



**ALEXCO RESOURCE CORP.**

*Brewery Creek Mine*

## **2007 ANNUAL WATER LICENSE REPORT**

Water Use License QZ96-007

## **2007 ANNUAL QUARTZ MINING LICENSE REPORT**

Yukon Quartz Mining License A99-001



**February 2008**





# ALEXCO RESOURCE CORP.

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### 2007 ANNUAL WATER LICENSE REPORT

Submitted to the Yukon Territory Water Board

Water Use License QZ96-007

### 2007 ANNUAL QUARTZ MINING LICENSE REPORT

Submitted to Yukon Government Energy Mines and Resources

Yukon Quartz Mining License A99-001

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**February 2008**



## **Executive Summary**

The Brewery Creek Mine, owned and operated by Alexco Resource Corp., is located in central Yukon approximately 55 kilometres east of Dawson City. The mine operates under Class 'A' Water Use License QZ96-007, originally issued as QZ94-003 in August 1995 and under Yukon Quartz Mining License A99-001 issued in 1999.

This report summarizes 2007 monitoring data and activities relevant to both the Water Use and Quartz Mining Licenses.

During 2007 no mining operations were conducted. The heap leach pad was detoxified in 2002 and drained down in 2003. Throughout 2007, all assays for Total cyanide remained below 2.0 mg/l.

During 2007, maintenance seeding and fertilization was completed on approximately 28.5 hectares.

The large scale lysimeter constructed in the Blue WRSA was monitored for chemistry and infiltration during 2007.

From May – June 2007, 24,240 m<sup>3</sup> of treated process solution was directly released into the Laura Creek watershed. No land application of solution occurred in 2007. Approximately 9,624 m<sup>3</sup> of fresh water from the surface of the heap and surrounding catchment was released as it was captured in the preg pond.

Whenever flow and climatic conditions permitted, all monitoring required under QZ96-007 was carried out.

There was no surface discharge of accumulated waters from any of the 6 pits (Pacific, Blue, Moosehead, Kokanee, South Golden and Lucky). All water in the pits either evaporates or infiltrates into the ground.

Benthic monitoring was conducted by Laberge Environmental Services in conjunction with third quarter surface water sampling and annual sediment sampling.

A revegetation assessment was completed by Laberge Environmental Services in August 2007.

SRK Consulting completed an independent analysis of the reclamation activities and remaining liabilities in August 2007 and there report is attached and similar to 2006 the report serves as the annual geotechnical inspection and reclamation status report.

No recordable spills occurred in 2007.



## Table of Contents

	Page
<b>1 INTRODUCTION .....</b>	<b>7</b>
<b>2 2007 OVERVIEW OF ACTIVITIES .....</b>	<b>7</b>
<b>3 WATER USE .....</b>	<b>10</b>
<b>4 MONITORING .....</b>	<b>10</b>
4.1 CLIMATE.....	10
4.1.1 Temperature .....	10
4.1.2 Precipitation.....	10
4.2 WATER QUALITY AND HYDROLOGY.....	11
4.2.1 Water Quality Monitoring .....	11
4.2.2 Surface Water Quality Results.....	15
4.2.3 Groundwater Quality Results.....	16
4.2.4 In-Pit Monitoring Stations Water Quality Results .....	16
4.2.5 Monitoring Conformance .....	17
4.2.6 Hydrology.....	18
4.3 BENTHIC MONITORING .....	19
4.4 SEDIMENT MONITORING .....	19
4.5 REVEGETATION MONITORING.....	19
4.6 LEAK DETECTION AND RECOVERY SYSTEMS.....	19
4.7 AIR QUALITY.....	19
4.8 EFFECTS ON WILDLIFE.....	20
4.8.1 Process-Related Mortalities .....	20
4.9 RECLAMATION ACTIVITIES REPORT .....	20
<b>5 REAGENT AND WASTE MANAGEMENT .....</b>	<b>21</b>
5.1 SPILL OCCURRENCE AND RESPONSE.....	21
5.2 REAGENT STORAGE AND HANDLING .....	21
<b>6 WATER MANAGEMENT.....</b>	<b>23</b>
6.1 DIRECT RELEASE .....	23

6.2 SELENIUM CRITERIA ..... 24  
6.3 HEAP COVER INFILTRATION ..... 25  
6.4 BLUE WRSA LYSIMETER ..... 28



## List of Tables

	Page
Table 4.1 2007 Compliance Water Quality Sampling	12
Table 4.2 2007 Reclamation Summary	21
Table 5.1 Storage of Major Reagents During 2007	22
Table 6.1 Solution Release 2007	24
Table 6.2 Heap Infiltration Water Balance	26
Table 6.2 Heap Infiltration Water Balance	27
Figure 6.1 Blue WRSA Lysimeter Performance	29
Figure 6.2 Blue WRSA Lysimeter Performance	30

## APPENDICES

### Appendix A: Climate

- A-1 2007 Summary (table & figure)
- A-2 2007 Climate Data by Month

### Appendix B: Water Quality

- Station Descriptions & Coordinates
- Monitoring Schedule
- Water Quality Results: Surface Water, In-Pit and Groundwater
- 1991-2007 SW Historical Comparison of TSS – Graphs
- 1991-2007 SW Historical Comparison of Nitrate – Graphs
- 1991-2007 SW Historical Comparison of Ammonia – Graphs
- 1991-2007 SW Historical Comparison of Metals – Graphs
- 1991-2007 SW Historical Comparison of Ammonia – Graphs
- 1991-2007 GW Historical Comparison for Metals (BC28a, BC19, BC21 and BC27)

### Appendix C Hydrology

- 2007 Hydrology Data

### Appendix D Benthic Monitoring Report

### Appendix E Stream Sediment Quality

- E-1 Stream Sediment Analysis: Metals
- E-2 Stream Sediment Analysis: Grain Size Distribution
- E-3 1991-2007 Historical Comparison

### Appendix F SRK Liability Estimate, Reclamation Assessment and Geotechnical Report

### Appendix G Reclamation Pictures

### Appendix H Soil Survey Report

### Appendix I Revegetation and Metals Uptake Assessment Report

### Appendix J Bio-Assay Reports

## **1 INTRODUCTION**

Brewery Creek Mine, owned and operated by Alexco Resource Corp., is located in central Yukon approximately 55 kilometers east of Dawson City. The mine is a conventional open pit heap leach operation that operated continuously from 1996 – 2001. The mine was permanently shut down in 2002. With the exception of some remaining site facilities, the mine has been fully reclaimed.

The mine operates under Class 'A' Water Use License QZ96-007, originally issued as QZ94-003 in August 1995 and under Quartz Mining License A99-001 issued in June 1999.

This report summarizes 2007 monitoring data and activities relevant to the Water Use and Quartz Mining Licenses.

## **2 2007 OVERVIEW OF ACTIVITIES**

The following tasks and activities were completed in 2007:

### ***January 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Weekly site visits for security and wildlife protection were conducted on a weekly basis during the month.
- No other site activity was completed.

### ***February 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Weekly site visits for security and wildlife protection were conducted on a weekly basis during the month.
- No other site activity was completed.

### ***March 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.

- March sampling included quarterly monitoring.
- Weekly site visits for security and wildlife protection were conducted on a weekly basis during the month.
- Removed exploration core shack building offsite.

#### ***April 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Twice weekly site visits began in preparation for spring freshet.
- No other site activity was completed.

#### ***May 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Fresh water that was collected in the preg pond as the result of surface runoff during the spring freshet was released by siphoning from the pond.
- Discharge of heap effluent collected in the overflow pond was released during the month.
- Began erosion control, maintenance seeding and fertilizing across several areas of the property (began 3rd week of May)
- Final cleanup of old valve houses (sold to locals) and organization of core racks.
- Began discharging compliant water on May 22<sup>nd</sup>.

#### ***June 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Release of compliance process solution continued during the month and was subsequently shutdown on June 21<sup>st</sup> due to reaching the maximum allowable volume of 25,000 m<sup>3</sup>.
- Continued and finished erosion repair and seeding and fertilizing.

### ***July 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Site visits continued 3-4 days per week by the local site manager.

### ***August 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- An inspection was completed by SRK Consulting and SteveJan Consultants Inc. for the purposes of determining the remaining closure liability as well as the SRK report serving as the annual geotechnical inspection.

### ***September 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Sediment sampling was completed as part of the quarterly sampling.

### ***October 2006***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Site presence resumed back to weekly checks for security and wildlife protection.
- No other site activity was completed.

### ***November 2007***

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Weekly site visits for security and wildlife protection were conducted on a weekly basis during the month.
- No other site activity was completed.

## **December 2007**

- Routine water quality monitoring was completed per the sites and conditions under Water License QZ96-007 and Quartz Mining License A99-001.
- Weekly site visits for security and wildlife protection were conducted on a weekly basis during the month.
- No other site activity was completed.

### **3 WATER USE**

In 2007, no water was withdrawn from Laura Creek or BC-23.

### **4 MONITORING**

#### **4.1 Climate**

Temperatures that are variable and extreme, with warm summers and prolonged extreme cold spells in winter characterize climate at the Brewery Creek Mine site. Typical of northern interior regions, most precipitation occurs as summer rain.

The 2007 climate monitoring data is summarized in Appendix A-1. 2007 climate data was collected manually during the period from January through December.

##### **4.1.1 Temperature**

June was the warmest month of the year with a recorded high of 29.9°C. February was the coldest month with a recorded minimum temperature of -42.0°C. 2007 monthly climate data is presented in Appendix A-2.

Brewery Creek data, collected since 1991, is summarized in Appendix A-3 (table and graph).

##### **4.1.2 Precipitation**

Total 2007 precipitation measured at the mine site was 295 mm (see Appendix A-1). 2007 was below the long-term average precipitation at Brewery Creek of 329 mm.

## 4.2 **Water Quality and Hydrology**

### 4.2.1 **Water Quality Monitoring**

Water quality sampling was performed as required by Schedule B of Water License QZ96-007. Appendix B-1 presents a monthly summary of compliance sampling, and Table 4.1 a tabulation of samples obtained.

Table 4.1 2007 Compliance Water Quality Sampling

	Surface Water	Ground water	In-Pit	Solution Discharge	Heap Effluent	Land Application Lysimeters
Number of Samples in 2007	80	33	20	1	12	0

Components and procedures of the Brewery Creek Mine (BCM) water quality sampling program are summarized below.

**Water Quality Laboratories:**

Norwest Labs

Burnaby, BC

The Norwest Labs Certificate of Accreditation is attached.

**Sampling Equipment:**

**Bottles:** Bottles are supplied by the principal laboratory, arrive on site in coolers, and are stored in coolers. A running inventory of approximately 50 (1L) CN, 50 (1L) standard analytical, and 50 (250 ml) metals sample bottles are maintained on open shelves in the administration building warehouse.

**Gloves:** Sampling gloves are often used when taking surface water samples. Either neoprene, or rubber panner’s gloves are used.

**Groundwater Bailers:** Single Sample™ disposable polyethylene bailers, 0.75” to 1.5” diameter are used.

**Sampling Procedure:**

*Surface Water Sampling:*

Both the outside of cyanide sampling bottle, and the sampling glove, are rinsed prior to opening the sample bottle. The bottle is opened; care is taken to not touch bottle rim or inside of cap. If stream depth permits, bottle is submerged with top facing upstream and allowed to fill. For shallower sites, the bottle is only partially submerged. Non-cyanide bottles and cap are rinsed twice with water from



the sampling site. Rinse water is discarded downstream. Cyanide bottles are not rinsed prior to filling. The bottle is filled and tightly capped. Prior to capping total metals sample, a nitric acid preservative (supplied by the principal analysis lab) is added to the bottle.

#### *Groundwater Sampling, Using Bailers:*

The sample bottle is opened, and care is taken to not touch bottle rim or inside of cap. The bailer is emptied through the top of the bailer, into the bottle. Non-cyanide bottles and cap are rinsed twice with water from the sampling site. Rinse water is discarded on the ground. Cyanide bottles are not rinsed prior to filling. The bottle is filled, and cap is placed tightly on bottle.

Dissolved metals samples are filtered in the field using a disposable filter apparatus. The filter apparatus is attached to a sterile collection bottle. Once filtered, a nitric acid preservative is added to the filtrate, and the cap is placed tightly on the bottle.

Occasionally the principal analysis lab performs the filtering and preserving of dissolved metals samples.

Dissolved metals samples are either filtered in the field using a disposable filter apparatus or filtered at the onsite mine environmental laboratory. The filter apparatus is attached to a sterile collection bottle. Once filtered, a nitric acid preservative is added to the filtrate, and the cap is placed tightly on the bottle.

#### **Sample Labeling:**

Sample bottles are labeled with the sample location, site name, date sampled, company name and parameters to be analyzed for.

#### **Sample Storage:**

Samples are stored in coolers until shipping. For the quarterly sampling events, which take multiple days, these coolers are kept indoors to prevent samples from freezing during the winter months and on ice to prevent temperature increases in the summer months.

#### **Sample Shipping:**

Surface and groundwater compliance samples are shipped either the day of, or the day following sampling. Samples are placed in coolers with one or more refrigeration packs, and shipped via courier, or with the samplers when they return to Whitehorse, and airfreight to Vancouver. The coolers are delivered to the principal laboratory.

# CERTIFICATE OF ACCREDITATION

Standards Council of Canada  
Conseil canadien des normes



# CERTIFICAT D'ACCREDITATION

## BODYCOTE TESTING GROUP (SURREY)

#104-19575-55A Avenue, Surrey, British Columbia

having been assessed by the Standards Council of Canada (SCC) and found to conform with the requirements of ISO/IEC 17025:2005 (CAN-P-4E) and the conditions for accreditation established by SCC is hereby recognized as an

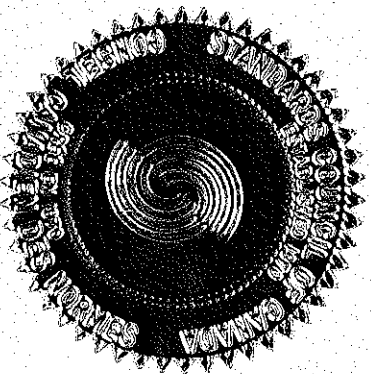
### ACCREDITED TESTING LABORATORY

for the specific tests or types of tests listed in the scope of accreditation approved by SCC and found on the SCC website at [www.scc.ca](http://www.scc.ca).

avant fait l'objet d'une évaluation réalisée par le Conseil canadien des normes (CCN) et été jugé conforme aux exigences énoncées dans ISO/CEI 17025:2005 (CAN-P-4E) et aux conditions liées à l'accréditation établies par le CCN, est, en vertu du présent certificat, reconnu comme étant un

### LABORATOIRE D'ESSAIS ACCRÉDITÉ

pour les essais ou types d'essais énumérés dans la portée d'accréditation approuvée par le CCN et figurant dans le site Web du CCN à [www.ccn.ca](http://www.ccn.ca).



This accreditation is the formal recognition of the technical competence of the laboratory, for the approved scope. In addition, this laboratory has demonstrated that they operate a quality management system (refer to the SCC website for the joint ISO/IEC:AF Communiqué dated 2005-06-18).

Cette accréditation est la reconnaissance officielle de la compétence technique du laboratoire pour la portée d'accréditation approuvée. Ce laboratoire a également prouvé qu'il gère un système de management de la qualité (voir le site Web du CCN pour le communiqué commun ISO/IEC:AF date du 18 juin 2005).

Chairman (SCC) / Président (CCN)

Accredited Laboratory No.: / Numéro de laboratoire accrédité : 188

Accreditation date: / Date d'accréditation : 1995-03-06

Issued on: / Délivré le : 2007-03-05

Expiry date: / Date d'expiration : 2009-03-06

#### 4.2.2 Surface Water Quality Results

Locations and descriptions of surface water quality stations are given in Appendix B. 2007 surface water quality results are tabulated by station. Certain key parameters including total suspended solids (TSS), nitrogen species (ammonia), and selected metals are graphically compared to historical data. A major forest fire came through the Brewery Creek Mine in 2004 and most notably burned extremely hot through the Laura Creek watershed. The sampling results for total suspended solids (TSS) are evidence of the influence of the forest fires on water quality in the Laura Creek stations in 2005. TSS at stations BC-1, 2 and 3 are all elevated over historic levels. TSS at BC-1 during 2007 show an overall reduction from 2005 and 2006 but remain elevated from previous years, before the fire occurred. This indicates that natural recovery is occurring from the fire damaged areas but release of sediments is still occurring from this natural event. TSS at station BC-2 was significantly higher in 2007 than historic levels and BC-3 was similar to BC-1 where the TSS was elevated but lower than the previous 2 years. Station BC-04 was elevated over the last 2 years but was lower than historic levels.

Ammonia levels at stations BC-1, 2 and 3 continued a downtrend from 2005 levels. Most all stations showed an increase in ammonia in 2005 from previous years, including background stations such as BC-6. This increase is attributed to the 2005 forest fire, similar to the increases in TSS. The same trend is appearing at stations BC-4 and 5 which are in the Lee Creek drainage. This suggests that the short term impact from the forest fire has been naturally remediated and conditions are returning to previous levels before the fire.

Arsenic and zinc concentrations at stations BC-1, 2 and 3 are similar to levels experienced in the past several years. No significant trends either up or down appear in any of the stations for the parameters arsenic and zinc. Occasional spikes occur at various stations but these are not associated with any trends.

Copper and lead levels at most stations are within historic levels and there is evidence that past spikes have diminished. Station BC-31 showed a large spike in lead in the Q4 sample but it does not appear to be related to any other stations or trends.

Selenium levels at stations BC-1, 2 and 3 show consistent trends from previous years. There were higher spikes of selenium at BC-2 in 2007 but they are lower than other historic selenium spikes at this station. Selenium at station BC-39 continues to be below the site specific criteria established (3.8 ug/l) for that station. The average selenium concentration at BC-39 during the year was 1.9 ug/l. The highest selenium value reported at station BC-39 in 2007 was 3.8 ug/l in, sampled in June 2007.

#### 4.2.3 Groundwater Quality Results

Locations and descriptions of groundwater quality stations are given in Appendix B. Water quality sampling from the groundwater stations is required on a quarterly basis as per the Water License. There are 7 groundwater piezometers and 1 deep groundwater well (BC-23) located downgradient of the leach pad. All of the stations are sampled on a quarterly basis but some of these stations continue to be dry and no sample is obtained. This is recorded in the sampling results in Appendix B. Station BC-20 contains frozen water on year round basis. This station historically collected water but it became permanently frozen a few years ago. Attempts are made each quarter to collect a sample and the condition is continuously noted. Antimony, arsenic and cadmium levels at BC-19 showed no increasing trends in 2006. Copper levels at BC-19 appear to have decreased in 2007 from the previous increasing trend exhibited in 2005 and 2006. Nickel showed an increase at BC-19 compared to previous years but lower than historic highs. Other parameters of note including mercury, silver, lead, iron, zinc and selenium continue to show no trends in BC-19.

Antimony, arsenic and cadmium levels at BC-21 showed no increasing trends in 2007 and are comparable to previous years. Copper levels at BC-21 exhibited a decrease in the previous trend of increasing values seen in 2005 and 2006. Other parameters of note including mercury, nickel, silver, lead, iron, zinc and selenium continue to show no trends of increasing levels in BC-21.

Arsenic at station BC-27 (Golden) showed increased levels similar to 2005 and 2006. The previous trend of increasing Other parameters at BC-27 such as antimony, cadmium, copper, silver, lead and selenium exhibit the same or a decreasing trend from previous years.

#### 4.2.4 In-Pit Monitoring Stations Water Quality Results

There was no mining activity in 2007 and mined out pits were used effectively as sediment control basins. Snow melt and precipitation run-off was directed to the closest inactive pit. Samples from all pits were taken from surface standing water within each pit.

In-pit samples were taken from the west end of Pacific Pit (BC-51), Blue (BC-12), Moosehead Pit (BC-15), Kokanee Phase 3 (BC-10), South Golden Pit (BC-17), and Lucky (BC-18).

Samples collected from the Kokanee Phase 3 and Golden pits (BC-10 and BC-17 respectively), show no abnormal values. Pacific Pit (BC-51) showed a lower pH and ranged from 3.1 – 3.6 during the sampling periods, this is similar to levels in 2006. High aluminum levels were associated with the lower pH during the same sampling periods. These lower pH levels for the Pacific Pit are consistent with previous years. PH values in the Blue Pit (BC-12) ranged from 4.3 – 6.0 throughout the 12

month sampling period. Increased levels of aluminum and iron were observed. These pH values are consistent with historic levels in the Blue Pit. Neither the Pacific or Blue Pits discharges to surface and all water infiltrates through the pit bottom. Previous years sampling in Moosehead showed higher levels of selenium. This trend appears to have reversed and selenium levels in Moosehead during 2007 continued to be below 0.05 mg/l. As is the case for all other pits, the water is contained in the pit and either exfiltrates or evaporates. The Lucky Pit (station BC-18) has generally been dry during the scheduled quarterly sampling events and this continued in 2007 where no water was found during any of the sampling events. Overall, the results of the pit water sampling indicates no trends or changes from previous years.

#### 4.2.5 Monitoring Conformance

Throughout the year certain monitoring stations or frequencies were not sampled due to various reasons. The following summarizes stations, frequencies or parameters that were not achieved in 2007:

BC-1: Flow measurements were not recorded during the winter months due to very low or no water and significant ice and glacial cover.

BC-2: Flow measurements were not recorded during the winter months due to very low or no water and significant ice and glacial cover.

BC-3: Flow measurements were not recorded during the winter months due to very low or no water and significant ice and glacial cover.

BC-4: Flow measurements were not recorded during the winter months due to significant ice and glacial cover.

BC-5: Flow measurements were not recorded during the winter months due to significant ice and glacial cover.

BC-6: Flow measurements were not recorded during the winter months due to significant ice cover. Flow measurements were not recorded in the open water season because of safety concerns with personnel entering this large fast moving water body during open water season.

BC-9: This in pit station is Fosters Pit and has not had any water for several years and this continued in 2007 and no samples were collected.

BC-11: This station is an intermittent seep at the toe of the Blue WRSA and there was no visible flow during the scheduled quarterly monitoring periods. No samples were collected here during the 2007 monitoring period as no water was ever found.

BC-13: This station is the Moosehead West Waste Dump and no longer exists and there is no visible flow to monitor.

BC-14: This station is the Moosehead East Waste Dump and no longer exists and there is no visible flow to monitor.

BC-16: This station is an intermittent surface flow below the Pacific Pit. No samples were collected here during the 2007 monitoring period as no water was ever found.

BC-18: This station is water in the Lucky Pit. It is generally dry and no sample can be obtained. During the 2007 monitoring year this location was dry during each of the four quarterly sampling periods.

