/07/2014		1	X	X
14	2014-CLRU-MSSA04-19	KK4931					X	19/07/2014		1	X	X
15	2014-CLRU-MSSA04-20	KK4932					X	19/07/2014		1	X	X
16	2014-CLRU-MSSA04-21	KK4933					X	19/07/2014		1	X	X
17	2014-CLRU-MSSA04-22	KK4934					X	19/07/2014		1	X	X

B473752

TAT (Turnaround Time)

LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL

* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS

PO NUMBER OR QUOTE NUMBER: S115826

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

CCME: CSR: AB TIER 1: OTHER:

JARS USED:

LAB USE ONLY: ARRIVAL TEMPERATURE °C: 11, 11, 13 CS:NA; DUE DATE:; LOG IN CHECK:

	DATE: DD/MM/YY	TIME:	RECEIVED BY:
RELINQUISHED BY SAMPLER: Robin McCall	21/08/2014	7:30	
RELINQUISHED BY:			RECEIVED BY:
RELINQUISHED BY:			RECEIVED BY LABORATORY: Laurel Berthier 2014/08/22 08:40

CUSTODY RECORD

CDGFORM - BC - 2007/Mar

08396171

Maxxam Analytics Inc

6 Canada Way
naby, BC V5G 1K5
w.maxxam.ca

Phone: (604) 734- 7276
Fax.: (604) 630-0110
Toll-Free: 1-800-665-8566

CHAIN-OF CUSTODY RECORD AND ANALYSIS REQUEST

PAGE 2 OF 2

LAB USE ONLY: MAXXAM JOB # B473752

ANALYSIS REQUEST

LAB USE ONLY: COC #

LAB USE ONLY

COMPANY NAME: Yukon Zinc Corporation

CLIENT PROJECT NO.:

COMPANY ADDRESS: #410-700 West Pender, Vancouver, BC, V6C 1G8

TEL.: 604-682-5474

E-MAIL: YZC Group

FAX: 604-682-5404

SAMPLER NAME (PRINT): TP, CJ, AK, and RM

PROJECT MANAGER: Robin McCall

LABORATORY CONTACT: Grahm Rudkin

	FIELD SAMPLE ID	MAXXAM LAB # (LAB USE ONLY)	MATRIX: GROUNDWATER	SURFACE WATER	DRINKING WATER	SOIL	OTHER	SAMPLING: DATE DD/MM/YY	TIME	# CONTAINERS	% moisture	metals, low level (whole body)
1	2014-CLRU-MSSA04-23	XX4941					X	19/07/2014		1	X	X
2	2014-CLRU-MSSA04-24	XX4942					X	19/07/2014		1	X	X
3	2014-CLRU-MSSA04-25	XX4943					X	19/07/2014		1	X	X
4	2014-CLRU-MSSA01-26	XX4944					X	20/07/2014		1	X	X
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												

B473752

TAT (Turnaround Time)

LESS THAN 5 DAY TAT MUST HAVE PRIOR APPROVAL

* Some exceptions apply - please contact laboratory

STANDARD	5 BUSINESS DAYS	X
RUSH	3 BUSINESS DAYS	
RUSH	2 BUSINESS DAYS	
URGENT	1 BUSINESS DAY	

OTHER BUSINESS DAYS _____

PO NUMBER OR QUOTE NUMBER: S115826

SPECIAL DETECTION LIMITS / CONTAMINANT TYPE:

ACCOUNTING CONTACT:

SPECIAL REPORTING OR BILLING INSTRUCTIONS:

CCME / CSR / AB TIER 1 / OTHER

JARS USED:

LAB USE ONLY: ARRIVAL TEMPERATURE °C: 11,11,13 CS.NA; DUE DATE: ; LOG IN CHECK:

RELINQUINSHED BY SAMPLER: Robin McCall	DATE: DD/MM/YY 21/08/2014	TIME: 7:30	RECEIVED BY:
RELINQUINSHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY:
RELINQUINSHED BY:	DATE: DD/MM/YY	TIME:	RECEIVED BY FOR LABORATORY: Laurel Berthier 2014/08/22 08:40

CUSTODY RECORD

COCFORM - BC - 20070422

Appendix H

Wildlife Research Permit

Yukon
Environment
Environnement

WILDLIFE RESEARCH PERMIT

SUBJECT TO THE PROVISIONS OF THE *WILDLIFE ACT* AND REGULATIONS:

PERMIS DE RECHERCHE SUR LA FAUNE

SOUS RÉSERVE DES DISPOSITIONS DE LA* LOI SUR LA FAUNE *ET DE SES RÈGLEMENTS D'APPLICATION

WRP #122

0	0	1

Vendor number
N° de distributeur/distributrice

Last name • *Nom de famille*	First name and initials • *Prénom usuel et autres prénoms*
McCall, Robin et al	(Yukon Zinc Corp/Wolverine Mine)
Mailing address • *Adresse postale*	
PO Box 57	
Town, city • *Ville, village*	Postal code • *Code postal*
Whitehorse, Yukon	Y1A 5X9

Issue Date
Date de délivrance

1	4	0	4	2	3
Year • *Année*		Month • *Mois*		Day • *Jour*	

Phone/message number • *N° de téléphone*
604-638-0921 Ext. 5022

is hereby authorized to engage in wildlife research respecting
est par les présentes autorisé(e) à effectuer des recherches sur la faune répondant aux particularités suivantes :

Trap and Collect small mammals as per the application submitted to Dept. of Environment on Feb. 6, 2014
species • *espèce*

in Finlayson District of southeast Yukon (Mine Site, Putt Creek and Money Creek Study areas)
location • *endroit*

from / ***à partir du*** 14 / 07 / 01 (Year *Année* / Month *Mois* / Day *Jour*)

to / ***jusqu'au*** **(Expiry date)** ***(Date d'expiration)*** 14 / 07 / 31 (Year *Année* / Month *Mois* / Day *Jour*)

CONDITIONS OF PERMIT
CONDITIONS ASSOCIÉES AU PERMIS conditions as attached

SIGNATURE OF PERMITTEE
SIGNATURE DU/DE LA TITULAIRE

ISSUING OFFICER
SIGNATURE DE LA PERSONNE CHARGÉE LA DÉLIVRANCE

Personal information contained on this form is collected under the *Wildlife Act* and associated Regulations and will be used by the Department of Environment for research, statistical and enforcement purposes. For further information, contact the Department of Environment at (867)667-5652 or 1-800-661-0408 within the Yukon.

Les renseignements personnels contenus dans le présent formulaire sont recueillis en vertu de la Loi sur la faune *et des règlements d'application, et ils seront utilisés par le ministère de l'Environnement à des fins de recherche, de compilation de statistiques et d'exécution de la Loi. Pour obtenir de plus amples renseignements, communiquez avec le ministère de l'Environnement, au (867) 667-5652 ou au 1-800-661-0408 (à l'intérieur du Yukon).*

YG(2405)NC3 02/2003

Distribution 1—Permittee • *Titulaire du permis* 2—Whitehorse Office • *Bureau de Whitehorse* 3—Leave in book • À conserver *dans le carnet*

Conditions for Wildlife Research Permit #WRP #122 issued April 23, 2014

1. This permit authorizes wildlife research in the form of trapping wildlife to be conducted using the methods described in the application for a Wildlife Research Permit provided by Robin McCall of Yukon Zinc Corp. / Wolverine Mine, within the study areas as identified on the map attached to application.

2. Permit holder must have obtained Yukon Scientists and Explores Act Licence.

3. Trapping activity must occur beyond one kilometre of any residence unless prior written consent from the property owner is obtained by the permittee.

4. Permit holder must carry the permit with them and produce it upon request of a Conservation Officer.

5. Trapping methods authorized are Pitfall and Museum Special Snap traps.

6. A maximum of **ten** individuals of the following species may be collected:

   Arctic Ground Squirrel (Spermophilus parryii)
   Red Squirrel (Tamiasciurus hudsonicus)
   Muskrat (Ondata zibethicus)

7. A maximum of fifty individuals of the following species may be collected:

   Least Chipmunk (Eutamias minimum)
   Meadow Jumping Mouse (Zapus husonius)
   Deer Mouse (Peromyscus maniculatus)
   Red-Backed Vole (Clethrionomys rutilus)
   Heather Vole (Phenacomys intermedius)
   Meadow Vole (Microtus pennsylvanicus)
   Long-Tailed Vole (M. longicaudus)
   Siberian Lemming (Lemmus sibiricus helvolus)
   Shrew (Sorex sp.)

.../2

8. Any accidental capture of non-target species must be reported to a Conservation Officer within 48 hours.

9. This permit is not valid on private property or First Nation settlement lands.

10. Permit holder must provide a report disclosing the results of the research, including trapping methods, observations and conclusions. Report must include raw data recorded in a spreadsheet (e.g.: wildlife numbers, composition, comments on habitat for each location that is included in the data)

11. Report must be provided to the Manager, Enforcement and Compliance, Environment Yukon upon completion of the research, or within 90 days of the expiry of the permit, whichever comes first.

12. This permit does not authorize any harassment of wildlife and does not authorize the holder to do any act prohibited under the Wildlife Act or Regulation.

13. An export permit must be obtained for all wildlife being exported from Yukon.

14. Failure to comply with the conditions of this permit, including failure to provide the required report constitutes an offence under the Wildlife Act.

15. Permit holder to contact Ryan Hennings, Conservation Officer Services, at 867-667-5786 prior to commencement of trapping.

16. This permit is not transferable.

Report is to be submitted to:

Manager, Enforcement and Compliance
Environment Yukon
Box 2703-V-18
Whitehorse, Yukon
Y1A 2C6
Ryan.Hennings@gov.yk.ca