BC-20: This station is a piezometer below the leach pad and similar to previous years no water is found in this piezometer.

BC-23: This station is a deep well below the process area. The pump installed in BC-23 stopped functioning in 2004. An attempt was made to remove the pump and discharge pipe using the company's crane. During this exercise, the discharge pipe broke approximately 20 feet below the casing elevation. Further attempts to remove the pipe and pump have not been successful. Consequently there are no samples reported for BC-23.

BC-24: This station is a piezometer below the leach pad and similar to previous years no water is found in this piezometer.

BC-25: This station is a piezometer below the leach pad and similar to previous years no water is found in this piezometer.

BC-26: This station is a piezometer below the leach pad and similar to previous years no water is found in this piezometer.

#### 4.2.6 Hydrology

Stream flow measurements for Laura Creek, Carolyn Creek, Lucky Creek, Lee Creek, and Pacific Creek stations were measured in 2007. All data are presented in Appendix C-1. Flowrates at the pumphouse station are included in Appendix C. The monthly flows for each of the monitoring stations are presented in Appendix B in the top column of the water quality analysis summary for each station. Tabular forms of flow are presented for BC-3 on a daily basis. This is daily data is used in conjunction with overflow pond dewatering rates. Heap solution discharge rates are regulated by measured flows at the pumphouse station.

#### 4.3 **Benthic Monitoring**

As specified in Part F, Clause 45, of Water License QZ96-007 benthic monitoring is required on a bi-annual basis. Benthic monitoring was completed by Laberge Environmental Services in August 2007 along with the third quarterly sampling event. Results are included in Appendix E.

#### 4.4 **Sediment Monitoring**

Annual stream sediment sampling was conducted in August 2007 along with the third quarterly sampling event and the bi-annual benthic monitoring. Sediment samples were collected from within the active channel of the streams, using an aluminum scoop. The samples were dried and screened using stainless steel sieves at ASTM mesh number 10, 20, 40, 60, 100, 140 and 270. Fraction weights were recorded. A minus 100-mesh sub-sample was analyzed for 33-element ultratrace ICP at Norwest Labs, Surrey British Columbia. Loss-on-ignition (LOI) was determined by heating the sample to 600°C. Results are tabulated in Appendix D.

Some obvious and notable decreasing trends are exhibited across a number of stations. Many parameters show levels have decreased back to pre mining conditions and baseline conditions. Arsenic, antimony and mercury are some of the best indicators and examples of decreasing metals in sediments over the past 8 years since mining ceased and the last 5 years since the major reclamation and stabilization work was completed.

#### 4.5 **Revegetation Monitoring**

A revegetation monitoring and assessment report was completed by Laberge Environmental Services in July 2007. The assessment included permanent monitoring plots and other revegetated areas across the property. The Laberge report is included in Appendix F. Conclusions and recommendations are included in the report.

#### 4.6 **Leak Detection and Recovery Systems**

Monitoring of (LDRS) systems was discontinued in 2005, consistent with long-term closure plans and the fact the heap has been fully decommissioned and drained. The leak detection piping and collection system remains intact however.

#### 4.7 **Air Quality**

No air quality monitoring for mercury emissions was conducted in 2007 due to the dismantling of the ADR facility in 2004 and the cessation of refining. No further air quality monitoring is anticipated.

## 4.8 **Effects on Wildlife**

### 4.8.1 **Process-Related Mortalities**

No wildlife process – related mortalities occurred during 2007. The fence constructed in June 2006 to prevent wildlife from entering the process ponds remains functional. The fence will remain in place until the liners have been removed from the ponds.

## 4.9 **Reclamation Activities Report**

An inspection of the reclamation activities and remaining liabilities was completed by SRK Consulting (company engineer) and SteveJan Consultants (government engineer) during August 2007. This report is attached as Appendix H. The SRK report serves as the annual geotechnical report as well as a status of the reclamation progress to date.

No major earthwork activity took place in 2007 and the majority of site activity consisted of monitoring, erosion control and seeding and fertilizing at select areas across the property.

The only major reclamation activities remaining at the site include dismantling the existing warehouse and removal of the lined process ponds. Removal and final reclamation of the lined process ponds and breaching the leach pad dike cannot be completed until approval is given by regulatory authorities. Alexco has discussed the need to complete this reclamation with the regulatory agencies but to date no authorization has been granted. The warehouse building will remain in place until the ponds have been removed and the site enters a quarterly monitoring schedule and the need for more frequent site presence is no longer required.

A summary of the revegetation maintenance work completed is shown in Table 4.2



Table 4.2 2007 Reclamation Summary

Area	hectares	Description of Work
Old camp yard, exploration core shack	1.5	scarified, seeded, fertilized
Old Equipment Road above heap	1	erosion control, seeded, fertilized
West face of leach pad	1	erosion control, seeded
Moosehead haul road	3	seeded, fertilized
Blue WRSA	5	erosion control, seeded, fertilized
Blue WRSA access road to pit	.5	seeded, fertilized
Road from Kokanee pit to Golden pit	2.5	seeded, fertilized
North Golden WRSA	7.5	seeded, fertilized
Lucky WRSA	1.5	seeded, fertilized
Lucky Haul Road to Bohemian pit	5	seeded, fertilized
Total	81	

The status of the reclamation can be found in discussion in both the SRK liability report and the Laberge revegetation assessment report.

## 5 REAGENT AND WASTE MANAGEMENT

### 5.1 Spill Occurrence and Response

No reportable spills occurred in 2007.

### 5.2 Reagent Storage and Handling

The following table summarizes the remaining quantities of reagents and chemicals stored on site during 2007.

Table 5.1 Storage of Major Reagents During 2007

<b>Product</b>	<b>Quantity Used 2006/Stored at end of Year</b>	<b>Storage Location</b>	<b>Storage Method</b>
Hydrochloric Acid	6 drums stored	Adjacent to Preg Pond	238 kilo drums (45 imp. gal.)
Hydrogen Peroxide	6 drums stored	Adjacent to Preg Pond	45 imp. Gal. drums
BTC Nutrients	10,000 liter stored	Adjacent to Preg Pond	25,000 liter storage tank

## 6 WATER MANAGEMENT

### 6.1 Direct Release

A total volume of 24,240 m<sup>3</sup> of compliant process solution and 9,624 m<sup>3</sup> of fresh water heap surface runoff was directly released in 2007. No solution was land applied in 2007. Water quality analysis and sampling was conducted and solution released was compliant with the water license criteria and conditions. Bioassays were completed on the heap surface water runoff (preg pond water) and the discharge waster (BC-28). These bioassays passed and the solution was demonstrated to be non toxic. Results of the bioassays are included in Appendix J. All samples from BC-28a (heap effluent) were below 2.0 ppm total cyanide in 2007. The first sample from the heap below 2.0 ppm total cyanide was in February 2002. All samples subsequently taken have returned a total cyanide value below 2.0 ppm. This constitutes 70 consecutive months where the total cyanide from the heap has been less than 2.0 ppm. Because the lined facilities and ponds have not been removed and reclaimed, fresh water from the surface of the heap during spring freshet is directed and contained in the preg pond and is not directly released. Removal of the liner and final reclamation of the ponds cannot be completed without authorization under the company's Quartz Mining License (A99-001). The company's water license condition for process solution release is an annual limit of 25,000 m<sup>3</sup>. The 25,000 m<sup>3</sup> limit was not intended to limit the amount of fresh surface water runoff released from the heap since this is an uncontrollable quantity and directly related to annual precipitation. Since the fresh water is contained separately from the leach pad underdrain, the release of the fresh water is not counted against the 25,000 m<sup>3</sup> limit and is recorded separately. This condition will be rectified once the ponds are removed and the surface drainage re-established. A summary of the volumes by month is shown in Table 6.1. The volume of land application released solution is included.

Table 6.1 Solution Release 2007

Month	Process Solution Direct Release (m <sup>3</sup> )	Fresh Water Direct Release (m <sup>3</sup> )	Land App Release (m <sup>3</sup> )	TOTAL (m <sup>3</sup> )
January				
February				
March				
April				
May	6,060	9,624		15,684
June	18,180			18,180
July				
August				
September				
October				
November				
December				
<b>Totals 2007</b>	<b>24,240</b>			<b>33,864</b>
<b>Totals To 2002 - 2007</b>	<b>158,937</b>	<b>79,131</b>	<b>151,796</b>	<b>389,864</b>
<b>Remaining Permitted</b>	<b>na</b>	<b>na</b>	<b>248,204</b>	

## 6.2 Selenium Criteria

Water quality results for BC-39 are indicated in Appendix B. All sampling periods at BC-39 returned a selenium concentration at or below the water license criteria for site specific levels. The site specific selenium criteria for compliance at station BC-39 is 3.8 ug/l. The highest selenium measured at station BC-39 during the year was 3.8 ug/l and the lowest was 0.4 ug/l.

### 6.3 Heap Cover Infiltration

The water balance model used in all previous Brewery Creek assessments has been modified and updated to determine the estimated infiltration of precipitation through the heap cover. The model uses actual snowpack and precipitation data, pond volumes and release volumes to determine the amount of solution that infiltrates through the cover. The model results are included in Table 7.2. The model differentiates and separates surface runoff from water that infiltrates through the cover. It is anticipated that this model will be modified and calibrated as time goes on and more actual field performance of the cover is realized. The model uses the basic water balance assumption of:

Starting Pond Volume + Water In – Water Out = Ending Pond Volume

The starting and ending pond volumes can be measured at the end of each reporting period. For the basis of the model, a monthly period is used.

Water IN is measured by actual precipitation measurements. The amount of precipitation falling over the leach pad is separated from the amount falling over the ponds.

Water OUT is directly measurable from land application and direct discharge flowmeters. The model balances the Water IN and OUT and calculates the “missing” amount of water that has left the system. This amount is assumed to be the volume that has been lost through evapotranspiration and uptake by vegetation.

The estimated infiltration through the heap for 2007 is estimated at 24.1%. Details of the monthly inputs and calculations are found in Table 6.2. This calculated infiltration rate is consistent with the estimated heap infiltration over the previous 3 years average and compares well with the 30.0% infiltration rate estimated by the soil cover design modeling. Based on the water quality measured at BC-28a and the demonstrated infiltration rates through the cover, the remediation measures implemented on the heap are demonstrated to be effective.

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Heap Infiltration Model**

**TABLE 7.2**

**Pond Volume Start + IN - OUT = Pond Volume End**

Pond Volume Start + Heap Infiltrate + Heap Spring Runoff + Pond Precip - Direct Release - Land App = Pond Volume End

Heap Infiltrate = Pond Volume End - Pond Volume Start - Heap Spring Runoff - Pond Precip + Direct Release + Land App

Pond Volume Start (m3) =	53,249	Cumulative Years		
Pond Volume End (m3) =	69,460	2004	2005	2006
Heap Spring Runoff (m3) =	34,196	21.1%	24.1%	27.4%
Pond Precip (m3)=	11,092			
Direct Release (m3) =	58,946			
Land App Release (m3) =	-			
Heap Infiltrate (m <sup>3</sup> ) =	29,869			
Total Heap Precip (m <sup>3</sup> ) =	109,161			
Estimated Heap Infiltrate %	27.36%			

\* Feb-04 precip is the cumulative snowpack from October 2003 - February 2004

CLIMATIC INPUTS		CATCHMENT AREAS					SOLUTION OUT				
Month	Precip. mm	Total Liner Area m <sup>2</sup>	Ponds Catchment Area m <sup>2</sup>	Precip Fallen Leach Pad	Heap Spring Runoff into Ponds	Precip Fallen Ponds	TOTAL IN	Direct Release	Land Application Release	Total Releases	Actual Pond Volume
	Input	Input	Input	Calc		Calc	Calc	Input		Calc	Input
Jan-04		311,000	31,600	-		-	0			0	63,000
Feb-04 *	158.0	311,000	31,600	49,138		4,993	54,131			0	65,592
Mar-04	17.5	311,000	31,600	5,443		553	60,126			0	68,184
Apr-04	11.9	311,000	31,600	3,701		376	64,203			0	73,965
May-04	11.5	311,000	31,600	3,577	24,743	363	68,143	21,052		21,052	77,482
Jun-04	19.8	311,000	31,600	6,158		626	74,927	18,021		18,021	65,782
Jul-04	47.6	311,000	31,600	14,804		1,504	91,234	16,927	13,161	30,088	39,348
Aug-04	6.4	311,000	31,600	1,990		202	93,427	22,701		22,701	22,745
Sep-04	27.0	311,000	31,600	8,397		853	102,677	6,246		6,246	21,711
Oct-04	43.0	311,000	31,600	13,373		1,359	117,409			0	24,303
Nov-04	31.0	311,000	31,600	9,641		980	128,030			0	26,895
Dec-04	37.1	311,000	31,600	11,538		1,172	140,740			0	29,487
Jan-05	22.4	311,000	31,600	6,966		708	148,414			0	32,079
Feb-05	33.2	311,000	31,600	10,325		1,049	159,789			0	34,671
Mar-05	18.9	311,000	31,600	5,878		597	166,264			0	37,263
Apr-05	26.0	311,000	31,600	8,086	15,750	822	175,171			0	59,616
May-05	37.9	311,000	31,600	11,787	19,561	1,198	188,156	28,305		28,305	58,548
Jun-05	37.6	311,000	31,600	11,694		1,188	201,038	23,993		23,993	39,873
Jul-05	38.9	311,000	31,600	12,098		1,229	214,365	5,936		5,936	34,527
Aug-05	63.7	311,000	31,600	19,811		2,013	236,188	2,007		2,007	41,560
Sep-05	49.9	311,000	31,600	15,519		1,577	253,284			0	43,463
Oct-05	13.9	311,000	31,600	4,323		439	258,046			0	47,525
Nov-05	44.5	311,000	31,600	13,840		1,406	273,292			0	49,688
Dec-05	21.1	311,000	31,600	6,562		667	280,521			0	51,949

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Heap Infiltration Model**

**TABLE 7.2**  
**Pond Volume Start + IN - OUT = Pond Volume End**

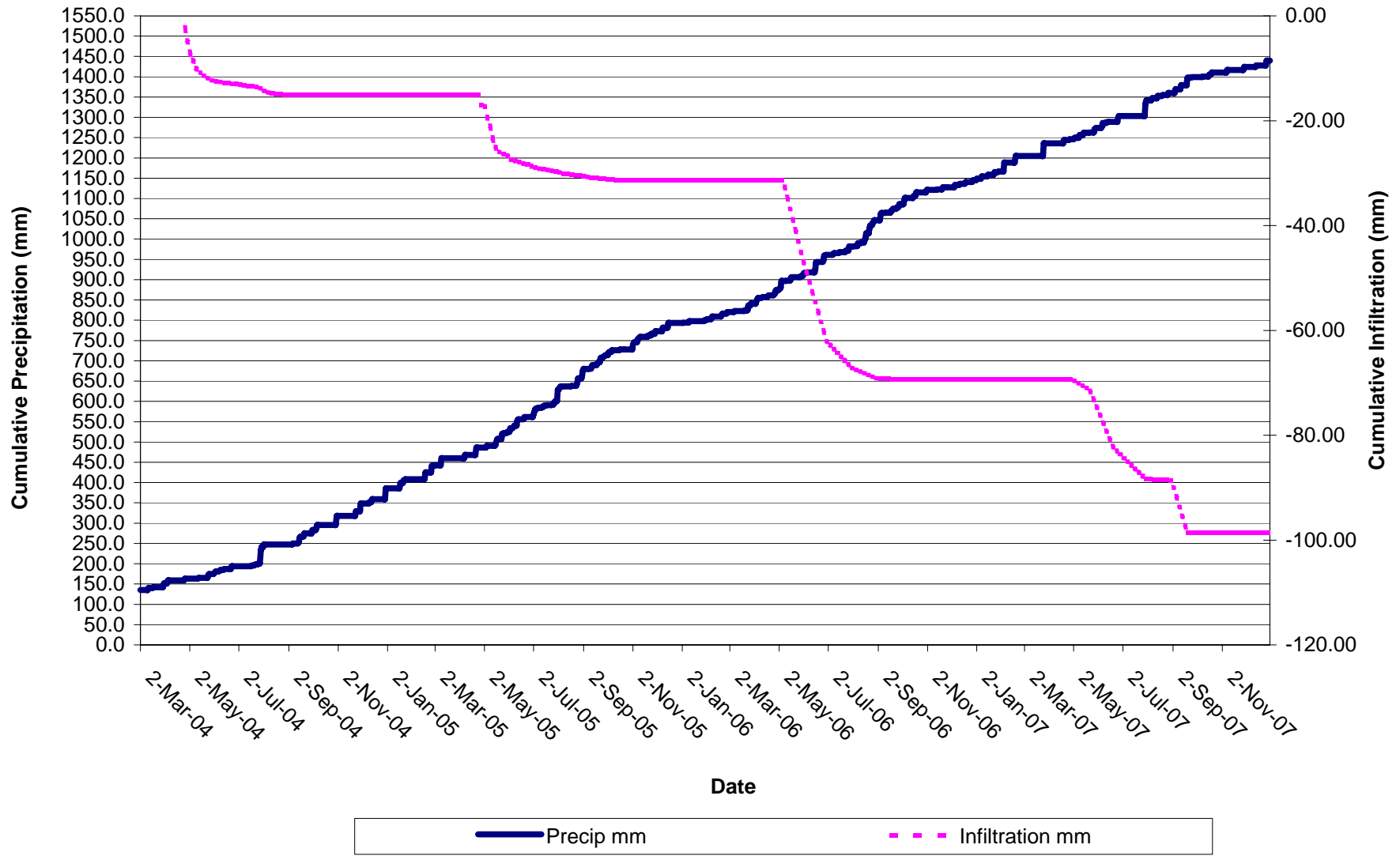
Pond Volume Start + Heap Infiltrate + Heap Spring Runoff + Pond Precip - Direct Release - Land App = Pond Volume End  
 Heap Infiltrate = Pond Volume End - Pond Volume Start - Heap Spring Runoff - Pond Precip + Direct Release + Land App

Pond Volume Start (m3) =	53,249	Cumulative Years		
Pond Volume End (m3) =	69,460	2004	2005	2006
Heap Spring Runoff (m3) =	34,196	21.1%	24.1%	27.4%
Pond Precip (m3)=	11,092			
Direct Release (m3) =	58,946			
Land App Release (m3) =	-			
Heap Infiltrate (m <sup>3</sup> ) =	29,869			
Total Heap Precip (m <sup>3</sup> ) =	109,161			
Estimated Heap Infiltrate %	27.36%			

\* Feb-04 precip is the cumulative snowpack from October 2003 - February 2004

CLIMATIC INPUTS		CATCHMENT AREAS					SOLUTION OUT				
Month	Precip. mm	Total Liner Area m <sup>2</sup>	Ponds Catchment Area m <sup>2</sup>	Precip Fallen Leach Pad	Heap Spring Runoff into Ponds	Precip Fallen Ponds	TOTAL IN	Direct Release	Land Application Release	Total Releases	Actual Pond Volume
	Input	Input	Input	Calc		Calc	Calc	Input		Calc	Input
Jan-06	6.4	311,000	31,600	1,990		202	282,714			0	53,249
Feb-06	20.4	311,000	31,600	6,344		645	289,703			0	54,549
Mar-06	20.3	311,000	31,600	6,313		641	296,657			0	55,849
Apr-06	33.0	311,000	31,600	10,263		1,043	307,963			0	79,284
May-06	34.7	311,000	31,600	10,792	34,196	1,097	319,851	24,750		24,750	74,079
Jun-06	52.8	311,000	31,600	16,421		1,668	337,941	34,196		34,196	57,897
Jul-06	20.7	311,000	31,600	6,438		654	345,032			0	59,790
Aug-06	64.6	311,000	31,600	20,091		2,041	367,164			0	60,418
Sep-06	39.2	311,000	31,600	12,191		1,239	380,594			0	63,145
Oct-06	29.3	311,000	31,600	9,112		926	390,633			0	64,860
Nov-06	12.3	311,000	31,600	3,825		389	394,847			0	67,360
Dec-06	17.3	311,000	31,600	5,380		547	400,773			0	69,460

**Figure 6.2**  
**Blue WRSA Lysimeter**  
**Soil Cover Infiltration Performance**





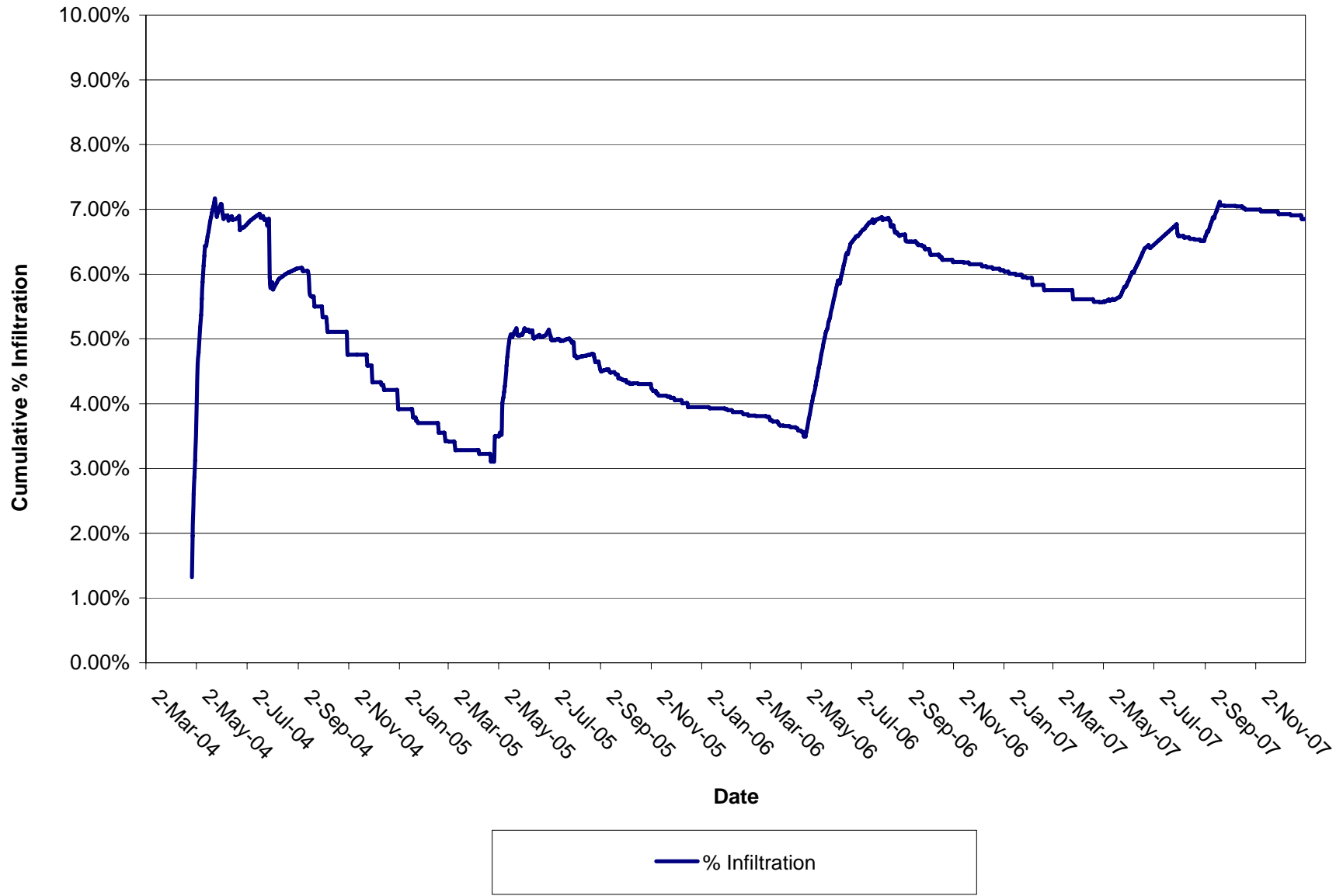
#### 6.4 **Blue WRSA Lysimeter**

A large scale lysimeter was constructed in 2003 to measure and collect precipitation as it passed through the 0.5 meter soil cover. Water quality samples are collected and analyzed. These results are included in Appendix B. The water quality from the large scale lysimeter is consistent with predictions made by SRK Consulting and there is no evidence of metal leaching or transport from the Blue WRSA material within the lysimeter.

The lysimeter also provides a mechanism to measure the overall level of precipitation infiltrating through the soil cover. A tank installed at the base of the Blue WRSA captures and measures the volume of solution that has passed through the cover. Precipitation levels throughout the year are measured and the percent infiltration can be calculated. The cumulative infiltration rate through the Blue WRSA cover continues to be on the order of 6-7% which is significantly less than the predicted rates from the modeling. Figures 6.1 and 6.2 present graphically the infiltration rates through the Blue WRSA cover.

Based on the water quality from the lysimeter and the infiltration rate through the cover, the remediation measures implemented in the Blue WRSA are demonstrated to be effective.

Figure 6.1 Blue WRSA Lysimeter



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Heap Infiltration Model**

**TABLE 6.2**

**Pond Volume Start + IN - OUT = Pond Volume End**

Pond Volume Start + Heap Infiltrate + Heap Spring Runoff + Pond Precip - Direct Release - Land App = Pond Volume End

Heap Infiltrate = Pond Volume End - Pond Volume Start - Heap Spring Runoff - Pond Precip + Direct Release + Land App

Pond Volume Start (m3) =	43,235			
Pond Volume End (m3) =	54,683			
Heap Spring Runoff (m3) =	9,624			
Pond Precip (m3) =	9,331			
Direct Release (m3) =	33,864			
Land App Release (m3) =	-			
Heap Infiltrate (m <sup>3</sup> ) =	26,357			
Total Heap Precip (m <sup>3</sup> ) =	109,161			
Estimated Heap Infiltrate %	24.14%			

			Cumulative Years			
			2004	2005	2006	2007
			21.1%	24.1%	27.3%	24.1%

\* Feb-04 precip is the cumulative snowpack from October 2003 - February 2004

Month	CLIMATIC INPUTS	CATCHMENT AREAS						SOLUTION OUT			Actual/Calculated Pond Volume
	Precip. mm	Total Liner Area m <sup>2</sup>	Ponds Catchment Area m <sup>2</sup>	Precip Fallen Leach Pad	Heap Spring Runoff into Ponds	Precip Fallen Ponds	TOTAL IN	Direct Release	Land Application Release	Total Releases	
	Input	Input	Input	Calc		Calc	Calc	Input		Calc	Input
Jan-04		311,000	31,600	-		-	0			0	63,000
Feb-04 *	158.0	311,000	31,600	49,138		4,993	54,131			0	65,592
Mar-04	17.5	311,000	31,600	5,443		553	60,126			0	68,184
Apr-04	11.9	311,000	31,600	3,701		376	64,203			0	73,965
May-04	11.5	311,000	31,600	3,577	24,743	363	68,143	21,052		21,052	77,482
Jun-04	19.8	311,000	31,600	6,158		626	74,927	18,021		18,021	65,782
Jul-04	47.6	311,000	31,600	14,804		1,504	91,234	16,927	13,161	30,088	39,348
Aug-04	6.4	311,000	31,600	1,990		202	93,427	22,701		22,701	22,745
Sep-04	27.0	311,000	31,600	8,397		853	102,677	6,246		6,246	21,711
Oct-04	43.0	311,000	31,600	13,373		1,359	117,409			0	24,303
Nov-04	31.0	311,000	31,600	9,641		980	128,030			0	26,895
Dec-04	37.1	311,000	31,600	11,538		1,172	140,740			0	29,487
Jan-05	22.4	311,000	31,600	6,966		708	148,414			0	32,079
Feb-05	33.2	311,000	31,600	10,325		1,049	159,789			0	34,671
Mar-05	18.9	311,000	31,600	5,878		597	166,264			0	37,263
Apr-05	26.0	311,000	31,600	8,086	15,750	822	175,171			0	59,616
May-05	37.9	311,000	31,600	11,787	19,561	1,198	188,156	28,305		28,305	58,548
Jun-05	37.6	311,000	31,600	11,694		1,188	201,038	23,993		23,993	39,873
Jul-05	38.9	311,000	31,600	12,098		1,229	214,365	5,936		5,936	34,527
Aug-05	63.7	311,000	31,600	19,811		2,013	236,188	2,007		2,007	41,560
Sep-05	49.9	311,000	31,600	15,519		1,577	253,284			0	43,463
Oct-05	13.9	311,000	31,600	4,323		439	258,046			0	47,525
Nov-05	44.5	311,000	31,600	13,840		1,406	273,292			0	49,688
Dec-05	21.1	311,000	31,600	6,562		667	280,521			0	51,949

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Heap Infiltration Model**

**TABLE 6.2**  
**Pond Volume Start + IN - OUT = Pond Volume End**

Pond Volume Start + Heap Infiltrate + Heap Spring Runoff + Pond Precip - Direct Release - Land App = Pond Volume End  
 Heap Infiltrate = Pond Volume End - Pond Volume Start - Heap Spring Runoff - Pond Precip + Direct Release + Land App

Pond Volume Start (m3) =	43,235	Cumulative Years			
Pond Volume End (m3) =	54,683	2004	2005	2006	2007
Heap Spring Runoff (m3) =	9,624	21.1%	24.1%	27.3%	24.1%
Pond Precip (m3)=	9,331				
Direct Release (m3) =	33,864				
Land App Release (m3) =	-				
Heap Infiltrate (m <sup>3</sup> ) =	26,357				
Total Heap Precip (m <sup>3</sup> ) =	109,161				
Estimated Heap Infiltrate %	24.14%				

\* Feb-04 precip is the cumulative snowpack from October 2003 - February 2004

Month	CLIMATIC INPUTS		CATCHMENT AREAS				SOLUTION OUT			Actual/Calculated Pond Volume	
	Precip. mm	Total Liner Area m <sup>2</sup>	Ponds Catchment Area m <sup>2</sup>	Precip Fallen Leach Pad	Heap Spring Runoff into Ponds	Precip Fallen Ponds	TOTAL IN	Direct Release	Land Application Release		Total Releases
	Input	Input	Input	Calc		Calc	Calc	Input			Calc
Jan-06	6.4	311,000	31,600	1,990		202	282,714			0	53,149
Feb-06	20.4	311,000	31,600	6,344		645	289,703			0	54,349
Mar-06	20.3	311,000	31,600	6,313		641	296,657			0	55,549
Apr-06	33.0	311,000	31,600	10,263		1,043	307,963			0	79,284
May-06	34.7	311,000	31,600	10,792	34,196	1,097	319,851	24,750		24,750	74,079
Jun-06	52.8	311,000	31,600	16,421		1,668	337,941	34,196		34,196	56,829
Jul-06	20.7	311,000	31,600	6,438		654	345,032			0	29,133
Aug-06	64.6	311,000	31,600	20,091		2,041	367,164			0	32,633
Sep-06	39.2	311,000	31,600	12,191		1,239	380,594			0	36,133
Oct-06	29.3	311,000	31,600	9,112		926	390,633			0	38,633
Nov-06	12.3	311,000	31,600	3,825		389	394,847			0	40,633
Dec-06	17.3	311,000	31,600	5,380		547	400,773			0	42,133
Jan-07	22.4	311,000	31,600	6,966		708	408,448			0	43,235
Feb-07	38.0	311,000	31,600	11,818		1,201	421,467			0	44,535
Mar-07	31.2	311,000	31,600	9,703		986	432,156			0	45,835
Apr-07	9.8	311,000	31,600	3,048		310	435,513			0	47,135
May-07	27.9	311,000	31,600	8,677	9,624	882	445,072	15,684		15,684	48,435
Jun-07	29.5	311,000	31,600	9,175		932	455,178	18,180		18,180	49,735
Jul-07	30.0	311,000	31,600	9,330		948	465,456			0	51,035
Aug-07	26.7	311,000	31,600	8,304		844	474,604			0	52,335
Sep-07	38.9	311,000	31,600	12,098		1,229	487,931			0	50,783
Oct-07	11.6	311,000	31,600	3,608		367	491,905			0	52,083
Nov-07	13.6	311,000	31,600	4,230		430	496,564			0	53,383
Dec-07	15.7	311,000	31,600	4,883		496	501,943			0	54,683

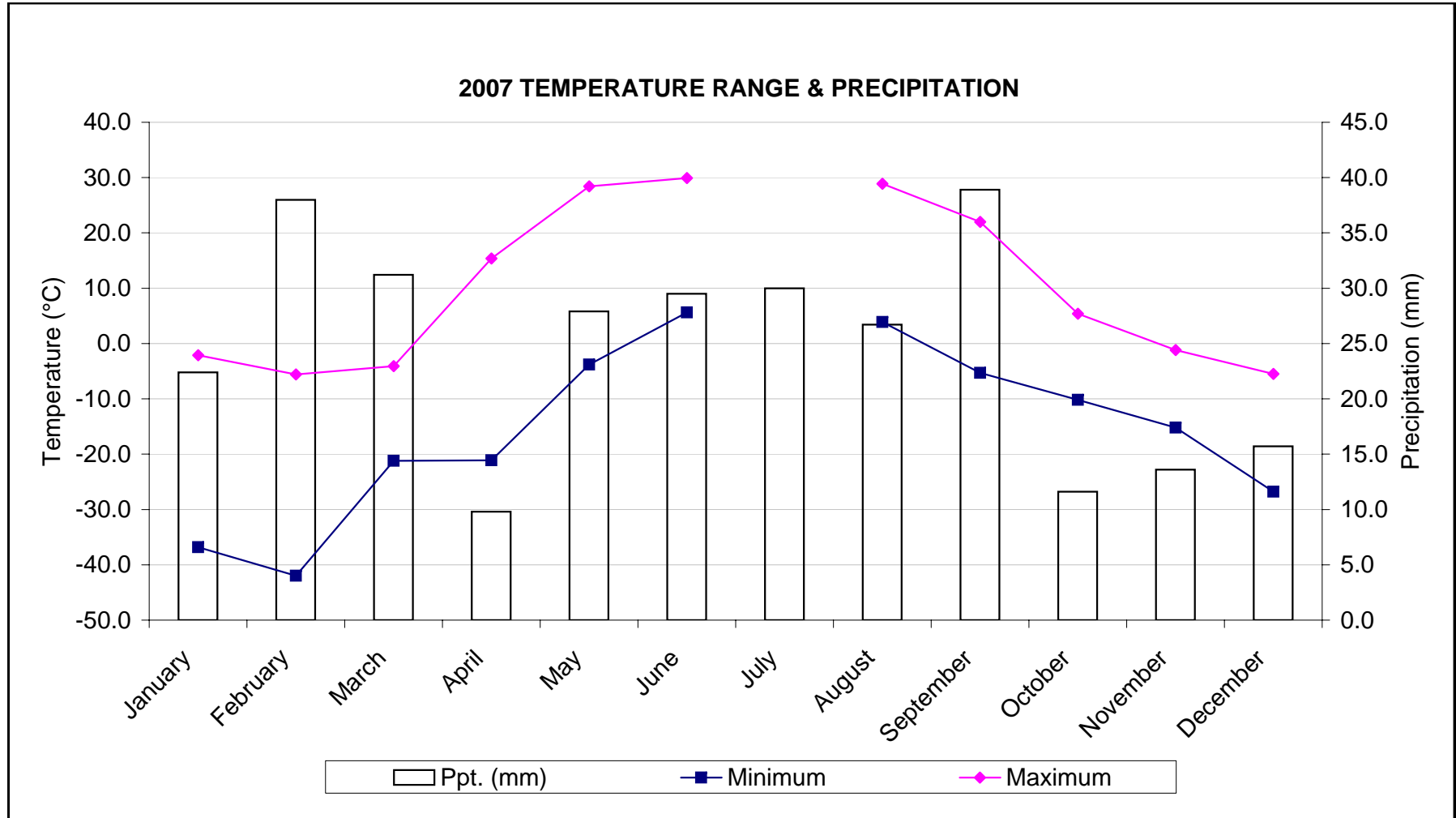
# **Appendix A**

## **CLIMATE**



## Climate Data - Summary 2007

Date	Temperature °C			Precipitation (mm)
	Max.	Min.	Avg.	
January	-2.1	-36.8	-15.2	22.4
February	-5.6	-42.0	-21.2	38.0
March	-4.1	-21.2	-12.6	31.2
April	15.4	-21.1	0.2	9.8
May	28.4	-3.8	12.3	27.9
June	29.9	5.6	17.1	29.5
July				30.0
August	28.9	3.9	15.6	26.7
September	22.0	-5.3	5.6	38.9
October	5.4	-10.2	-2.2	11.6
November	-1.2	-15.2	-8.2	13.6
December	-5.5	-26.8	-16.0	15.7
<b>Summary</b>				<b>295.3</b>





**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - January 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Jan-07				
02-Jan-07	-2.5	-16	-9.25	4.2
03-Jan-07				
04-Jan-07				
05-Jan-07				
06-Jan-07				
07-Jan-07				
08-Jan-07	-6.5	-26.4	-16.45	5.6
09-Jan-07				
10-Jan-07				
11-Jan-07				
12-Jan-07				
13-Jan-07				
14-Jan-07				
15-Jan-07				
16-Jan-07	-4.7	-36.8	-20.75	4.0
17-Jan-07				
18-Jan-07				
19-Jan-07				
20-Jan-07				
21-Jan-07				
22-Jan-07				
23-Jan-07				
24-Jan-07	-5.3	-25.2	-15.25	6.2
25-Jan-07				
26-Jan-07				
27-Jan-07				
28-Jan-07				
29-Jan-07	-2.1	-26.0	-14.05	2.3
30-Jan-07				
31-Jan-07				

Monthly Min. Temp.	-36.8	°C
Monthly Max. Temp.	-2.1	°C
Average Temperature	-15.2	°C
Total AWS Precipitation	22.4	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - February 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Feb-07				
02-Feb-07				
03-Feb-07				
04-Feb-07				
05-Feb-07	-6.4	-21.2	-13.8	21.4
06-Feb-07				
07-Feb-07				
08-Feb-07				
09-Feb-07				
10-Feb-07				
11-Feb-07				
12-Feb-07				
13-Feb-07	-10.0	-27.0	-18.5	0.0
14-Feb-07				
15-Feb-07				
16-Feb-07				
17-Feb-07				
18-Feb-07				
19-Feb-07	-5.6	-33.7	-19.7	16.6
20-Feb-07				
21-Feb-07				
22-Feb-07				
23-Feb-07				
24-Feb-07				
25-Feb-07				
26-Feb-07	-24.0	-42.0	-33.0	0.0
27-Feb-07				
28-Feb-07				

Monthly Min. Temp.	-42.0	°C
Monthly Max. Temp.	-5.6	°C
Average Temperature	-21.2	°C
Total AWS Precipitation	38.0	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - March 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Mar-07				
02-Mar-07				
03-Mar-07				
04-Mar-07				
05-Mar-07				
06-Mar-07				
07-Mar-07				
08-Mar-07				
09-Mar-07				
10-Mar-07				
11-Mar-07				
12-Mar-07				
13-Mar-07				
14-Mar-07				
15-Mar-07				
16-Mar-07				
17-Mar-07				
18-Mar-07				
19-Mar-07				
20-Mar-07				
21-Mar-07				
22-Mar-07				
23-Mar-07				
24-Mar-07				
25-Mar-07				
26-Mar-07	-0.1	-29.6	-14.9	31.2
27-Mar-07	-4.1	-21.2	-12.7	0.0
28-Mar-07	-2.1	-21.4	-11.8	0.0
29-Mar-07	0.4	-22.9	-11.3	0.0
30-Mar-07				
31-Mar-07				

Monthly Min. Temp.	-29.6	°C
Monthly Max. Temp.	0.4	°C
Average Temperature	-12.6	°C
Total AWS Precipitation	31.2	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - April 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Apr-07				
02-Apr-07	4.9	-21.1	-8.1	0.0
03-Apr-07				
04-Apr-07				
05-Apr-07				
06-Apr-07				
07-Apr-07				
08-Apr-07				
09-Apr-07	11.4	-13.2	-0.9	0.0
10-Apr-07				
11-Apr-07				
12-Apr-07				
13-Apr-07				
14-Apr-07				
15-Apr-07				
16-Apr-07				
17-Apr-07				
18-Apr-07				
19-Apr-07				
20-Apr-07	15.4	-8.1	3.7	8.0
21-Apr-07				
22-Apr-07				
23-Apr-07				
24-Apr-07				
25-Apr-07				
26-Apr-07				
27-Apr-07	14.3	-1.8	6.3	1.8
28-Apr-07				
29-Apr-07				
30-Apr-07				

Monthly Min. Temp.	-21.1	°C
Monthly Max. Temp.	15.4	°C
Average Temperature	0.2	°C
Total AWS Precipitation	9.8	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - May 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-May-07				
02-May-07				
03-May-07	16.5	-3.0	6.8	3.9
04-May-07				
05-May-07				
06-May-07				
07-May-07				
08-May-07				
09-May-07	18.5	-2.2	8.2	6.0
10-May-07				
11-May-07				
12-May-07				
13-May-07				
14-May-07	15.5	-2.1	6.7	5.7
15-May-07				
16-May-07				
17-May-07	16.7	-3.8	6.5	0.3
18-May-07				
19-May-07				
20-May-07				
21-May-07				
22-May-07	23.6	2.3	13.0	0.9
23-May-07	26.0	9.7	17.9	0.0
24-May-07	25.4	9.1	17.3	0.0
25-May-07	24.9	9.3	17.1	0.0
26-May-07				
27-May-07				
28-May-07	28.4	5.4	16.9	8.3
29-May-07	15.3	5.9	10.6	2.0
30-May-07	18.9	8.4	13.7	0.0
31-May-07	18.7	6.8	12.8	0.8

Monthly Min. Temp.	-3.8	°C
Monthly Max. Temp.	28.4	°C
Average Temperature	12.3	°C
Total AWS Precipitation	27.9	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - June 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Jun-07	22.9	8.3	15.6	0.0
02-Jun-07				
03-Jun-07				
04-Jun-07	26.3	10.1	18.2	0.0
05-Jun-07	29.9	18.6	24.3	0.0
06-Jun-07	27.8	13.2	20.5	3.2
07-Jun-07	19.3	8.5	13.9	8.8
08-Jun-07	19.6	5.8	12.7	0.0
09-Jun-07				
10-Jun-07				
11-Jun-07	25.4	6.1	15.8	0.2
12-Jun-07	23.7	8.3	16.0	2.0
13-Jun-07	20.0	7.3	13.7	0.0
14-Jun-07	24.4	5.6	15.0	0.2
15-Jun-07	23.9	6.6	15.3	0.5
16-Jun-07				
17-Jun-07				
18-Jun-07	28.9	7.8	18.4	0.0
19-Jun-07	27.5	8.5	18.0	0.0
20-Jun-07	26.4	8.1	17.3	0.0
21-Jun-07	27.3	12.2	19.8	0.0
22-Jun-07	29.6	12.1	20.9	0.0
23-Jun-07				
24-Jun-07				
25-Jun-07	26.5	9.5	18.0	0.0
26-Jun-07	21.1	9.9	15.5	10.0
27-Jun-07	19.1	9.7	14.4	4.4
28-Jun-07	23.9	9.6	16.8	0.2
29-Jun-07	26.4	13.9	20.2	0.0
30-Jun-07				

Monthly Min. Temp.	5.6	°C
Monthly Max. Temp.	29.9	°C
Average Temperature	17.1	°C
Total AWS Precipitation	29.5	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - July 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Jul-07				
02-Jul-07				
03-Jul-07				
04-Jul-07				
05-Jul-07				
06-Jul-07				
07-Jul-07				
08-Jul-07				
09-Jul-07				
10-Jul-07				
11-Jul-07				
12-Jul-07				
13-Jul-07				
14-Jul-07				
15-Jul-07				
16-Jul-07				
17-Jul-07				
18-Jul-07				
19-Jul-07				
20-Jul-07				
21-Jul-07				
22-Jul-07				
23-Jul-07				
24-Jul-07				
25-Jul-07				
26-Jul-07				
27-Jul-07				
28-Jul-07				
29-Jul-07				
30-Jul-07				30.0
31-Jul-07				

Monthly Min. Temp.		°C
Monthly Max. Temp.		°C
Average Temperature		°C
Total AWS Precipitation	30.0	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - August 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Aug-07	28.9	8.5	18.7	8.5
02-Aug-07				
03-Aug-07				
04-Aug-07				
05-Aug-07				
06-Aug-07				
07-Aug-07				
08-Aug-07	23.9	4.3	14.1	5.2
09-Aug-07				
10-Aug-07				
11-Aug-07				
12-Aug-07				
13-Aug-07				
14-Aug-07				
15-Aug-07	21.8	3.9	12.9	5.2
16-Aug-07				
17-Aug-07				
18-Aug-07				
19-Aug-07				
20-Aug-07				
21-Aug-07	28.8	7.4	18.1	2.9
22-Aug-07				
23-Aug-07				
24-Aug-07				
25-Aug-07				
26-Aug-07				
27-Aug-07				
28-Aug-07	22.4	5.8	14.1	4.9
29-Aug-07				
30-Aug-07				
31-Aug-07				

Monthly Min. Temp.	3.9	°C
Monthly Max. Temp.	28.9	°C
Average Temperature	15.6	°C
Total AWS Precipitation	26.7	mm



**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - September 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Sep-07				
02-Sep-07				
03-Sep-07				
04-Sep-07				
05-Sep-07	22.0	4.1	13.1	8.9
06-Sep-07				
07-Sep-07				
08-Sep-07				
09-Sep-07				
10-Sep-07				
11-Sep-07				
12-Sep-07	16.1	3.4	9.8	10.4
13-Sep-07				
14-Sep-07				
15-Sep-07				
16-Sep-07				
17-Sep-07				
18-Sep-07				
19-Sep-07				
20-Sep-07	16.7	-1.1	7.8	18.2
21-Sep-07				
22-Sep-07				
23-Sep-07				
24-Sep-07	8.2	-5.3	1.5	0.2
25-Sep-07	5.5	-1.1	2.2	0.6
26-Sep-07	6.8	-1.0	2.9	0.6
27-Sep-07				
28-Sep-07	7.4	-2.8	2.3	0.0
29-Sep-07				
30-Sep-07				

Monthly Min. Temp.	-5.3	°C
Monthly Max. Temp.	22.0	°C
Average Temperature	5.6	°C
Total AWS Precipitation	38.9	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - October 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Oct-07	5.4	-3.1	1.15	0
02-Oct-07				
03-Oct-07				
04-Oct-07				
05-Oct-07				
06-Oct-07				
07-Oct-07				
08-Oct-07				
09-Oct-07	4.3	-10.2	-2.95	1.4
10-Oct-07				
11-Oct-07				
12-Oct-07				
13-Oct-07				
14-Oct-07				
15-Oct-07				
16-Oct-07				
17-Oct-07	-11.2	3.7	-3.75	4.9
18-Oct-07				
19-Oct-07				
20-Oct-07	1.8	-8	-3.1	5.3
21-Oct-07				
22-Oct-07				
23-Oct-07				
24-Oct-07				
25-Oct-07				
26-Oct-07				
27-Oct-07				
28-Oct-07				
29-Oct-07				
30-Oct-07				
31-Oct-06				

Monthly Min. Temp.	-10.2	°C
Monthly Max. Temp.	5.4	°C
Average Temperature	-2.2	°C
Total AWS Precipitation	11.6	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - November 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Nov-07				
02-Nov-07				
03-Nov-07				
04-Nov-07				
05-Nov-07				
06-Nov-07				
07-Nov-07				
08-Nov-07	-15.2	0.8	-7.2	5.9
09-Nov-07				
10-Nov-07				
11-Nov-07				
12-Nov-07				
13-Nov-07				
14-Nov-07				
15-Nov-07				
16-Nov-07				
17-Nov-07				
18-Nov-07				
19-Nov-07				
20-Nov-07				
21-Nov-07				
22-Nov-07				
23-Nov-07				
24-Nov-07				
25-Nov-07				
26-Nov-07				
27-Nov-07				
28-Nov-07				
29-Nov-07	-17.2	-1.2	-9.2	7.7
30-Nov-07				

Monthly Min. Temp.	-1.2	°C
Monthly Max. Temp.	-15.2	°C
Average Temperature	-8.2	°C
Total AWS Precipitation	13.6	mm

**Brewery Creek Mine  
Monitoring Pursuant to Water License QZ96-007**

Climate Data - December 2007

Date	Temperature °C			Ppt. (mm)
	Max.	Min.	Avg.	
01-Dec-07				
02-Dec-07				
03-Dec-07				
04-Dec-07				
05-Dec-07				
06-Dec-07				
07-Dec-07				
08-Dec-07				
09-Dec-07				
10-Dec-07				
11-Dec-07				
12-Dec-07				
13-Dec-07				
14-Dec-07	-27.6	-4.1	-15.9	3.9
15-Dec-07				
16-Dec-07				
17-Dec-07				
18-Dec-07				
19-Dec-07				
20-Dec-07				
21-Dec-07				
22-Dec-07				
23-Dec-07				
24-Dec-07				
25-Dec-07				
26-Dec-07				
27-Dec-07	-26.8	-5.5	-16.2	11.8
28-Dec-07				
29-Dec-07				
30-Dec-07				
31-Dec-07				

Monthly Min. Temp.	-5.5	°C
Monthly Max. Temp.	-26.8	°C
Average Temperature	-16.0	°C
Total AWS Precipitation	15.7	mm

# **Appendix B**

## **WATER QUALITY**



**QZ96-007 - Amendment 7 (Application QZ03-062)**

**SCHEDULE A  
MONITORING STATIONS**

Station	Description	UTM Coordinates (Zone 7)	
		Northing (m)	Easting (m)
BC-01, H5, W5, B3	Laura Ck., 50 m u/s from Ditch Road	7,099,630	634,420
BC-02, H15, W15	Carolyn Ck. u/s from Laura Ck.	7,101,970	633,250
BC-03, 2, W4B	Laura Ck. above Carolyn Ck.	7,102,570	632,345
BC-04, H13, W13, B7	Lucky Ck. d/s from Lucky Pit	7,107,640	639,180
BC-05	Pacific Ck. u/s from confl. with Lee Ck.	7,103,130	627,610
BC-06, K1, W9, B5	South Klondike d/s from confl. with Lee Ck.	7,097,460	627,400
BC-09	Fosters Pit and Dump (Upper)		
BC-10	Kokanee Pit and Dump	7,105,760	635,620
BC-11	Blue Waste Dump	7,105,050	633,740
BC-12	Blue Pit	7,105,420	634,090
BC-13	Moosehead West Waste Dump	7,106,120	634,150
BC-14	Moosehead East Waste Dump		
BC-15	Moosehead Pit discharge	7,106,430	634,420
BC-16	Pacific Gulch - 300m above Laura	7,105,140	633,350
BC-17	Golden Pit and Dump	7,106,510	637,560
BC-18S	Lucky Pit and Dump - south end	7,107,220	638,180
BC-18N	Lucky Pit and Dump - north end	7,107,410	638,160
BC-19	Piezometer RC94-843	7,103,750	632,290
BC-20	Piezometer RC94-844	7,104,710	632,070
BC-21	Piezometer RC95-1354	7,105,070	632,740
BC-22	Piezometer RC95-1357	7,104,000	632,066
BC-23	Piezometer RC95-1370	7,103,410	632,500
BC-24	Piezometer RC95-1400	7,104,630	631,920
BC-25	Piezometer RC96-1608	7,104,000	632,215
BC-26	Piezometer RC97-2024	7,107,120	638,320
BC-27	Piezometer RC97-2026	7,106,550	637,380
BC-28	Overflow pond decant	7,103,800	632,540
BC28a	Discharge from heap		
BC-39	Laura Creek in the side channel of the South Klondike River	7,098,230	631,340
BC-51W	Pacific Pit - west side	7,105,240	633,130
BC-65	Land Application Piezometer	7,102,140	633,990
BC-66	Land Application Piezometer	7,100,660	634,710
BC-67	Blue WRSA Piezometer	7,105,280	633,710
BC-68	Blue WRSA Piezometer	7,105,310	633,920
BC-69	Blue WRSA Piezometer	7,105,150	633,820
H2, W2, B2, BC-31	Golden Creek above confluence with S. Klondike	7,104,030	642,340
H3, W3, BC-32	Laura Creek below exploration camp	7,105,100	634,170
H6, W6A, B6, BC-33	Lee Creek above Pacific Creek	7,103,240	627,420
H7, W7, B1, BC-34	Lee Creek at Ditch Road	7,100,380	627,710
He, W14, BC-35	Pacific Creek below heap leach pad	7,106,010	630,650
H16, W16, BC-36	Golden Creek above confluence with Lucky Creek	7,109,860	640,500
H17, W5A, BC-37	Laura Creek at Ditch Road	7,099,700	633,960
K4, W8, B4, BC-38	S. Klondike upstream from confluence with Golden Creek	7,102,670	642,250

QZ96-007 - Amendment 7 (Application QZ03-062)

**SCHEDULE B-1  
MONITORING SCHEDULE (2005 to 2009)**

Monitoring Station																																				
Parameter	BC 1	BC 2	BC 3	BC 4	BC 5	BC 6	BC 9	BC 10	BC 11	BC 12	BC 13	BC 14	BC 15	BC 16	BC 17	BC 18	BC 19	BC 20	BC 21	BC 22	BC 23	BC 24	BC 25	BC 26	BC 27	BC 28	BC 28a	BC 31	BC 34	BC 39	BC 51W	BC 65	BC 66	BC 67	BC 68	BC 69
Flow	M/Q	M/Q	C	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	C		Q	Q	Q	Q	(2)	(2)	(2)	(2)	(2)
pH (field)	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	MWA	MWA	Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q
pH (laboratory)	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q	
Conductivity (field)	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	MWA	MWA	Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q	
Conductivity (lab)	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q		
Temperature (field)	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q												Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q	
Hardness	M/Q	M/Q	M/Q	Q	Q	Q																														
Alkalinity	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q		
Dissolved solids	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			Q	Q	Q	Q			Q	Q	Q		
Suspended solids	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q										MWA	MWA	Q	Q	Q	Q	MA/Q	MA/Q				
Chloride	M/Q	M/Q	M/Q	Q	Q	Q										Q	Q	Q	Q	Q	Q	Q	Q											Q	Q	Q
Sulphate	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q		
Ammonia	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q		MWA	MWA	Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q	
Nitrate	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q			Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q		
Total cyanide	M/Q	M/Q			Q											Q	Q	Q	Q	Q	Q	Q	Q	MWA	MWA					MA/Q	MA/Q	Q	Q	Q		
WAD cyanide	M/Q	M/Q			Q											Q	Q	Q	Q	Q	Q	Q	Q	MWA	MWA					MA/Q	MA/Q	Q	Q	Q		
ICP metals	M/Q	M/Q	M/Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q		MWA	MWA	Q	Q	Q	Q	MA/Q	MA/Q	Q	Q	Q	
Bio-assay																									MWA	MWA										

**LEGEND**

Q = Quarterly  
M/Q = Monthly in years 2005, 2006 and 2007, and quarterly in years 2008 and 2009  
C = Continuous  
MWA=Monthly when active  
MA/Q=Monthly when active and quarterly when not active

ICP metals to include Ca, Mg, Na, K, Cu, As, Sb, Hg, Zn, Se, Pb, Al Bi, Cd, Cr, Fe, Mn, Mo, Ni, Ag and S.

BC-18 includes BC-18S and BC-18N  
(2) denotes static water elevation



QZ96-007 - Amendment 7 (Application QZ03-062)

**SCHEDULE B-2  
MONITORING SCHEDULE (2010 to 2014)**

Monitoring Station																																					
Parameter	BC 1	BC 2	BC 3	BC 4	BC 5	BC 6	BC 9	BC 10	BC 11	BC 12	BC 13	BC 14	BC 15	BC 16	BC 17	BC 18	BC 19	BC 20	BC 21	BC 22	BC 23	BC 24	BC 25	BC 26	BC 27	BC 28	BC 28a	BC 31	BC 34	BC 39	BC 51W	BC 65	BC 66	BC 67	BC 68	BC 69	
Flow	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	C		SA	SA	SA	SA	(2)	(2)	(2)	(2)	(2)
pH (field)	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	MWA	MWA	SA	SA	SA	SA	MA/Q	MA/Q	A	A	A
pH (laboratory)	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA	SA	SA	SA	MA/Q	MA/Q	A	A	A
Conductivity (field)	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	MWA	MWA	SA	SA	SA	SA	MA/Q	MA/Q	A	A	A
Conductivity (lab)	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA	SA	SA	SA	MA/Q	MA/Q	A	A	A
Temperature (field)	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA													SA	SA	SA	SA	MA/Q	MA/Q	A	A	A
Hardness	SA	SA	SA	SA	SA	SA																															
Alkalinity	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA	SA	SA	SA	MA/Q	MA/Q	A	A	A	
Dissolved solids	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA	SA	SA	SA			A	A	A	
Suspended solids	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA											MWA	MWA	SA	SA	SA	SA	MA/Q	MA/Q			
Chloride	SA	SA	SA	SA	SA	SA											SA	SA	SA	SA	SA	SA	SA	SA	SA										A	A	A
Sulphate	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA	SA	SA	SA	MA/Q	MA/Q	A	A	A	
Ammonia	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	MWA	MWA	SA	SA	SA	SA	MA/Q	MA/Q	A	A	A	
Nitrate	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA			SA	SA	SA	SA	MA/Q	MA/Q	A	A	A	
Total cyanide	SA	SA				SA											SA	SA	SA	SA	SA	SA	SA	SA	SA	MWA	MWA					MA/Q	MA/Q	A	A	A	
WAD cyanide	SA	SA				SA											SA	SA	SA	SA	SA	SA	SA	SA	SA	MWA	MWA					MA/Q	MA/Q	A	A	A	
ICP metals	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	MWA	MWA	SA	SA	SA	SA	MA/Q	MA/Q	A	A	A	
Bio-assay																										MWA	MWA										

**LEGEND**  
 A=Annually  
 SA=Semi-Annually  
 MWA=Monthly when active  
 MA/Q=Monthly when active and quarterly when not active  
 C = Continuous

ICP metals to include Ca, Mg, Na, K, Cu, As, Sb, Hg, Zn, Se, Pb, Al Bi, Cd, Cr, Fe, Mn, Mo, Ni, Ag and S.  
 BC-18 includes BC-18S and BC-18N  
 (2) denotes static water elevation

QZ96-007 - Amendment 7 (Application QZ03-062)

**SCHEDULE B-3  
MONITORING SCHEDULE (2015 to expiry)**

Monitoring Station																																					
Parameter	BC 1	BC 2	BC 3	BC 4	BC 5	BC 6	BC 9	BC 10	BC 11	BC 12	BC 13	BC 14	BC 15	BC 16	BC 17	BC 18	BC 19	BC 20	BC 21	BC 22	BC 23	BC 24	BC 25	BC 26	BC 27	BC 28	BC 28a	BC 31	BC 34	BC 39	BC 51W	BC 65	BC 66	BC 67	BC 68	BC 69	
Flow	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	C		A	A	A	A	(2)	(2)	(2)	(2)	(2)
pH (field)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	MWA	MWA	A	A	A	A	MA/Q	MA/Q	A	A	A
pH (laboratory)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			A	A	A	A	MA/Q	MA/Q	A	A	A	
Conductivity (field)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	MWA	MWA	A	A	A	A	MA/Q	MA/Q	A	A	A	
Conductivity (lab)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			A	A	A	A	MA/Q	MA/Q	A	A	A		
Temperature (field)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A													A	A	A	A	MA/Q	MA/Q	A	A	A
Hardness	A	A	A	A	A	A																															
Alkalinity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			A	A	A	A	MA/Q	MA/Q	A	A	A		
Dissolved solids	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			A	A	A	A			A	A	A		
Suspended solids	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A										MWA	MWA	A	A	A	A	MA/Q	MA/Q				
Chloride	A	A	A	A	A	A										A	A	A	A	A	A	A	A	A										A	A	A	
Sulphate	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			A	A	A	A	MA/Q	MA/Q	A	A	A		
Ammonia	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	MWA	MWA	A	A	A	A	MA/Q	MA/Q	A	A	A		
Nitrate	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			A	A	A	A	MA/Q	MA/Q	A	A	A		
Total cyanide	A	A				A										A	A	A	A	A	A	A	A	A	MWA	MWA					MA/Q	MA/Q	A	A	A		
WAD cyanide	A	A				A										A	A	A	A	A	A	A	A	A	MWA	MWA					MA/Q	MA/Q	A	A	A		
ICP metals	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	MWA	MWA	A	A	A	A	MA/Q	MA/Q	A	A	A		
Bio-assay																										MWA	MWA										

**LEGEND**

A=Annually  
MWA=Monthly when active  
MA/Q=Monthly when active and quarterly when not active  
C = Continuous

ICP metals to include Ca, Mg, Na, K, Cu, As, Sb, Hg, Zn, Se, Pb, Al Bi, Cd, Cr, Fe, Mn, Mo, Ni, Ag and S.

BC-18 includes BC-18S and BC-18N  
(2) denotes static water elevation

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	523459-2	BC-1	BC-1	BC-1	540276-1	548998-1	554371-4
Units	Date	28-Jan-07	26-Feb-07	25-Mar-07	17-Apr-07	26-May-07	13-Jun-07	BC-1
m3/sec, m	<b>Water Level or Flow</b>	frozen	no water found	no water found	*frozen	*frozen	0.164322	
pH units	<b>pH (field)</b>	7.15			7.7	7.03	8.3	
pH units	<b>pH (lab)</b>	*			7.89	7.78	7.82	
uS/cm	<b>Conductivity (field)</b>	645			292	311	396	
uS/cm	<b>Conductivity (lab)</b>	*			332	354	454	
°C	<b>Temperature (field)</b>	0.4			0.4	0.5	2	
mg CaCO <sub>3</sub> /L	<b>Hardness</b>	478			176	171	215	
mg CaCO <sub>3</sub> /L	<b>Alkalinity</b>	232			88	86	112	
mg/L	<b>Total Dissolved Solids</b>	648			243	254	322	
mg/L	<b>Total Suspended Solids</b>	<2			<2	114	149	
mg/L	<b>Chloride</b>	0.72			18	1.2	1.5	
mg/L	<b>Sulfate</b>	210			72	72	97	
mg /L	<b>Ammonia</b>	0.006			<0.05	<0.05	0.039	
mg /L	<b>Nitrate</b>	0.16			1	4.4	8.2	
mg/L	<b>Total Cyanide</b>	0.001			0.001	0.01	0.019	
mg/L	<b>WAD Cyanide</b>	0.002			<0.002	0.006	0.008	
	<b>Total Metals</b>	<b>TM</b>			<b>TM</b>	<b>TM</b>	<b>TM</b>	
mg/L	<b>Aluminum</b>	0.012			0.12	3.42	4.04	
mg/L	<b>Antimony</b>	0.0033			0.0023	0.0072	0.0058	
mg/L	<b>Arsenic</b>	0.006			0.0085	0.0114	0.0107	
mg/L	<b>Barium</b>	0.138			0.067	0.171	0.196	
mg/L	<b>Beryllium</b>	<0.0001			<0.0002	0.0001	0.0002	
mg/L	<b>Bismuth</b>	<0.0005			<0.001	<0.0005	<0.0005	
mg/L	<b>Boron</b>	0.012			0.009	0.011	0.011	
mg/L	<b>Cadmium</b>	0.00006			0.00011	0.00019	0.0002	
mg/L	<b>Calcium</b>	115			42.5	41.7	53.3	
mg/L	<b>Chromium</b>	<0.0005			<0.001	0.0058	0.0063	
mg/L	<b>Cobalt</b>	0.0011			0.001	0.0147	0.0212	
mg/L	<b>Copper</b>	0.001			0.002	0.006	0.009	
mg/L	<b>Iron</b>	<0.1			0.2	4.2	4.4	
mg/L	<b>Lead</b>	0.0002			0.0004	0.002	0.0029	
mg/L	<b>Lithium</b>	0.024			0.007	0.01	0.014	
mg/L	<b>Magnesium</b>	46.3			17	16.2	19.9	
mg/L	<b>Manganese</b>	0.076			0.045	0.236	0.141	
mg/L	<b>Mercury</b>	<0.0001			<0.0001	<0.02	0.04	
mg/L	<b>Molybdenum</b>	0.003			<0.002	0.002	0.003	
mg/L	<b>Nickel</b>	0.0019	0.002	0.0072	0.0116			
mg/L	<b>Phosphorus</b>	<0.02	0.28	0.11	0.12			
mg/L	<b>Potassium</b>	2.5	3	1.9	1.8			
mg/L	<b>Selenium</b>	0.0027	<0.0004	0.0034	0.0052			
mg/L	<b>Silicon</b>	9.4	5.18	10.6	8.15			
mg/L	<b>Silver</b>	<0.0001	<0.0002	<0.0001	<0.0001			
mg/L	<b>Sodium</b>	7.5	3.1	8.5	13.7			
mg/L	<b>Strontium</b>	0.605	0.18	0.208	0.278			
mg/L	<b>Sulphur</b>	79.4	25.7	25.8	32.4			
mg/L	<b>Thallium</b>	<0.00005	<0.0001	0.00006	0.00007			
mg/L	<b>Tin</b>	<0.001	<0.002	<0.001	<0.001			
mg/L	<b>Titanium</b>	0.0052	0.0043	0.184	0.172			
mg/L	<b>Uranium</b>	0.0034	0.001	0.0017	0.0024			
mg/L	<b>Vanadium</b>	0.0009	0.002	0.0143	0.0148			
mg/L	<b>Zinc</b>	0.016	0.01	0.028	0.035			

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		560874-1	569512-1	574074-1	585521-1	591963-1	594520-21
	Station	BC-1	BC1	BC-1	BC-1	BC-1	BC-1
Units	Date	14-Jul-07	20-Aug-07	12-Sep-07	01-Nov-07	28-Nov-07	20-Dec-07
m <sup>3</sup> /sec, m	Water Level or Flow	0.13877	0.11102	0.0997	frozen	frozen	frozen
pH units	pH (field)	8.28	8.28	7.89	8.05	8.02	7.67
pH units	pH (lab)	8.04	8.18	8.09	8.07	7.97	7.9
uS/cm	Conductivity (field)	396	435	459	844	844	621
uS/cm	Conductivity (lab)	468	512	408	528	812	655
°C	Temperature (field)	4.1	4.1	2	0.5	0.5	0.2
mg CaCO <sub>3</sub> /L	Hardness	250	266	203	293	479	340
mg CaCO <sub>3</sub> /L	Alkalinity	145	162	135	161	249	185
mg/L	Total Dissolved Solids	332	422	292	378	628	460
mg/L	Total Suspended Solids	38	28	100	8	<2	<2
mg/L	Chloride	0.6	0.4	0.5	0.35	0.1	0.62
mg/L	Sulfate	116	133	102	150	241	178
mg /L	Ammonia	0.02	<0.01	<0.01	<0.01	0.2000	<0.01
mg /L	Nitrate	0.4	0.2	0.21	0.3	0.06	0.09
mg/L	Total Cyanide	0.002	0.001	<0.001	<0.001	<0.001	0.001
mg/L	WAD Cyanide	0.002	<0.002	<0.002	<0.002	<0.002	0.002
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	1.49	0.906	2.89	0.149	0.055	0.007
mg/L	Antimony	0.0039	0.0032	0.0054	0.003	0.0043	0.0028
mg/L	Arsenic	0.0062	0.0052	0.0104	0.0038	0.0041	0.0032
mg/L	Barium	0.102	0.09	0.157	0.074	0.114	0.077
mg/L	Beryllium	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.01	0.009	0.009	0.009	0.017	0.009
mg/L	Cadmium	0.00008	0.00006	0.00016	0.00004	0.00008	0.00005
mg/L	Calcium	60.3	66.1	49.6	72.9	118	83.9
mg/L	Chromium	0.0027	0.0021	0.0048	0.0014	0.0016	0.0006
mg/L	Cobalt	0.0013	0.0009	0.0024	0.0004	0.0002	<0.0001
mg/L	Copper	0.003	0.002	0.006	0.002	0.002	0.001
mg/L	Iron	1.6	1.2	3.4	0.2	0.3	<0.1
mg/L	Lead	0.0007	0.0005	0.0018	0.0002	0.0001	<0.0001
mg/L	Lithium	0.015	0.014	0.014	0.015	0.022	0.016
mg/L	Magnesium	24.2	24.6	19.3	26.9	44.9	31.7
mg/L	Manganese	0.068	0.07	0.121	0.046	0.029	0.009
mg/L	Mercury	<0.02	<0.02	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Molybdenum	0.003	0.003	0.003	0.003	0.005	0.004
mg/L	Nickel	0.0028	0.003	0.007	0.0012	0.0017	<0.0005
mg/L	Phosphorus	0.04			<0.02	4	
mg/L	Potassium	1.5	1.4	1.6	1.4		1.8
mg/L	Selenium	0.0018	0.0013	0.0015	0.0015	0.0016	0.0018
mg/L	Silicon	7.24	6.7	9.32	6	8.48	6.5
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	4.8	5.1	4.2	5.1	7.5	6.1
mg/L	Strontium	0.368	0.346	0.264	0.402	0.602	0.447
mg/L	Sulphur	38.7	42.2	31.6	48.5	78.8	56.9
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.097	0.0386	0.133	0.0086	0.0078	0.0038
mg/L	Uranium	0.0026	0.0026	0.0021	0.0027	0.0041	0.0034
mg/L	Vanadium	0.0057	0.0046	0.014	0.0014	0.0009	0.0008
mg/L	Zinc	0.01	0.01	0.02	0.009	0.014	0.011

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-2	529513-2	536014-3	540276-2	548998-2	554371-22
Units	Date	BC-2	BC-2	BC-2	BC-2	BC-2	BC-2
m3/sec, m	Water Level or Flow	28-Jan-07	frozen	frozen	frozen	frozen	nm
pH units	pH (field)		7.82	7.96	7.09	7.07	7.95
pH units	pH (lab)		7.73	8.20	6.97	7.16	7.52
uS/cm	Conductivity (field)		1372	1991	209	400	834
uS/cm	Conductivity (lab)		1700	2200	226	448	990
°C	Temperature (field)		0.4	0.2	0.2	2.5	4.2
mg CaCO <sub>3</sub> /L	Hardness		1030	1280	110	175	324
mg CaCO <sub>3</sub> /L	Alkalinity		296	395	40	52	68
mg/L	Total Dissolved Solids		1200	1970	260	352	726
mg/L	Total Suspended Solids		4	6	<2	134	739
mg/L	Chloride		3.2	4	12.7	3.1	8.3
mg/L	Sulfate		630	980	53	107	204
mg /L	Ammonia		0.014	0.005	<0.05	0.12	0.168
mg /L	Nitrate		0.4	6	1.1	13	59
mg/L	Total Cyanide		0.005	0.008	0.006	0.032	0.012
mg/L	WAD Cyanide		0.004	0.002	0.004	0.014	0.064
	<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum		0.02	0.016	0.624	4.61	17.3
mg/L	Antimony		<0.0004	0.0009	0.0055	0.01	0.0071
mg/L	Arsenic		0.0007	0.0018	0.002	0.0037	0.012
mg/L	Barium		0.13	0.132	0.11	0.228	0.623
mg/L	Beryllium		<0.0002	<0.0001	<0.0002	0.0001	0.0006
mg/L	Bismuth		<0.001	<0.0005	<0.001	<0.0005	<0.001
mg/L	Boron		0.008	0.007	0.01	0.013	0.021
mg/L	Cadmium		0.00016	0.00006	0.00011	0.00031	0.00044
mg/L	Calcium		207	281	28	40.1	81.3
mg/L	Chromium		<0.001	<0.0005	0.002	0.0074	0.0228
mg/L	Cobalt		0.0076	0.0097	0.0067	0.0415	0.157
mg/L	Copper		<0.002	0.003	0.005	0.007	0.03
mg/L	Iron		<0.2	<0.1	0.7	5.5	19
mg/L	Lead		0.0007	0.0004	0.0007	0.0036	0.012
mg/L	Lithium		0.031	0.054	0.004	0.008	0.027
mg/L	Magnesium		124	140	11	18.2	29.3
mg/L	Manganese		1.39	0.098	0.16	0.6	0.594
mg/L	Mercury		<0.0001	<0.0001	<0.0001	<0.02	0.07
mg/L	Molybdenum		<0.002	<0.001	<0.002	<0.001	<0.002
mg/L	Nickel		0.0043	0.0018	0.0053	0.0074	0.0285
mg/L	Phosphorus		0.03	0.04	0.33	0.14	0.52
mg/L	Potassium		4.4	6.7	3.5	2.3	4
mg/L	Selenium		0.012	0.0293	0.0007	0.007	0.0295
mg/L	Silicon		10.5	10.7	4.49	12.2	21.8
mg/L	Silver		<0.0002	<0.0001	<0.0002	<0.0001	0.0002
mg/L	Sodium		31.8	41	6.3	23.2	90.7
mg/L	Strontium		0.716	0.894	0.082	0.146	0.32
mg/L	Sulphur		235	314	20	35.8	64.9
mg/L	Thallium		<0.0001	<0.00005	<0.0001	0.00006	0.0002
mg/L	Tin		<0.002	<0.001	<0.002	<0.001	<0.002
mg/L	Titanium		0.015	0.0215	0.011	0.231	0.558
mg/L	Uranium		<0.001	0.004	<0.001	0.0005	0.002
mg/L	Vanadium		<0.0002	0.0002	0.002	0.014	0.0503
mg/L	Zinc		0.024	0.01	0.01	0.027	0.091

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		560874-3	569512-2	574074-3	585521-2	591963-2	
	Station	BC-2	BC2	BC-2	BC-2	BC-2	BC2
Units	Date	14-Jul-07	19-Aug-07	12-Sep-07	1-Nov-07	28-Nov-07	20-Dec-07
m3/sec, m	Water Level or Flow	0.0015	0.0015	0.0024	frozen	frozen	
pH units	pH (field)	7.83	7.32	7.45	8.05	7.23	
pH units	pH (lab)	7.73	7.82	7.85	7.63	6.98	
uS/cm	Conductivity (field)	559	637	574	844	956	
uS/cm	Conductivity (lab)	689	765	517	946	975	
°C	Temperature (field)	3.8	5.6	1.4	0.5	0.2	
mg CaCO <sub>3</sub> /L	Hardness	321	374	239	530	511	
mg CaCO <sub>3</sub> /L	Alkalinity	133	157	116	195	141	
mg/L	Total Dissolved Solids	510	626	392	760	810	
mg/L	Total Suspended Solids	44	19	11	6	17	
mg/L	Chloride	1.8	1.4	1.4	2.44	2.53	
mg/L	Sulfate	23.9	270	172	320	380	
mg /L	Ammonia	0.08	0.02	0.03	0.03	0.08	
mg /L	Nitrate	5.2	2.1	1.1	4.38	0.21	
mg/L	Total Cyanide	0.016	0.007	0.003	0.008	0.003	
mg/L	WAD Cyanide	0.004	0.002	0.002	0.002	<0.002	
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	
mg/L	Aluminum	1.16	1.21	0.453	0.605	0.408	
mg/L	Antimony	0.0022	0.0016	0.0021	0.0012	0.0017	
mg/L	Arsenic	0.0014	0.0018	0.0016	0.0012	0.0011	
mg/L	Barium	0.116	0.112	0.084	0.113	0.095	
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
mg/L	Boron	0.011	0.011	0.007	0.011	0.007	
mg/L	Cadmium	0.00004	0.00005	0.00004	0.00019	0.00019	
mg/L	Calcium	74.8	89.3	56	125	117	
mg/L	Chromium	0.0021	0.0026	0.001	0.0025	0.0027	
mg/L	Cobalt	0.0129	0.0072	0.005	0.0085	0.007	
mg/L	Copper	0.004	0.004	0.002	0.004	0.003	
mg/L	Iron	1.6	1.8	1	0.9	4	
mg/L	Lead	0.0008	0.0011	0.0003	0.0036	0.0007	
mg/L	Lithium	0.014	0.014	0.01	0.02	0.012	
mg/L	Magnesium	32.5	36.6	24.1	53	53.1	
mg/L	Manganese	0.323	0.253	0.21	0.252	1.05	
mg/L	Mercury	<0.02	<0.02	<0.0001	<0.0001	<0.0001	
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001	<0.001	
mg/L	Nickel	0.002	0.0035	0.0031	0.0016	0.0044	
mg/L	Phosphorus	0.04			<0.02	1.6	
mg/L	Potassium	1.7	1.7	1.3	2.8		
mg/L	Selenium	0.0054	0.005	0.0032	0.0092	0.0017	
mg/L	Silicon	6.74	6.49	5.7	6.09	6.57	
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
mg/L	Sodium	25.4	21	13.9	22.4	24.2	
mg/L	Strontium	0.256	0.28	0.185	0.42	0.368	
mg/L	Sulphur	73.3	83.9	52.3	117	136	
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
mg/L	Tin	<0.001	<0.001	<0.001	<0.001	<0.001	
mg/L	Titanium	0.0919	0.0548	0.0189	0.0356	0.028	
mg/L	Uranium	0.0011	0.0014	0.0009	0.0022	0.0011	
mg/L	Vanadium	0.0039	0.0043	0.0021	0.0021	0.0015	
mg/L	Zinc	0.012	0.013	0.005	0.033	0.018	

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-3	BC-3	BC-3	540276-3	548998-3	554371-23
Units	Date	28-Jan-07	26-Feb-07	25-Mar-07	17-Apr-07	26-May-07	14-Jun-07
m3/sec, m	Water Level or Flow				frozen	frozen	0.1309
pH units	pH (field)				7.58	7.22	8.25
pH units	pH (lab)				7.97	7.74	7.92
uS/cm	Conductivity (field)				665	296	344
uS/cm	Conductivity (lab)				676	337	402
°C	Temperature (field)				0.2	0.1	1.5
mg CaCO <sub>3</sub> /L	Hardness				373	184	216
mg CaCO <sub>3</sub> /L	Alkalinity				183	90	123
mg/L	Total Dissolved Solids				490	252	260
mg/L	Total Suspended Solids				<2	226	64
mg/L	Chloride				17.3	0.8	0.6
mg/L	Sulfate				178	69	90
mg /L	Ammonia				<0.05	<0.05	0.012
mg /L	Nitrate				0.2	2.2	0.3
mg/L	Total Cyanide				0.001	0.004	0.002
mg/L	WAD Cyanide				<0.002	0.004	<0.002
	<b>Total Metals</b>				<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum				0.17	10.6	1.57
mg/L	Antimony				0.0053	0.006	0.0061
mg/L	Arsenic				0.0027	0.0134	0.0092
mg/L	Barium				0.11	0.338	0.11
mg/L	Beryllium				<0.0002	0.0003	<0.0002
mg/L	Bismuth				<0.001	<0.0005	<0.001
mg/L	Boron				0.007	0.01	0.01
mg/L	Cadmium				0.00006	0.00035	0.00013
mg/L	Calcium				87.8	44	52.6
mg/L	Chromium				<0.001	0.0149	0.0027
mg/L	Cobalt				0.001	0.0116	0.002
mg/L	Copper				<0.002	0.013	0.004
mg/L	Iron				0.2	12.1	2
mg/L	Lead				0.0005	0.0066	0.001
mg/L	Lithium				0.02	0.015	0.01
mg/L	Magnesium				37.3	18.2	20.5
mg/L	Manganese				0.095	0.342	0.12
mg/L	Mercury				<0.0001	<0.02	0.05
mg/L	Molybdenum				<0.002	0.002	0.002
mg/L	Nickel				0.002	0.0179	0.0055
mg/L	Phosphorus				0.04	0.23	0.06
mg/L	Potassium				2.5	2.5	2
mg/L	Selenium				0.0008	0.0026	0.001
mg/L	Silicon				5.38	16.6	6.49
mg/L	Silver				<0.0002	0.0002	<0.0002
mg/L	Sodium				4.2	5.4	2.4
mg/L	Strontium				0.392	0.233	0.269
mg/L	Sulphur				60	24.9	30.7
mg/L	Thallium				<0.0001	0.00015	<0.0001
mg/L	Tin				<0.002	<0.001	<0.002
mg/L	Titanium				0.01	0.378	0.103
mg/L	Uranium				0.0026	0.0018	0.0025
mg/L	Vanadium				0.001	0.0292	0.007
mg/L	Zinc				0.007	0.059	0.02

no water found

no water found

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		560874-4	569512-3	574074-4	585521-3	591963-3	594520-2
	<b>Station</b>	<b>BC-3</b>	<b>BC3</b>	<b>BC-3</b>	<b>BC-3</b>	<b>BC-3</b>	<b>BC-3</b>
<b>Units</b>	<b>Date</b>	14-Jul-07	19-Aug-07	12-Sep-07	1-Nov-07	28-Nov-07	18-Dec-07
m3/sec, m	<b>Water Level or Flow</b>	0.066	0.06105	0.106	frozen	frozen	frozen
pH units	<b>pH (field)</b>	8.13	7.97	7.34	8.28	7.84	7.4
pH units	<b>pH (lab)</b>	7.96	8.11	8	7.95	8.01	7.77
uS/cm	<b>Conductivity (field)</b>	418	470	474	588	668	633
uS/cm	<b>Conductivity (lab)</b>	489	553	429	582	642	763
°C	<b>Temperature (field)</b>	3.1	4.7	0.5	0.5	0.4	0.2
mg CaCO <sub>3</sub> /L	<b>Hardness</b>	254	294	214	323	357	388
mg CaCO <sub>3</sub> /L	<b>Alkalinity</b>	150	169	134	166	180	217
mg/L	<b>Total Dissolved Solids</b>	358	444	310	436	478	538
mg/L	<b>Total Suspended Solids</b>	6	4	26	4	<2	6
mg/L	<b>Chloride</b>	0.7	0.4	0.49	0.68	0.39	0.72
mg/L	<b>Sulfate</b>	124	148	111	182	191	230
mg /L	<b>Ammonia</b>	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
mg /L	<b>Nitrate</b>	0.3	0.2	0.25	0.2	0.22	0.4
mg/L	<b>Total Cyanide</b>	0.001	<0.001	<0.001	<0.001	<0.001	0.001
mg/L	<b>WAD Cyanide</b>	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	<b>Aluminum</b>	0.334	0.269	0.809	0.077	0.046	0.032
mg/L	<b>Antimony</b>	0.0048	0.0044	0.0064	0.0042	0.0039	0.0041
mg/L	<b>Arsenic</b>	0.0044	0.0042	0.0076	0.0022	0.0019	0.0015
mg/L	<b>Barium</b>	0.073	0.076	0.094	0.07	0.075	0.084
mg/L	<b>Beryllium</b>	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Bismuth</b>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	<b>Boron</b>	0.009	0.009	0.008	0.008	0.01	0.01
mg/L	<b>Cadmium</b>	0.00006	0.00006	0.00012	0.00006	0.00006	0.00012
mg/L	<b>Calcium</b>	60.8	72.2	52.1	78.8	86	93.6
mg/L	<b>Chromium</b>	0.001	0.001	0.0018	0.0022	0.0014	0.001
mg/L	<b>Cobalt</b>	0.0006	0.0006	0.0014	0.0005	0.0006	0.0006
mg/L	<b>Copper</b>	0.002	0.002	0.003	0.001	<0.001	0.002
mg/L	<b>Iron</b>	0.5	0.5	1	0.2	0.1	<0.1
mg/L	<b>Lead</b>	0.0003	0.0003	0.0006	0.0002	0.0002	0.0004
mg/L	<b>Lithium</b>	0.015	0.017	0.015	0.017	0.02	0.022
mg/L	<b>Magnesium</b>	24.9	27.6	20.5	30.7	34.6	37.5
mg/L	<b>Manganese</b>	0.066	0.081	0.093	0.075	0.089	0.095
mg/L	<b>Mercury</b>	<0.02	<0.02	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Molybdenum</b>	0.002	0.002	0.002	0.002	0.002	0.002
mg/L	<b>Nickel</b>	0.0025	0.0029	0.006	0.0022	0.0029	0.0025
mg/L	<b>Phosphorus</b>	<0.02			<0.02		
mg/L	<b>Potassium</b>	1.6	1.5	1.4	1.7	1.6	2
mg/L	<b>Selenium</b>	0.001	0.0012	0.0012	0.001	0.0006	0.0012
mg/L	<b>Silicon</b>	4.48	4.77	5.6	4.64	4.64	5.03
mg/L	<b>Silver</b>	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Sodium</b>	3.2	4.1	3	4.2	4.4	6.3
mg/L	<b>Strontium</b>	0.376	0.395	0.284	0.46	0.472	0.548
mg/L	<b>Sulphur</b>	40.1	47.3	34.2	54.5	61.9	68.2
mg/L	<b>Thallium</b>	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	<b>Tin</b>	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
mg/L	<b>Titanium</b>	0.0529	0.0116	0.0313	0.0058	0.0062	0.0056
mg/L	<b>Uranium</b>	0.0022	0.0024	0.0018	0.0024	0.0027	0.0031
mg/L	<b>Vanadium</b>	0.0017	0.0016	0.0043	0.0006	0.0005	0.0003
mg/L	<b>Zinc</b>	0.006	0.01	0.013	0.01	0.014	0.018



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		536014-10	554371-10	569512-4	594520-11
	Station	BC4	BC-4	BC4	BC-4
Units	Date	26-Mar-07	13-Jun-07	21-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow	frozen	nm	0.0316	frozen
pH units	pH (field)	7.6	8.22	7.82	7.32
pH units	pH (lab)	8.00	7.88	8.09	7.76
uS/cm	Conductivity (field)	1165		639	827
uS/cm	Conductivity (lab)	1270	533	744	954
°C	Temperature (field)	0.2	0.8	2.9	0.2
mg CaCO <sub>3</sub> /L	Hardness	727	288	434	523
mg CaCO <sub>3</sub> /L	Alkalinity	301	140	202	250
mg/L	Total Dissolved Solids	1000	392	664	704
mg/L	Total Suspended Solids	<2	26	292	<2
mg/L	Chloride	0.4	0.4	0.2	0.51
mg/L	Sulfate	430	157	244	252
mg /L	Ammonia	0.008	0.01	0.03	<0.01
mg /L	Nitrate	0.4	0.3	0.2	0.18
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	<0.005	0.514	4.13	0.018
mg/L	Antimony	0.0038	0.0044	0.0046	0.0034
mg/L	Arsenic	0.0018	0.005	0.0136	0.0018
mg/L	Barium	0.114	0.096	0.193	0.096
mg/L	Beryllium	<0.0001	<0.0001	0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.008	0.006	0.01	0.01
mg/L	Cadmium	0.0002	0.00013	0.00039	0.00039
mg/L	Calcium	177	69	106	129
mg/L	Chromium	<0.0005	0.001	0.0076	0.0006
mg/L	Cobalt	0.0006	0.001	0.0034	0.0006
mg/L	Copper	0.002	0.003	0.009	<0.001
mg/L	Iron	<0.1	0.9	6.1	0.1
mg/L	Lead	0.001	0.001	0.0067	0.0029
mg/L	Lithium	0.01	0.005	0.012	0.009
mg/L	Magnesium	69.4	28.2	41.4	49
mg/L	Manganese	0.099	0.097	0.262	0.152
mg/L	Mercury	<0.0001	0.05	<0.02	<0.0001
mg/L	Molybdenum	0.004	0.002	0.002	0.003
mg/L	Nickel	0.0043	0.0056	0.0114	0.0038
mg/L	Phosphorus	<0.02	0.03		
mg/L	Potassium	2.2	1.1	1.8	1.6
mg/L	Selenium	0.0038	0.0029	0.0027	0.0027
mg/L	Silicon	4.1	4.02	10.2	3.47
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	2	1.4	2.4	2.6
mg/L	Strontium	0.742	0.404	0.565	0.697
mg/L	Sulphur	138	49.9	75.9	97
mg/L	Thallium	<0.00005	<0.00005	0.00008	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0034	0.0555	0.193	0.0074
mg/L	Uranium	0.0075	0.0034	0.0044	0.006
mg/L	Vanadium	0.0003	0.0028	0.0152	0.0005
mg/L	Zinc	0.018	0.013	0.042	0.039

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		536014-9	554371-11	569512-5	594520-13
	Station	BC5	BC-5	BC5	BC-5
Units	Date	26-Mar-07	13-Jun-07	21-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow	frozen	0.1165	0.06822	frozen
pH units	pH (field)	7.66	8.28	8.22	7.04
pH units	pH (lab)	8.23	7.87	8.18	7.88
uS/cm	Conductivity (field)	861	350	560	617
uS/cm	Conductivity (lab)	936	400	648	659
°C	Temperature (field)	0.2	1	3.8	0.2
mg CaCO <sub>3</sub> /L	Hardness	517	212	366	345
mg CaCO <sub>3</sub> /L	Alkalinity	243	127	208	180
mg/L	Total Dissolved Solids	712	298	516	450
mg/L	Total Suspended Solids	<2		<2	3
mg/L	Chloride	0.5	0.4	0.2	0.36
mg/L	Sulfate	270	89	176	185
mg /L	Ammonia	0.019	0.011	<0.01	0.04
mg /L	Nitrate	0.8	<0.1	<0.1	0.28
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.008	0.067	0.033	0.09
mg/L	Antimony	0.0003	0.0004	0.0004	0.0002
mg/L	Arsenic	<0.0002	0.0007	0.0006	0.0003
mg/L	Barium	0.076	0.063	0.068	0.059
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.008	0.005	0.006	0.006
mg/L	Cadmium	0.00015	0.00008	0.00006	0.00014
mg/L	Calcium	122	53.7	91.8	85.8
mg/L	Chromium	<0.0005	<0.0005	<0.0005	0.0007
mg/L	Cobalt	0.0002	0.0002	<0.0001	<0.0001
mg/L	Copper	0.001	0.002	0.001	0.002
mg/L	Iron	<0.1	0.2	<0.1	0.1
mg/L	Lead	0.0003	0.0001	<0.0001	0.0002
mg/L	Lithium	0.004	0.003	0.006	0.003
mg/L	Magnesium	51.8	18.9	33.2	31.8
mg/L	Manganese	0.02	0.017	0.005	0.01
mg/L	Mercury	<0.0001	0.08	<0.02	<0.0001
mg/L	Molybdenum	0.002	0.003	0.003	0.001
mg/L	Nickel	0.0026	0.0057	0.0024	0.0018
mg/L	Phosphorus	0.02	<0.02		
mg/L	Potassium	1.6	0.9	0.9	1
mg/L	Selenium	0.0032	0.0012	0.0018	0.0022
mg/L	Silicon	4.88	2.94	3.42	3.59
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	2.6	1	2.3	2.7
mg/L	Strontium	0.523	0.211	0.36	0.379
mg/L	Sulphur	87.8	29.3	55.5	58.6
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0007	0.0312	0.0041	0.008
mg/L	Uranium	0.0039	0.0022	0.0038	0.0027
mg/L	Vanadium	0.0011	0.0014	0.0013	0.0014
mg/L	Zinc	0.015	0.014	0.011	0.017

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		536014-8	554371-7	569512-6	594520-8
	Station	BC6	BC6	BC6	BC6
Units	Date	26-Mar-07	13-Jun-07	22-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow	frozen	nm	nm	frozen
pH units	pH (field)	7.73	8.07	7.76	7.22
pH units	pH (lab)	7.73	7.72	7.96	7.79
uS/cm	Conductivity (field)	279	283	240	234
uS/cm	Conductivity (lab)	358	331	287	294
°C	Temperature (field)	0.2	4	8.2	0.4
mg CaCO <sub>3</sub> /L	Hardness	172	173	144	140
mg CaCO <sub>3</sub> /L	Alkalinity	106	104	97	87
mg/L	Total Dissolved Solids	236	228	228	168
mg/L	Total Suspended Solids	<2	4	4	4
mg/L	Chloride	0.2	0.4	0.1	0.22
mg/L	Sulfate	75	71	60	54.5
mg /L	Ammonia	<0.002	0.007	<0.01	<0.01
mg /L	Nitrate	0.6	0.2	0.1	0.2
mg/L	Total Cyanide	0.001	0.001	<0.001	<0.001
mg/L	WAD Cyanide	<0.002	<0.002	<0.002	0.002
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.005	0.184	0.015	0.032
mg/L	Antimony	<0.0002	0.0003	<0.0002	<0.0002
mg/L	Arsenic	<0.0002	0.0005	0.0005	0.0002
mg/L	Barium	0.064	0.047	0.058	0.076
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.006	0.008	0.006	0.004
mg/L	Cadmium	0.00004	0.0001	0.00005	0.00003
mg/L	Calcium	45.5	43.4	39.6	38.5
mg/L	Chromium	<0.0005	0.0008	<0.0005	0.0005
mg/L	Cobalt	<0.0001	0.0003	<0.0001	<0.0001
mg/L	Copper	<0.001	0.002	<0.001	<0.001
mg/L	Iron	<0.1	0.3	<0.1	<0.1
mg/L	Lead	0.0002	0.0002	0.0002	<0.0001
mg/L	Lithium	0.002	0.002	0.003	0.002
mg/L	Magnesium	14.1	15.8	10.9	10.5
mg/L	Manganese	<0.005	0.014	0.005	<0.005
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	0.002	<0.001	<0.001
mg/L	Nickel	0.0009	0.0031	<0.0005	<0.0005
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	0.5	0.6	0.5	0.5
mg/L	Selenium	0.0005	0.001	0.0004	0.0005
mg/L	Silicon	3.04	3.31	2.69	2.72
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	2.6	1.4	2.7	2.8
mg/L	Strontium	0.262	0.194	0.242	0.236
mg/L	Sulphur	23.6	23	19.4	20
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	<0.0005	0.0429	0.0015	0.0024
mg/L	Uranium	0.0012	0.0011	0.0008	0.0008
mg/L	Vanadium	0.0004	0.0025	0.0003	0.0003
mg/L	Zinc	0.004	0.02	0.007	0.005

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-16	555696-2 BC-16	BC16	BC-16
Units	Date	26-Mar-07	24-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow		nm		
pH units	pH (field)		7.20		
pH units	pH (lab)		7.84		
uS/cm	Conductivity (field)		710		
uS/cm	Conductivity (lab)		616		
°C	Temperature (field)		nm		
mg CaCO <sub>3</sub> /L	Hardness		351		
mg CaCO <sub>3</sub> /L	Alkalinity		163		
mg/L	Total Dissolved Solids		488		
mg/L	Total Suspended Solids		6		
mg/L	Chloride		1.8		
mg/L	Sulfate		211		
mg /L	Ammonia		0.01		
mg /L	Nitrate		0.2		
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Total Metals</b>		<b>TM</b>		
mg/L	Aluminum		1.06		
mg/L	Antimony		0.0484		
mg/L	Arsenic		0.0199		
mg/L	Barium		0.109		
mg/L	Beryllium		<0.0001		
mg/L	Bismuth		<0.0005		
mg/L	Boron		0.014		
mg/L	Cadmium		0.00025		
mg/L	Calcium		102		
mg/L	Chromium		0.0017		
mg/L	Cobalt		0.0006		
mg/L	Copper		0.003		
mg/L	Iron		0.8		
mg/L	Lead		0.0009		
mg/L	Lithium		0.004		
mg/L	Magnesium		23.5		
mg/L	Manganese		0.015		
mg/L	Mercury		0.05		
mg/L	Molybdenum		0.001		
mg/L	Nickel		0.0038		
mg/L	Phosphorus		0.12		
mg/L	Potassium		1.3		
mg/L	Selenium		0.0038		
mg/L	Silicon		6.43		
mg/L	Silver		<0.0001		
mg/L	Sodium		1.6		
mg/L	Strontium		0.303		
mg/L	Sulphur		63.3		
mg/L	Thallium		<0.00005		
mg/L	Tin		<0.001		
mg/L	Titanium		0.0265		
mg/L	Uranium		0.0034		
mg/L	Vanadium		0.0049		
mg/L	Zinc		0.019		

no water found

no water found

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-31	554371-3	569512-15	594520-9
Units	Date	BC-31	BC-31	BC31	BC-31
m3/sec, m	Water Level or Flow	26-Mar-07	13-Jun-07	21-Aug-07	19-Dec-07
pH units	pH (field)		nm	0.372525	frozen
pH units	pH (lab)		8.27	8.22	7.13
uS/cm	Conductivity (field)		7.75	8.11	7.8
uS/cm	Conductivity (lab)		261	472	654
°C	Temperature (field)		301	559	791
mg CaCO <sub>3</sub> /L	Hardness		2.5	4.3	0.2
mg CaCO <sub>3</sub> /L	Alkalinity		162	299	424
mg/L	Total Dissolved Solids		97	184	230
mg/L	Total Suspended Solids		240	458	560
mg/L	Chloride		54	<2	<2
mg/L	Sulfate		0.3	0.1	0.29
mg /L	Ammonia		62	140	228
mg /L	Nitrate		0.013	<0.01	<0.01
mg/L	Total Cyanide		0.2	<0.1	0.23
mg/L	WAD Cyanide				
	<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum		0.968	0.049	0.008
mg/L	Antimony		0.0007	0.0025	0.0007
mg/L	Arsenic		0.0018	0.0027	0.0006
mg/L	Barium		0.099	0.06	0.078
mg/L	Beryllium		<0.0001	<0.0001	<0.0001
mg/L	Bismuth		<0.0005	<0.0005	<0.0005
mg/L	Boron		0.006	0.009	0.01
mg/L	Cadmium		0.00014	0.0006	0.0001
mg/L	Calcium		38.5	71.5	99.6
mg/L	Chromium		0.0019	0.0009	0.0006
mg/L	Cobalt		0.0009	<0.0001	<0.0001
mg/L	Copper		0.006	0.003	0.002
mg/L	Iron		1.6	0.3	<0.1
mg/L	Lead		0.0008	0.062	0.008
mg/L	Lithium		0.003	0.007	0.008
mg/L	Magnesium		15.9	29.3	42.5
mg/L	Manganese		0.051	0.19	0.006
mg/L	Mercury		0.04	<0.02	<0.0001
mg/L	Molybdenum		0.001	0.002	0.002
mg/L	Nickel		0.0062	0.0019	0.0013
mg/L	Phosphorus		0.06		
mg/L	Potassium		0.9	0.9	1.2
mg/L	Selenium		0.0011	0.0014	0.0024
mg/L	Silicon		4.52	3.41	3.96
mg/L	Silver		<0.0001	0.0006	<0.0001
mg/L	Sodium		1.2	2.4	3.6
mg/L	Strontium		0.198	0.366	0.519
mg/L	Sulphur		20.7	43.9	69.8
mg/L	Thallium		<0.00005	<0.00005	<0.00005
mg/L	Tin		<0.001	<0.001	<0.001
mg/L	Titanium		0.0628	0.0034	0.0049
mg/L	Uranium		0.0018	0.0034	0.0058
mg/L	Vanadium		0.006	0.0009	0.0005
mg/L	Zinc		0.019	0.042	0.015

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		536014-1	554371-27	569512-18	594520-7
	Station	BC34	BC34	BC34	BC34
Units	Date	25-Mar-07	14-Jun-07	23-Aug-07	18-Dec-07
m3/sec, m	Water Level or Flow	frozen	nm	0.562	frozen
pH units	pH (field)	7.42	8.27	7.78	7.28
pH units	pH (lab)	7.85	7.9	8.3	7.74
uS/cm	Conductivity (field)	592	513	424	584
uS/cm	Conductivity (lab)	687	377	509	609
°C	Temperature (field)	0.2	6.5	7	0.5
mg CaCO <sub>3</sub> /L	Hardness	359	197	267	320
mg CaCO <sub>3</sub> /L	Alkalinity	179	116	155	164
mg/L	Total Dissolved Solids	496	260	412	410
mg/L	Total Suspended Solids	<2	4	<2	<2
mg/L	Chloride	0.1	0.4	0.1	0.27
mg/L	Sulfate	190	84	133	162
mg /L	Ammonia	0.008	0.019	<0.01	<0.01
mg /L	Nitrate	0.5	0.2	<0.1	0.25
mg/L	Total Cyanide		<0.001		
mg/L	WAD Cyanide			<0.002	
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.01	0.234	0.196	0.016
mg/L	Antimony	0.0002	0.0003	0.0003	0.0003
mg/L	Arsenic	<0.0002	0.0009	0.0002	<0.0002
mg/L	Barium	0.054	0.054	0.053	0.054
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.005	0.007	0.007	0.006
mg/L	Cadmium	0.00012	0.00013	0.0001	0.0001
mg/L	Calcium	88.3	49.2	67.1	79.8
mg/L	Chromium	<0.0005	0.001	0.001	0.0005
mg/L	Cobalt	0.0002	0.0002	0.0001	<0.0001
mg/L	Copper	0.001	0.003	0.002	0.001
mg/L	Iron	<0.1	0.3	0.2	<0.1
mg/L	Lead	0.0004	0.002	0.0006	0.0001
mg/L	Lithium	0.003	0.003	0.004	0.003
mg/L	Magnesium	33.7	17.9	24.1	29.4
mg/L	Manganese	0.032	0.015	0.016	0.012
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	0.001	0.001	0.001	0.001
mg/L	Nickel	0.0026	0.0036	0.0024	0.0017
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	0.6	0.7	0.8	0.8
mg/L	Selenium	0.0017	0.0015	0.0015	0.0018
mg/L	Silicon	3.4	3.26	2.81	3.23
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	1.6	1.2	1.8	2.5
mg/L	Strontium	0.363	0.223	0.296	0.342
mg/L	Sulphur	58.2	27.9	41.9	53.3
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	<0.0005	0.0536	0.0082	0.0041
mg/L	Uranium	0.0028	0.0014	0.0019	0.0025
mg/L	Vanadium	0.0008	0.003	0.0028	0.0008
mg/L	Zinc	0.013	0.014	0.015	0.014

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		569512-21	574074-7	585521-5	591963-5	
	Station	BC37	BC-37	BC-37	BC-37	BC37
Units	Date	20-Aug-07	12-Sep-07	1-Nov-07	28-Nov-07	20-Dec-07
m3/sec, m	Water Level or Flow	0.061	0.0518	frozen	frozen	
pH units	pH (field)	8.41	8.21	8.19	8.06	
pH units	pH (lab)	8.29	8.06	8.11	7.97	
uS/cm	Conductivity (field)	430	478	470	589	
uS/cm	Conductivity (lab)	511	407	529	622	
°C	Temperature (field)	5.2	2	0.5	0.5	
mg CaCO <sub>3</sub> /L	Hardness	266	200	295	348	
mg CaCO <sub>3</sub> /L	Alkalinity	156	127	154	182	
mg/L	Total Dissolved Solids	422	298	410	472	
mg/L	Total Suspended Solids	15	60	8	<2	
mg/L	Chloride	0.4	0.5	0.54	0.71	
mg/L	Sulfate	132	101	153	173	
mg /L	Ammonia	<0.01	<0.01	<0.01	0.02	
mg /L	Nitrate	0.02	0.22	0.29	0.24	
mg/L	Total Cyanide	-	0.001	<0.001	<0.001	
mg/L	WAD Cyanide	-	<0.002	<0.002	<0.002	
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	
mg/L	Aluminum	0.552	1.68	0.238	0.012	
mg/L	Antimony	0.003	0.0054	0.0035	0.0037	
mg/L	Arsenic	0.0046	0.0083	0.0048	0.0034	
mg/L	Barium	0.078	0.123	0.094	0.081	
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	
mg/L	Boron	0.009	0.008	0.008	0.012	
mg/L	Cadmium	0.00004	0.00013	0.00004	0.00005	
mg/L	Calcium	66	48.7	73.3	85.2	
mg/L	Chromium	0.0014	0.0051	0.0016	0.0013	
mg/L	Cobalt	0.0007	0.0016	0.0007	0.0004	
mg/L	Copper	0.002	0.005	0.002	0.002	
mg/L	Iron	0.8	2.2	0.3	<0.1	
mg/L	Lead	0.0005	0.0013	0.0003	0.0002	
mg/L	Lithium	0.015	0.012	0.014	0.018	
mg/L	Magnesium	24.5	19.1	27.3	32.8	
mg/L	Manganese	0.057	0.087	0.04	0.026	
mg/L	Mercury	<0.02	<0.0001	<0.0001	<0.0001	
mg/L	Molybdenum	0.003	0.003	0.003	0.004	
mg/L	Nickel	0.0024	0.0064	0.0012	0.0017	
mg/L	Phosphorus			<0.02		
mg/L	Potassium	1.4	1.5	1.5	1.7	
mg/L	Selenium	0.0014	0.0016	0.002	0.0019	
mg/L	Silicon	6.18	8.05	6.04	6.53	
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001	
mg/L	Sodium	5.2	3.9	5.1	5.6	
mg/L	Strontium	0.354	0.249	0.406	0.464	
mg/L	Sulphur	42	31.4	48.7	57	
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005	
mg/L	Tin	<0.001	<0.001	<0.001	<0.001	
mg/L	Titanium	0.0262	0.0707	0.0133	0.0044	
mg/L	Uranium	0.0027	0.002	0.0027	0.0033	
mg/L	Vanadium	0.0035	0.0074	0.0018	0.0008	
mg/L	Zinc	0.008	0.014	0.007	0.01	

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-39	BC-39	BC-39	540276-5	548998-5	554371-3
Units	Date	28-Jan-07	26-Feb-07	25-Mar-07	17-Apr-07	26-May-07	13-Jun-07
m3/sec, m	Water Level or Flow				nm	1.17	0.0721
pH units	pH (field)				7.61	7.26	8.43
pH units	pH (lab)				6.74	7.81	7.94
uS/cm	Conductivity (field)				157	303	359
uS/cm	Conductivity (lab)				100	346	425
°C	Temperature (field)				0.2	0.75	7
mg CaCO <sub>3</sub> /L	Hardness				48	180	196
mg CaCO <sub>3</sub> /L	Alkalinity				31	84	108
mg/L	Total Dissolved Solids				100	246	294
mg/L	Total Suspended Solids				3	235	<2
mg/L	Chloride				12.2	1.2	1.4
mg/L	Sulfate				16.3	70	90
mg /L	Ammonia				<0.05	<0.05	0.007
mg /L	Nitrate				<0.1	4.2	6.7
mg/L	Total Cyanide				<0.001	0.017	0.015
mg/L	WAD Cyanide				<0.002	0.008	0.006
	<b>Total Metals</b>				<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum				0.063	6.94	0.131
mg/L	Antimony				0.0005	0.0073	0.0053
mg/L	Arsenic				0.002	0.0184	0.0037
mg/L	Barium				0.032	0.281	0.074
mg/L	Beryllium				<0.0002	0.0003	<0.0001
mg/L	Bismuth				<0.001	<0.0005	<0.0005
mg/L	Boron				0.01	0.01	0.006
mg/L	Cadmium				0.00011	0.00034	0.00004
mg/L	Calcium				11	43.5	48.8
mg/L	Chromium				<0.001	0.0107	0.0006
mg/L	Cobalt				0.0004	0.0159	0.0162
mg/L	Copper				<0.002	0.011	0.003
mg/L	Iron				<0.2	8.7	0.3
mg/L	Lead				0.0005	0.0038	0.0004
mg/L	Lithium				<0.002	0.012	0.006
mg/L	Magnesium				5	17.3	18
mg/L	Manganese				0.02	0.316	0.009
mg/L	Mercury				<0.0001	<0.02	<0.02
mg/L	Molybdenum				<0.002	0.002	0.003
mg/L	Nickel				0.001	0.0158	0.0024
mg/L	Phosphorus				0.31	0.23	<0.02
mg/L	Potassium				6.8	2.2	1.3
mg/L	Selenium				<0.0004	0.0032	0.0038
mg/L	Silicon				1.6	13.1	3.45
mg/L	Silver				<0.0002	0.0001	<0.0001
mg/L	Sodium				<0.8	8.6	11.9
mg/L	Strontium				0.052	0.221	0.244
mg/L	Sulphur				6.1	24.3	29.8
mg/L	Thallium				<0.0001	0.00011	<0.00005
mg/L	Tin				<0.002	<0.001	<0.001
mg/L	Titanium				0.0028	0.326	0.039
mg/L	Uranium				<0.001	0.0021	0.0021
mg/L	Vanadium				0.0007	0.0261	0.0011
mg/L	Zinc				0.01	0.054	0.006

no water found

no water found

no water found



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		560874-5	569512-23	574074-6			
	Station	BC-39	BC39	BC-39	BC-39	BC-39	BC39
Units	Date	14-Jul-07	20-Aug-07	12-Sep-07	1-Nov-07	28-Nov-07	20-Dec-07
m3/sec, m	Water Level or Flow	0.001	0.032025	0.0369	no water found	no water found	no water found
pH units	pH (field)	8.24	7.82	8.16			
pH units	pH (lab)	8.06	8.31	8.07			
uS/cm	Conductivity (field)	362	428	429			
uS/cm	Conductivity (lab)	468	504	390			
°C	Temperature (field)	12.2	9.9	2			
mg CaCO <sub>3</sub> /L	Hardness	244	264	189			
mg CaCO <sub>3</sub> /L	Alkalinity	142	156	122			
mg/L	Total Dissolved Solids	326	402	286			
mg/L	Total Suspended Solids	26	<2	<2			
mg/L	Chloride	0.6	0.4	0.48			
mg/L	Sulfate	116	133	96.6			
mg /L	Ammonia	0.01	<0.01	<0.01			
mg /L	Nitrate	0.4	<0.1	0.14			
mg/L	Total Cyanide	0.004		0.001			
mg/L	WAD Cyanide	0.002		<0.002			
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>			
mg/L	Aluminum	0.898	0.05	0.169			
mg/L	Antimony	0.0038	0.003	0.0048			
mg/L	Arsenic	0.0053	0.0035	0.0043			
mg/L	Barium	0.089	0.068	0.065			
mg/L	Beryllium	<0.0001	<0.0001	<0.0001			
mg/L	Bismuth	<0.0005	<0.0005	<0.0005			
mg/L	Boron	0.01	0.009	0.007			
mg/L	Cadmium	0.00004	0.00002	0.00005			
mg/L	Calcium	58.9	65.6	46.3			
mg/L	Chromium	0.0017	<0.0005	0.0005			
mg/L	Cobalt	0.0011	0.0003	0.0005			
mg/L	Copper	0.002	0.001	0.002			
mg/L	Iron	1.1	0.1	0.3			
mg/L	Lead	0.0005	0.0003	0.0003			
mg/L	Lithium	0.014	0.014	0.01			
mg/L	Magnesium	23.4	24.2	17.9			
mg/L	Manganese	0.051	<0.005	0.01			
mg/L	Mercury	<0.02	<0.02	<0.01			
mg/L	Molybdenum	0.003	0.003	0.003			
mg/L	Nickel	0.0022	0.001	0.0024			
mg/L	Phosphorus	0.02					
mg/L	Potassium	1.5	1.3	1.1			
mg/L	Selenium	0.0016	0.0012	0.0012			
mg/L	Silicon	6.62	4.36	4.94			
mg/L	Silver	<0.0001	<0.0001	<0.0001			
mg/L	Sodium	4.6	5.1	3.7			
mg/L	Strontium	0.354	0.343	0.241			
mg/L	Sulphur	38	41.8	29.9			
mg/L	Thallium	<0.00005	<0.00005	<0.00005			
mg/L	Tin	<0.001	<0.001	<0.001			
mg/L	Titanium	0.0717	0.0041	0.0083			
mg/L	Uranium	0.0026	0.0028	0.0017			
mg/L	Vanadium	0.004	0.0013	0.0015			
mg/L	Zinc	0.006	0.006	0.004			

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-53	BC-53	BC53	540276-6	548998-6	554371-5
Units	Date	28-Jan-07	26-Feb-07	25-Mar-07	17-Apr-07	27-May-07	13-Jun-07
m3/sec, m	Water Level or Flow				*	1.21	nm
pH units	pH (field)				7.72	7.28	8.31
pH units	pH (lab)				7.71	7.92	7.82
uS/cm	Conductivity (field)				305	268	393
uS/cm	Conductivity (lab)				342	316	456
°C	Temperature (field)				0.2	6	2.5
mg CaCO <sub>3</sub> /L	Hardness				180	151	216
mg CaCO <sub>3</sub> /L	Alkalinity				87	83	112
mg/L	Total Dissolved Solids				284	222	332
mg/L	Total Suspended Solids				<2	<2	152
mg/L	Chloride				11	1	1.6
mg/L	Sulfate				77	64	98
mg /L	Ammonia				<0.05	<0.05	0.037
mg /L	Nitrate				0.2	2.7	8.2
mg/L	Total Cyanide				<0.001	0.01	0.019
mg/L	WAD Cyanide				0.002	0.004	0.008
	<b>Total Metals</b>				<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum				0.12	0.228	5.25
mg/L	Antimony				0.0024	0.0046	0.0058
mg/L	Arsenic				0.0075	0.004	0.0133
mg/L	Barium				0.07	0.062	0.229
mg/L	Beryllium				<0.0002	<0.0001	0.0002
mg/L	Bismuth				<0.001	<0.0005	<0.0005
mg/L	Boron				0.007	0.007	0.011
mg/L	Cadmium				0.00016	0.00005	0.00026
mg/L	Calcium				42.7	37.2	53.2
mg/L	Chromium				<0.001	0.0008	0.008
mg/L	Cobalt				0.001	0.0089	0.0211
mg/L	Copper				<0.002	0.002	0.01
mg/L	Iron				0.2	0.4	5.8
mg/L	Lead				0.0003	0.0004	0.0038
mg/L	Lithium				0.007	0.006	0.014
mg/L	Magnesium				18	14	20.2
mg/L	Manganese				0.04	0.018	0.17
mg/L	Mercury				<0.0001	<0.02	0.05
mg/L	Molybdenum				<0.002	0.002	0.003
mg/L	Nickel				0.002	0.0017	0.0126
mg/L	Phosphorus				0.25	0.02	0.17
mg/L	Potassium				3	1.3	2
mg/L	Selenium				<0.0004	0.002	0.0051
mg/L	Silicon				5.13	3.59	9.43
mg/L	Silver				<0.0002	<0.0001	<0.0001
mg/L	Sodium				3.3	6	13.7
mg/L	Strontium				0.18	0.178	0.276
mg/L	Sulphur				27.6	21.6	32.5
mg/L	Thallium				<0.0001	<0.00005	0.00008
mg/L	Tin				<0.002	<0.001	<0.001
mg/L	Titanium				0.005	0.0486	0.216
mg/L	Uranium				0.001	0.0014	0.0026
mg/L	Vanadium				0.002	0.0018	0.0196
mg/L	Zinc				0.01	0.008	0.042

no water found

no water found

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		560874-6	569512-25	574074-5	585521-6	591963-6	
	Station	BC53	BC53	BC53	BC53	BC53	BC53
Units	Date	14-Jul-07	20-Aug-07	12-Sep-07	1-Nov-07	28-Nov-07	20-Dec-07
m <sup>3</sup> /sec, m	Water Level or Flow	0.059	0.043665	0.1576	frozen	frozen	
pH units	pH (field)	8.31	8.22	8.10	8.04	7.78	
pH units	pH (lab)	8.01	8.23	8.04	7.98	7.9	
uS/cm	Conductivity (field)	390	432	456	666	617	
uS/cm	Conductivity (lab)	443	506	405	884	593	
°C	Temperature (field)	5.6	5.1	2.3	0.5	0.5	
mg CaCO <sub>3</sub> /L	Hardness	229	265	201	461	327	
mg CaCO <sub>3</sub> /L	Alkalinity	136	157	127	255	172	
mg/L	Total Dissolved Solids	328	358	300	716	432	
mg/L	Total Suspended Solids	5	16	74	20	<2	
mg/L	Chloride	82	0.4	0.51	1.03	0.56	
mg/L	Sulfate	16.7	133	100	257	159	
mg /L	Ammonia	0.02	<0.01	<0.01	<0.01	<0.01	
mg /L	Nitrate	0.6	0.2	0.22	0.55	0.18	
mg/L	Total Cyanide	0.003	0.001	<0.001	0.002	<0.001	
mg/L	WAD Cyanide	0.002	<0.002	<0.002	<0.002	<0.002	
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	
mg/L	Aluminum	0.451	0.572	1.83	0.316	0.01	
mg/L	Antimony	0.0036	0.0032	0.0052	0.0051	0.0032	
mg/L	Arsenic	0.005	0.0047	0.0086	0.0063	0.0027	
mg/L	Barium	0.083	0.08	0.121	0.092	0.077	
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
mg/L	Boron	0.009	0.008	0.01	0.013	0.012	
mg/L	Cadmium	0.00008	0.00004	0.00014	0.00007	0.00004	
mg/L	Calcium	55.5	65.9	48.9	112	80.5	
mg/L	Chromium	0.0011	0.0027	0.0033	0.0018	0.0013	
mg/L	Cobalt	0.0007	0.0007	0.0016	0.0009	0.0002	
mg/L	Copper	0.002	0.002	0.004	0.002	0.001	
mg/L	Iron	0.6	0.8	2.3	0.4	<0.1	
mg/L	Lead	0.0009	0.0007	0.0012	0.001	<0.0001	
mg/L	Lithium	0.013	0.014	0.012	0.022	0.017	
mg/L	Magnesium	22	24.4	19.1	43.9	30.6	
mg/L	Manganese	0.034	0.058	0.085	0.058	0.024	
mg/L	Mercury	<0.02	<0.02	<0.0001	<0.0001	<0.0001	
mg/L	Molybdenum	0.003	0.003	0.003	0.005	0.004	
mg/L	Nickel	0.0013	0.002	0.0057	0.0018	0.0019	
mg/L	Phosphorus	0.03			0.02	1.5	
mg/L	Potassium	1.4	1.4	1.4	2.3		
mg/L	Selenium	0.0015	0.0012	0.0015	0.003	0.0015	
mg/L	Silicon	5.14	6.23	8.25	7.15	6.18	
mg/L	Silver	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	
mg/L	Sodium	4.4	4.9	4.2	7.9	5.2	
mg/L	Strontium	0.328	0.35	0.263	0.639	0.438	
mg/L	Sulphur	35.6	41.8	31.5	79.8	53.2	
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
mg/L	Tin	<0.001	<0.001	<0.001	<0.001	<0.001	
mg/L	Titanium	0.0605	0.028	0.0956	0.0178	0.0042	
mg/L	Uranium	0.0025	0.0025	0.002	0.0043	0.0031	
mg/L	Vanadium	0.0026	0.0034	0.0084	0.0025	0.0008	
mg/L	Zinc	0.014	0.007	0.014	0.01	0.009	

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BC-32	554371-19	569512-16	594520-20
Units	Date	BC-32	BC-32	BC32	BC-32
m3/sec, m	Water Level or Flow	25-Mar-07	14-Jun-07	21-Aug-07	20-Dec-07
pH units	pH (field)		nm	0.017	frozen
pH units	pH (lab)		8.07	7.92	7.46
uS/cm	Conductivity (field)		7.87	7.99	7.82
uS/cm	Conductivity (lab)		403	521	702
°C	Temperature (field)		473	618	725
mg CaCO <sub>3</sub> /L	Hardness		2.5	3.9	0.2
mg CaCO <sub>3</sub> /L	Alkalinity		261	335	397
mg/L	Total Dissolved Solids		165	216	232
mg/L	Total Suspended Solids		308	508	500
mg/L	Chloride		18	22	6
mg/L	Sulfate		0.7	0.4	0.68
mg /L	Ammonia		98	147	180
mg /L	Nitrate		0.018	<0.01	0.02
mg/L	Total Cyanide		0.2	0.1	0.1
mg/L	WAD Cyanide			<0.001	<0.001
				<0.002	0.002
	<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum		0.552	0.041	0.07
mg/L	Antimony		0.011	0.009	0.0093
mg/L	Arsenic		0.007	0.0023	0.0025
mg/L	Barium		0.11	0.078	0.092
mg/L	Beryllium		<0.0002	<0.0001	<0.0001
mg/L	Bismuth		<0.001	<0.0005	<0.0005
mg/L	Boron		0.01	0.011	0.01
mg/L	Cadmium		0.00014	0.00009	0.00013
mg/L	Calcium		64.2	84.1	98.9
mg/L	Chromium		0.002	0.0013	0.0019
mg/L	Cobalt		0.0007	0.0004	0.001
mg/L	Copper		0.002	<0.001	<0.001
mg/L	Iron		0.7	0.2	0.3
mg/L	Lead		0.0024	0.0008	<0.0001
mg/L	Lithium		0.009	0.01	0.011
mg/L	Magnesium		24.6	30.5	36.3
mg/L	Manganese		0.076	0.097	0.185
mg/L	Mercury		0.04	<0.02	<0.0001
mg/L	Molybdenum		0.003	0.002	0.003
mg/L	Nickel		0.0049	0.0031	0.004
mg/L	Phosphorus		<0.02		
mg/L	Potassium		2	1.9	2.3
mg/L	Selenium		0.002	0.0012	0.0009
mg/L	Silicon		4	3.41	3.75
mg/L	Silver		<0.0002	<0.0001	<0.0001
mg/L	Sodium		1	2.2	2.5
mg/L	Strontium		0.352	0.479	0.562
mg/L	Sulphur		32.5	46.1	58.1
mg/L	Thallium		<0.0001	<0.00005	<0.00005
mg/L	Tin		<0.002	<0.001	<0.001
mg/L	Titanium		0.0532	0.0038	0.006
mg/L	Uranium		0.0032	0.0029	0.0032
mg/L	Vanadium		0.0038	0.0004	0.0009
mg/L	Zinc		0.01	0.01	0.016

no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		569512-17	594520-14
	Station	BC33	BC-33
Units	Date	22-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow	0.96638	frozen
pH units	pH (field)	8.29	7.40
pH units	pH (lab)	8.21	7.9
uS/cm	Conductivity (field)	421	838
uS/cm	Conductivity (lab)	500	863
°C	Temperature (field)	5.6	0.4
mg CaCO <sub>3</sub> /L	Hardness	266	461
mg CaCO <sub>3</sub> /L	Alkalinity	152	244
mg/L	Total Dissolved Solids	418	624
mg/L	Total Suspended Solids	<2	<2
mg/L	Chloride	0.1	0.52
mg/L	Sulfate	133	263
mg /L	Ammonia	<0.01	0.03
mg /L	Nitrate	<0.1	0.41
mg/L	Total Cyanide	<0.001	<0.001
mg/L	WAD Cyanide	<0.002	0.002
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.017	0.018
mg/L	Antimony	0.0002	0.0003
mg/L	Arsenic	0.0002	0.0005
mg/L	Barium	0.046	0.077
mg/L	Beryllium	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005
mg/L	Boron	0.007	0.008
mg/L	Cadmium	0.00007	0.0002
mg/L	Calcium	67	115
mg/L	Chromium	0.0017	0.0008
mg/L	Cobalt	<0.0001	<0.0001
mg/L	Copper	0.001	0.003
mg/L	Iron	<0.1	<0.1
mg/L	Lead	0.0007	0.0001
mg/L	Lithium	0.003	0.004
mg/L	Magnesium	24.1	42.2
mg/L	Manganese	0.006	0.009
mg/L	Mercury	<0.02	<0.0001
mg/L	Molybdenum	0.001	0.002
mg/L	Nickel	0.0017	0.0018
mg/L	Phosphorus		
mg/L	Potassium	0.7	1.1
mg/L	Selenium	0.0017	0.0029
mg/L	Silicon	2.81	4.59
mg/L	Silver	<0.0001	<0.0001
mg/L	Sodium	1.8	3.3
mg/L	Strontium	0.294	0.509
mg/L	Sulphur	42	78.5
mg/L	Thallium	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001
mg/L	Titanium	0.0029	0.0059
mg/L	Uranium	0.0018	0.0036
mg/L	Vanadium	0.0011	0.0011
mg/L	Zinc	0.011	0.022

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		569512-19	594520-12
	Station	BC35	BC-35
Units	Date	21-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow	nm	frozen
pH units	pH (field)	8.1	7.36
pH units	pH (lab)	8.21	7.86
uS/cm	Conductivity (field)	581	725
uS/cm	Conductivity (lab)	682	797
°C	Temperature (field)	3.4	0.2
mg CaCO <sub>3</sub> /L	Hardness	375	423
mg CaCO <sub>3</sub> /L	Alkalinity	218	244
mg/L	Total Dissolved Solids	570	554
mg/L	Total Suspended Solids	<2	<2
mg/L	Chloride	0.2	0.16
mg/L	Sulfate	186	219
mg /L	Ammonia	<0.01	<0.01
mg /L	Nitrate	<0.1	0.08
mg/L	Total Cyanide	<0.001	<0.001
mg/L	WAD Cyanide	<0.002	<0.002
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.034	0.007
mg/L	Antimony	0.0005	0.0003
mg/L	Arsenic	0.0008	0.0004
mg/L	Barium	0.069	0.086
mg/L	Beryllium	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005
mg/L	Boron	0.008	0.008
mg/L	Cadmium	0.00004	0.00003
mg/L	Calcium	87.3	96.1
mg/L	Chromium	<0.0005	0.0006
mg/L	Cobalt	<0.0001	<0.0001
mg/L	Copper	0.001	<0.001
mg/L	Iron	<0.1	<0.1
mg/L	Lead	0.0004	<0.0001
mg/L	Lithium	0.009	0.011
mg/L	Magnesium	38.2	44.5
mg/L	Manganese	0.02	0.011
mg/L	Mercury	<0.02	<0.0001
mg/L	Molybdenum	0.002	<0.001
mg/L	Nickel	0.0031	0.0016
mg/L	Phosphorus		
mg/L	Potassium	0.9	1.1
mg/L	Selenium	0.0015	0.0009
mg/L	Silicon	3.04	3.67
mg/L	Silver	<0.0001	<0.0001
mg/L	Sodium	2.8	3.6
mg/L	Strontium	0.428	0.512
mg/L	Sulphur	57.9	66.4
mg/L	Thallium	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001
mg/L	Titanium	0.0045	0.0051
mg/L	Uranium	0.0044	0.0041
mg/L	Vanadium	0.0006	0.0004
mg/L	Zinc	0.015	0.016

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		569512-20	594520-10
	Station	BC36	BC36
Units	Date	21-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow	0.39717	frozen
pH units	pH (field)	8.17	7.06
pH units	pH (lab)	8.15	7.88
uS/cm	Conductivity (field)	478	682
uS/cm	Conductivity (lab)	557	734
°C	Temperature (field)	3.2	0.2
mg CaCO <sub>3</sub> /L	Hardness	297	384
mg CaCO <sub>3</sub> /L	Alkalinity	196	227
mg/L	Total Dissolved Solids	464	502
mg/L	Total Suspended Solids	<2	<2
mg/L	Chloride	<0.1	0.28
mg/L	Sulfate	128	190
mg /L	Ammonia	<0.01	<0.01
mg /L	Nitrate	0.2	0.28
mg/L	Total Cyanide	<0.001	<0.001
mg/L	WAD Cyanide	<0.002	<0.002
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.029	0.019
mg/L	Antimony	<0.0002	0.0003
mg/L	Arsenic	<0.0002	<0.0002
mg/L	Barium	0.061	0.077
mg/L	Beryllium	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005
mg/L	Boron	0.008	0.009
mg/L	Cadmium	0.00006	0.00009
mg/L	Calcium	72.6	92.9
mg/L	Chromium	0.0005	0.0006
mg/L	Cobalt	<0.0001	<0.0001
mg/L	Copper	0.001	0.002
mg/L	Iron	<0.1	<0.1
mg/L	Lead	0.0002	0.0001
mg/L	Lithium	0.006	0.008
mg/L	Magnesium	28.1	37
mg/L	Manganese	0.008	0.009
mg/L	Mercury	<0.02	<0.0001
mg/L	Molybdenum	0.001	0.001
mg/L	Nickel	0.0017	0.0012
mg/L	Phosphorus		
mg/L	Potassium	0.8	1.1
mg/L	Selenium	0.0015	0.0021
mg/L	Silicon	3.44	3.91
mg/L	Silver	<0.0001	<0.0001
mg/L	Sodium	2.4	3.9
mg/L	Strontium	0.396	0.512
mg/L	Sulphur	40	60
mg/L	Thallium	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001
mg/L	Titanium	0.0032	0.0048
mg/L	Uranium	0.0039	0.0054
mg/L	Vanadium	0.001	0.0006
mg/L	Zinc	0.01	0.016

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

		536014-11	554371-8	569512-22	594520-27
	Station	BC38	BC-38	BC38	BC-38
Units	Date	26-Mar-07	13-Jun-07	21-Aug-07	18-Dec-07
m3/sec, m	Water Level or Flow	frozen	nm	nm	frozen
pH units	pH (field)	7.48	8.20	7.82	7.40
pH units	pH (lab)	7.65	7.74	7.93	7.83
uS/cm	Conductivity (field)	178	170	222	287
uS/cm	Conductivity (lab)	335	196	268	317
°C	Temperature (field)	0.3	5.5	8.6	0.4
mg CaCO <sub>3</sub> /L	Hardness	164	94	130	154
mg CaCO <sub>3</sub> /L	Alkalinity	98	61	93	95
mg/L	Total Dissolved Solids	232	142	206	194
mg/L	Total Suspended Solids	<2	12	<2	6
mg/L	Chloride	0.4	0.3	0.1	0.12
mg/L	Sulfate	71	38	52	60.9
mg /L	Ammonia	0.043	0.008	<0.01	<0.01
mg /L	Nitrate	0.6	0.2	0.1	0.17
mg/L	Total Cyanide	0.001	<0.002	<0.001	<0.001
mg/L	WAD Cyanide	<0.002	<0.001	<0.002	0.002
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	0.005	0.346	0.025	0.104
mg/L	Antimony	0.0003	<0.0002	<0.0002	<0.0002
mg/L	Arsenic	<0.0002	0.0009	0.0004	0.0005
mg/L	Barium	0.065	0.054	0.059	0.071
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.005	0.006	0.006	0.005
mg/L	Cadmium	0.00007	0.00005	0.00003	0.00003
mg/L	Calcium	44.2	26.5	37.5	41.9
mg/L	Chromium	<0.0005	0.001	0.0007	0.0007
mg/L	Cobalt	<0.0001	0.0003	<0.0001	<0.0001
mg/L	Copper	0.001	0.005	<0.001	0.001
mg/L	Iron	<0.1	0.4	<0.1	0.1
mg/L	Lead	0.0007	0.0003	0.0002	0.0001
mg/L	Lithium	0.002	0.003	0.003	0.002
mg/L	Magnesium	13.1	6.8	9.7	12
mg/L	Manganese	0.008	0.021	0.027	0.008
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.0011	0.0046	0.0005	<0.0005
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	<0.4	<0.4	0.5	0.5
mg/L	Selenium	0.0007	0.0005	0.0004	0.0006
mg/L	Silicon	2.87	3	2.83	3.04
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	2.3	1.4	2.5	3
mg/L	Strontium	0.273	0.169	0.243	0.251
mg/L	Sulphur	22.8	12.5	17.3	22.4
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	<0.0005	0.0623	0.0018	0.0046
mg/L	Uranium	0.0013	0.0006	0.0006	0.0012
mg/L	Vanadium	0.0002	0.0014	0.0002	0.0005
mg/L	Zinc	0.007	0.006	0.006	0.008



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	BTC	BTC	569512-31 BTC	BTC
Units	Date	25-Mar-07	13-Jun-07	22-Aug-07	18-Dec-07
m <sup>3</sup> /sec, m	Water Level or Flow			nm	
pH units	pH (field)			7.91	
pH units	pH (lab)			8.02	
uS/cm	Conductivity (field)			3030	
uS/cm	Conductivity (lab)			2650	
°C	Temperature (field)			16.3	
mg CaCO <sub>3</sub> /L	Hardness			649	
mg CaCO <sub>3</sub> /L	Alkalinity			158	
mg/L	Total Dissolved Solids			2270	
mg/L	Total Suspended Solids			<2	
mg/L	Chloride			25	
mg/L	Sulfate			410	
mg /L	Ammonia			0.14	
mg /L	Nitrate			200	
mg/L	Total Cyanide			0.7	
mg/L	WAD Cyanide			0.128	
	<b>Total Metals</b>			<b>TM</b>	
mg/L	Aluminum			0.034	
mg/L	Antimony			1.1	
mg/L	Arsenic			0.185	
mg/L	Barium			0.087	
mg/L	Beryllium			<0.0001	
mg/L	Bismuth			<0.0005	
mg/L	Boron			0.049	
mg/L	Cadmium			0.00004	
mg/L	Calcium			190	
mg/L	Chromium			0.0008	
mg/L	Cobalt			0.61	
mg/L	Copper			0.004	
mg/L	Iron			0.1	
mg/L	Lead			0.0006	
mg/L	Lithium			0.004	
mg/L	Magnesium			42.7	
mg/L	Manganese			0.205	
mg/L	Mercury			<0.02	
mg/L	Molybdenum			0.029	
mg/L	Nickel			0.0086	
mg/L	Phosphorus				
mg/L	Potassium			10.5	
mg/L	Selenium			0.116	
mg/L	Silicon			1.17	
mg/L	Silver			<0.0001	
mg/L	Sodium			312	
mg/L	Strontium			1.06	
mg/L	Sulphur			140	
mg/L	Thallium			0.00019	
mg/L	Tin			<0.001	
mg/L	Titanium			0.0101	
mg/L	Uranium			0.0146	
mg/L	Vanadium			0.0007	
mg/L	Zinc			0.015	

no samples taken

no samples taken

no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Station	Blue Tank	554371-26 Blue Tank	569512-30 Blue Tank	Blue Tank
Units	Date	26-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow		nm	0.46	
pH units	pH (field)		6.78	7.03	
pH units	pH (lab)		7.16	7.31	
uS/cm	Conductivity (field)		679	730	
uS/cm	Conductivity (lab)		845	935	
°C	Temperature (field)		18	18.5	
mg CaCO <sub>3</sub> /L	Hardness		466	523	
mg CaCO <sub>3</sub> /L	Alkalinity		297	415	
mg/L	Total Dissolved Solids		638	758	
mg/L	Total Suspended Solids		<2	<2	
mg/L	Chloride		2.6	12	
mg/L	Sulfate		163	144	
mg /L	Ammonia		0.007	<0.01	
mg /L	Nitrate		5.5	<0.1	
mg/L	Total Cyanide		0.001	0.001	
mg/L	WAD Cyanide		<0.002	<0.002	
	<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	
mg/L	Aluminum		0.006	<0.005	
mg/L	Antimony		0.049	0.0463	
mg/L	Arsenic		0.0812	0.0732	
mg/L	Barium		0.075	0.049	
mg/L	Beryllium		<0.0001	<0.0001	
mg/L	Bismuth		<0.0005	<0.0005	
mg/L	Boron		0.008	0.007	
mg/L	Cadmium		0.00023	0.00019	
mg/L	Calcium		138	161	
mg/L	Chromium		0.0006	0.0006	
mg/L	Cobalt		0.0005	0.0003	
mg/L	Copper		0.001	<0.001	
mg/L	Iron		<0.1	<0.1	
mg/L	Lead		<0.0001	0.0003	
mg/L	Lithium		0.001	0.001	
mg/L	Magnesium		29.6	29	
mg/L	Manganese		0.012	0.015	
mg/L	Mercury		0.13	<0.02	
mg/L	Molybdenum		0.003	0.002	
mg/L	Nickel		0.0049	0.0011	
mg/L	Phosphorus		<0.02		
mg/L	Potassium		1.6	1.4	
mg/L	Selenium		0.0141	0.0063	
mg/L	Silicon		4.78	5.07	
mg/L	Silver		<0.0001	<0.0001	
mg/L	Sodium		3	3.5	
mg/L	Strontium		0.632	0.714	
mg/L	Sulphur		51.5	45.5	
mg/L	Thallium		0.00006	0.00005	
mg/L	Tin		<0.001	<0.001	
mg/L	Titanium		0.0378	0.0028	
mg/L	Uranium		0.0089	0.0077	
mg/L	Vanadium		0.0003	0.0002	
mg/L	Zinc		0.012	0.022	

dry - no samples taken

dry - no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Surface Stations**

	Water License		546852-2	554371-21
	Discharge Standards	Station	BC-28	BC-28
Units		Date	17-May-07	13-Jun-07
m3/sec, m		Water Level or Flow	-4.1	nm
pH units		pH (field)	8.08	9.15
pH units	6.0-9.5	pH (lab)	8.12	8.18
uS/cm		Conductivity (field)		875
uS/cm		Conductivity (lab)	807	1100
°C		Temperature (field)	10.2	13.5
mg CaCO <sub>3</sub> /L		Hardness	169	248
mg CaCO <sub>3</sub> /L		Alkalinity	48	67
mg/L		Total Dissolved Solids	592	796
mg/L	50	Total Suspended Solids	<2	<2
mg/L		Chloride	7.4	11
mg/L		Sulfate	21	164
mg /L	15	Ammonia	0.02	0.04
mg/L		Nitrate	56	83
mg/L	2	Total Cyanide	0.11	0.19
mg/L	0.25	WAD Cyanide	0.038	0.046
<b>Total Metals</b>			<b>TM</b>	<b>TM</b>
mg/L		Aluminum	1.62	0.018
mg/L	1.00	Antimony	0.433	0.594
mg/L	0.50	Arsenic	0.12	0.152
mg/L		Barium	0.104	0.063
mg/L		Beryllium	<0.0001	<0.0001
mg/L	0.50	Bismuth	<0.0005	<0.0005
mg/L		Boron	0.018	0.018
mg/L	0.10	Cadmium	0.00014	<0.00001
mg/L		Calcium	50.6	74.3
mg/L	0.50	Chromium	0.0024	<0.0005
mg/L		Cobalt	0.118	0.208
mg/L	0.20	Copper	0.004	0.002
mg/L	1.00	Iron	1.1	<0.1
mg/L	0.20	Lead	0.0012	0.0001
mg/L		Lithium	0.002	0.002
mg/L		Magnesium	10.4	15.3
mg/L	2.00	Manganese	0.093	0.028
mg/L	0.005	Mercury	0.0002	0.04
mg/L	0.50	Molybdenum	0.01	0.016
mg/L	0.80	Nickel	0.0044	0.0038
mg/L		Phosphorus	0.03	<0.02
mg/L		Potassium	3.1	2.9
mg/L	0.25	Selenium	0.025	0.0477
mg/L		Silicon	4.44	0.64
mg/L	0.10	Silver	0.0001	<0.0001
mg/L		Sodium	65.6	129
mg/L		Strontium	0.251	0.399
mg/L		Sulphur	33.6	53.4
mg/L		Thallium	0.00011	0.0001
mg/L		Tin	<0.001	<0.001
mg/L		Titanium	0.0551	0.0222
mg/L		Uranium	0.0031	0.0059
mg/L		Vanadium	0.0068	0.0005
mg/L	0.50	Zinc	0.02	0.004

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**BC-28a Heap Effluent**

Appendix B5-1

	Water License		523459-1	529513-1	536014-2	540276-4	548998-4
	Discharge Standards	Station	BC28a	BC28a	BC28a	BC28a	BC28a
Units		Date	28-Jan-07	26-Feb-07	25-Mar-07	17-Apr-07	26-May-07
m <sup>3</sup> /sec, m		Water Level or Flow	0.0004	0.00041	0.00049	0.0004	0.0011
pH units		pH (field)	7.4	7.87	7.80	7.54	7.92
pH units	6.0-9.5	pH (lab)		8.07	8.06	7.85	7.81
uS/cm		Conductivity (field)	4130	4610	4380	4300	3070
uS/cm		Conductivity (lab)		4120	4210	3410	2470
°C		Temperature (field)	2.7	2.7	2.6	3.4	4.5
mg CaCO <sub>3</sub> /L		Hardness	981	989	982	888	689
mg CaCO <sub>3</sub> /L		Alkalinity		110	111	108	118
mg/L		Total Dissolved Solids	3380	3070	3410	2800	2000
mg/L	50	Total Suspended Solids	<2	2	<2	4	4
mg/L		Chloride	34.9	38	38	43.2	20
mg/L		Sulfate	490	490	530	460	420
mg /L	15	Ammonia	0.009	0.022	0.014	<0.05	<0.05
mg /L		Nitrate	347	380	360	300	180
mg/L	2	Total Cyanide	1.2	1.5	1	0.9	0.8
mg/L	0.25	WAD Cyanide	0.146	0.172	0.188	0.13	0.062
<b>Total Metals</b>			<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L		Aluminium	0.01	0.007	<0.005	0.648	4.24
mg/L	1.00	Antimony	1.59	1.66	1.57	1.35	1.6
mg/L	0.50	Arsenic	0.342	0.335	0.294	0.27	0.487
mg/L		Barium	0.073	0.066	0.068	0.1	0.315
mg/L		Beryllium	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
mg/L	0.50	Bismuth	<0.0005	<0.0005	<0.0005	<0.001	<0.001
mg/L		Boron	0.011	0.011	0.008	0.01	0.02
mg/L	0.10	Cadmium	<0.00001	<0.00001	<0.00001	0.00014	0.00037
mg/L		Calcium	298	299	296	264	208
mg/L	0.50	Chromium	0.0007	0.0006	0.0006	0.002	0.0089
mg/L		Cobalt	0.986	0.938	0.968	0.69	0.497
mg/L	0.20	Copper	0.004	0.003	0.003	0.005	0.008
mg/L	1.00	Iron	0.3	0.3	0.3	0.7	2
mg/L	0.20	Lead	0.0004	0.0002	0.0002	0.0007	0.003
mg/L		Lithium	0.006	0.004	0.005	0.004	0.004
mg/L		Magnesium	57.8	58.7	59.2	55.5	41.4
mg/L	2.00	Manganese	0.017	0.016	0.016	0.05	0.035
mg/L	0.005	Mercury	<0.0001	<0.0001	<0.0001	0.0001	0.0002
mg/L	0.50	Molybdenum	0.032	0.032	0.029	0.026	0.033
mg/L	0.80	Nickel	0.009	0.0098	0.0078	0.0086	0.007
mg/L		Phosphorus	0.16	0.18	0.18	0.18	0.28
mg/L		Potassium	5.4	5.6	5.3	6	5
mg/L	0.25	Selenium	0.194	0.197	0.169	0.135	0.12
mg/L		Silicon	3.5	3.48	3.44	4.56	10.9
mg/L	0.10	Silver	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
mg/L		Sodium	448	452	459	357	273
mg/L		Strontium	1.5	1.64	1.49	1.15	1.03
mg/L		Sulphur	184	176	176	166	150
mg/L		Thallium	0.00031	0.00029	0.00027	0.00033	0.00049
mg/L		Tin	<0.001	<0.001	<0.001	<0.002	<0.002
mg/L		Titanium	0.0115	0.0097	0.0046	0.017	0.0926
mg/L		Uranium	0.0214	0.0198	0.0188	0.019	0.015
mg/L		Vanadium	0.0003	0.0003	0.0003	0.0029	0.0388
mg/L	0.50	Zinc	0.008	0.007	0.006	0.009	0.03

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**BC-28a Heap Effluent**

Appendix B5-1

	Water License		554371-9	560874-2	569512-14	574074-2	585521-4
	Discharge Standards	Station	BC28a	BC28a	BC28a	BC28a	BC28a
Units		Date	13-Jun-07	14-Jul-07	23-Aug-07	12-Sep-07	1-Nov-07
m <sup>3</sup> /sec, m		Water Level or Flow	0.0011	nm	0.0009	0.0007	0.0008
pH units		pH (field)	7.71	7.56	7.71	7.14	8.03
pH units	6.0-9.5	pH (lab)	7.72	7.67	7.71	7.76	7.96
uS/cm		Conductivity (field)	4120	3940	3430	3600	4860
uS/cm		Conductivity (lab)	3230	3720	2750	3270	3650
°C		Temperature (field)	4	5.6	4.1	4.5	4.4
mg CaCO <sub>3</sub> /L		Hardness	880	1060	755	861	1080
mg CaCO <sub>3</sub> /L		Alkalinity	140	142	145	156	122
mg/L		Total Dissolved Solids	2760	3240	2410	2780	3380
mg/L	50	Total Suspended Solids	<2	221	138	<2	<2
mg/L		Chloride	26	31	19	26.1	33.7
mg/L		Sulfate	550	580	460	562	664
mg /L	15	Ammonia	0.022	0.02	<0.01	0.01	<0.01
mg /L		Nitrate	260	310	200	262	340
mg/L	2	Total Cyanide	0.9	1.4	0.93	0.9	0.5
mg/L	0.25	WAD Cyanide	0.102	0.106	0.106	0.2	0.116
<b>Total Metals</b>			<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L		Aluminium	0.185	13.3	3.32	0.029	0.011
mg/L	1.00	Antimony	1.42	1.41	1.08	1.35	1.67
mg/L	0.50	Arsenic	0.336	0.879	0.483	0.329	0.354
mg/L		Barium	0.104	0.517	0.219	0.074	0.068
mg/L		Beryllium	<0.0001	0.0005	0.0002	<0.0001	<0.0001
mg/L	0.50	Bismuth	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
mg/L		Boron	0.008	0.02	0.011	0.01	0.01
mg/L	0.10	Cadmium	<0.0001	0.0015	0.00072	<0.0001	0.00004
mg/L		Calcium	262	310	226	248	317
mg/L	0.50	Chromium	0.001	0.0211	0.0067	0.0008	0.0017
mg/L		Cobalt	0.698	0.839	0.523	0.728	0.919
mg/L	0.20	Copper	0.004	0.024	0.009	0.004	0.003
mg/L	1.00	Iron	0.4	21.1	6.6	0.2	0.3
mg/L	0.20	Lead	0.0004	0.0282	0.0111	<0.0001	<0.0001
mg/L		Lithium	0.003	0.02	0.007	0.005	0.005
mg/L		Magnesium	54.8	68.6	46.5	58.4	69.8
mg/L	2.00	Manganese	0.029	0.632	0.313	0.033	0.018
mg/L	0.005	Mercury	0.00011	0.00006	0.00034	<0.0001	0.0001
mg/L	0.50	Molybdenum	0.028	0.026	0.02	0.024	0.03
mg/L	0.80	Nickel	0.013	0.029	0.0143	0.0113	<0.0005
mg/L		Phosphorus	0.15	0.29			0.09
mg/L		Potassium	4.7	7.7	4.7	4.7	5.5
mg/L	0.25	Selenium	0.168	0.173	0.118	0.158	0.196
mg/L		Silicon	4.14	20.7	8.74	3.93	4.1
mg/L	0.10	Silver	<0.0001	0.0004	0.0001	<0.0001	<0.0001
mg/L		Sodium	358	462	289	362	458
mg/L		Strontium	1.33	1.94	1.2	1.35	1.98
mg/L		Sulphur	187	208	155	185	227
mg/L		Thallium	0.00031	0.001	0.00046	0.00029	0.00031
mg/L		Tin	<0.001	<0.002	<0.001	<0.001	<0.001
mg/L		Titanium	0.0504	0.476	0.124	0.0114	0.0149
mg/L		Uranium	0.0224	0.023	0.0191	0.0232	0.0239
mg/L		Vanadium	0.0019	0.0511	0.015	0.0004	0.0004
mg/L	0.50	Zinc	0.012	0.16	0.058	0.013	0.011

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**BC-28a Heap Effluent**

	Water License		591963-4	594520-1
	Discharge Standards	Station	BC28a	BC28a
Units		Date	28-Nov-07	18-Dec-07
m3/sec, m		Water Level or Flow	0.0005	0.0005
pH units		pH (field)	8.04	7.89
pH units	6.0-9.5	pH (lab)	7.98	8.02
uS/cm		Conductivity (field)	4220	3246
uS/cm		Conductivity (lab)	3860	4040
°C		Temperature (field)	2.8	2.8
mg CaCO <sub>3</sub> /L		Hardness	1060	1040
mg CaCO <sub>3</sub> /L		Alkalinity	120	119
mg/L		Total Dissolved Solids	3510	3430
mg/L	50	Total Suspended Solids	3	<2
mg/L		Chloride	33.3	33.1
mg/L		Sulfate	510	583
mg /L	15	Ammonia	<0.01	0.04
mg /L		Nitrate	372	385
mg/L	2	Total Cyanide	1.3	1.4
mg/L	0.25	WAD Cyanide	0.112	0.08
<b>Total Metals</b>			<b>TM</b>	<b>TM</b>
mg/L		Aluminum	0.013	0.022
mg/L	1.00	Antimony	1.53	1.58
mg/L	0.50	Arsenic	0.348	0.337
mg/L		Barium	0.07	0.068
mg/L		Beryllium	<0.0001	<0.0001
mg/L	0.50	Bismuth	<0.0005	<0.0005
mg/L		Boron	0.012	0.011
mg/L	0.10	Cadmium	0.00004	0.00006
mg/L		Calcium	312	309
mg/L	0.50	Chromium	0.0015	0.0012
mg/L		Cobalt	0.896	0.868
mg/L	0.20	Copper	0.003	0.003
mg/L	1.00	Iron	0.3	0.3
mg/L	0.20	Lead	<0.0001	<0.0001
mg/L		Lithium	0.006	0.006
mg/L		Magnesium	68.2	64.5
mg/L	2.00	Manganese	0.02	0.013
mg/L	0.005	Mercury	0.0001	<0.0001
mg/L	0.50	Molybdenum	0.031	0.03
mg/L	0.80	Nickel	0.0065	0.0038
mg/L		Phosphorus	5.3	
mg/L		Potassium		5.4
mg/L	0.25	Selenium	0.189	0.187
mg/L		Silicon	3.92	3.84
mg/L	0.10	Silver	<0.0001	<0.0001
mg/L		Sodium	452	457
mg/L		Strontium	1.56	1.62
mg/L		Sulphur	216	206
mg/L		Thallium	0.00031	0.00032
mg/L		Tin	<0.001	<0.001
mg/L		Titanium	0.0161	0.0156
mg/L		Uranium	0.0243	0.0232
mg/L		Vanadium	0.0004	0.0004
mg/L	0.50	Zinc	0.01	0.008

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**In Pit Stations**

		536014-17	554371-15	569512-7	594520-17
	<b>Station</b>	<b>BC10</b>	<b>BC-10</b>	<b>BC10</b>	<b>BC-10</b>
<b>Units</b>	<b>Date</b>	27-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	<b>Water Level or Flow</b>	-1.29	-6.6	-1.25	-1.44
pH units	<b>pH (field)</b>	7.89	8.58	8.38	7.67
pH units	<b>pH (lab)</b>	8.05	8	8.3	8.04
uS/cm	<b>Conductivity (field)</b>	363	256	318	389
uS/cm	<b>Conductivity (lab)</b>	517	317	393	491
°C	<b>Temperature (field)</b>	0.3	15	15.7	0.2
mg CaCO <sub>3</sub> /L	<b>Hardness</b>	258	158	206	254
mg CaCO <sub>3</sub> /L	<b>Alkalinity</b>	165	90	130	156
mg/L	<b>Total Dissolved Solids</b>	344	202	332	302
mg/L	<b>Total Suspended Solids</b>	<2	6	2	<2
mg/L	<b>Chloride</b>	0.4	0.5	0.4	0.45
mg/L	<b>Sulfate</b>	106	74	91	103
mg /L	<b>Ammonia</b>	0.009	0.006	<0.01	0.03
mg/L	<b>Nitrate</b>	0.6	<0.1	<0.1	0.07
mg/L	<b>Total Cyanide</b>				
mg/L	<b>WAD Cyanide</b>				
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	<b>Aluminum</b>	0.018	0.393	0.269	0.013
mg/L	<b>Antimony</b>	0.144	0.0968	0.166	0.2
mg/L	<b>Arsenic</b>	0.0123	0.0122	0.014	0.0149
mg/L	<b>Barium</b>	0.084	0.172	0.177	0.12
mg/L	<b>Beryllium</b>	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Bismuth</b>	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	<b>Boron</b>	0.004	0.004	0.004	0.004
mg/L	<b>Cadmium</b>	0.00005	0.00007	0.00012	0.00003
mg/L	<b>Calcium</b>	61.1	38.2	50.5	61.7
mg/L	<b>Chromium</b>	<0.0005	0.0008	0.001	0.0006
mg/L	<b>Cobalt</b>	<0.0001	0.0002	0.0001	<0.0001
mg/L	<b>Copper</b>	0.024	0.002	0.002	0.003
mg/L	<b>Iron</b>	<0.1	0.3	0.3	<0.1
mg/L	<b>Lead</b>	0.0002	0.0011	0.0006	<0.0001
mg/L	<b>Lithium</b>	0.003	0.002	0.003	0.004
mg/L	<b>Magnesium</b>	25.7	15.3	19.3	24.4
mg/L	<b>Manganese</b>	0.006	0.01	0.014	0.019
mg/L	<b>Mercury</b>	<0.0001	0.03	<0.02	<0.0001
mg/L	<b>Molybdenum</b>	0.007	0.004	0.004	0.005
mg/L	<b>Nickel</b>	0.001	0.0019	0.0008	<0.0005
mg/L	<b>Phosphorus</b>	<0.02	<0.02		
mg/L	<b>Potassium</b>	1.1	1.5	1.4	1.5
mg/L	<b>Selenium</b>	0.004	0.0044	0.0044	0.0044
mg/L	<b>Silicon</b>	3.15	2.95	2.54	2.44
mg/L	<b>Silver</b>	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Sodium</b>	0.9	0.6	1.3	1.7
mg/L	<b>Strontium</b>	0.552	0.355	0.456	0.566
mg/L	<b>Sulphur</b>	32.7	24.3	29.2	35.2
mg/L	<b>Thallium</b>	0.00009	0.0001	0.00013	0.00012
mg/L	<b>Tin</b>	<0.001	<0.001	<0.001	<0.001
mg/L	<b>Titanium</b>	<0.0005	0.0357	0.0082	0.0024
mg/L	<b>Uranium</b>	0.0107	0.006	0.0073	0.0097
mg/L	<b>Vanadium</b>	0.0003	0.0022	0.0019	0.0002
mg/L	<b>Zinc</b>	0.014	0.007	0.01	0.01

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**In Pit Stations**

		536014-12	554371-17	569512-8	594520-19
	Station	BC12	BC12	BC12	BC12
Units	Date	26-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	-1.19	-9.1	-1.14	-1.23
pH units	pH (field)	5.21	6.50	5.22	6.12
pH units	pH (lab)	5.47	6.06	4.3	6.17
uS/cm	Conductivity (field)	1595	709	993	1069
uS/cm	Conductivity (lab)	1720	914	1260	1210
°C	Temperature (field)	0.3	16	17.6	0.1
mg CaCO <sub>3</sub> /L	Hardness	979	494	712	697
mg CaCO <sub>3</sub> /L	Alkalinity	14	5	<5	36
mg/L	Total Dissolved Solids	1580	742	1200	1040
mg/L	Total Suspended Solids	10	4	20	2
mg/L	Chloride	1.4	1.6	1.4	1.61
mg/L	Sulfate	1030	460	720	580
mg /L	Ammonia	0.144	0.042	<0.01	0.1
mg /L	Nitrate	0.1	0.5	<0.1	<0.02
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	1.51	0.497	2.36	0.522
mg/L	Antimony	0.0048	0.0259	0.0078	0.0103
mg/L	Arsenic	0.0426	0.0038	0.0727	0.0666
mg/L	Barium	0.042	0.098	0.051	0.027
mg/L	Beryllium	0.004	0.0015	0.0045	0.0016
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.021	0.015	0.024	0.023
mg/L	Cadmium	0.00496	0.00314	0.00524	0.00245
mg/L	Calcium	236	123	179	173
mg/L	Chromium	0.0005	0.0006	0.0018	0.0007
mg/L	Cobalt	0.0837	0.0368	0.058	0.0424
mg/L	Copper	0.054	0.046	0.08	0.026
mg/L	Iron	5.5	1	2.4	0.2
mg/L	Lead	0.0005	0.0002	0.0011	0.0008
mg/L	Lithium	0.008	0.007	0.009	0.007
mg/L	Magnesium	94.8	45.2	64.3	64.6
mg/L	Manganese	3.04	1.31	2.12	1.5
mg/L	Mercury	<0.0001	0.03	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.203	0.117	0.154	0.108
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	4	2.2	3.1	3.3
mg/L	Selenium	<0.0002	0.0024	0.0013	0.0003
mg/L	Silicon	6.2	4.12	3.8	3.84
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	1.8	0.9	2	2.1
mg/L	Strontium	1.42	0.824	1.07	0.999
mg/L	Sulphur	317	158	233	217
mg/L	Thallium	0.00022	0.00012	0.00022	0.0002
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0221	0.0575	0.0162	0.0141
mg/L	Uranium	0.0021	0.0017	0.002	0.001
mg/L	Vanadium	<0.0001	0.0008	0.0006	0.0001
mg/L	Zinc	0.421	0.245	0.327	0.214



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**In Pit Stations**

		536014-7	554371-12	569512-9	594520-18
	Station	BC15	BC-15	BC15	BC-15
Units	Date	26-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	-4	-4.5	-3.74	-4.17
pH units	pH (field)	7.37	8.10	8.13	7.47
pH units	pH (lab)	7.64	7.82	7.94	7.71
uS/cm	Conductivity (field)	1538	379	712	985
uS/cm	Conductivity (lab)	1210	483	887	1020
°C	Temperature (field)	0.3	15	14.1	0.2
mg CaCO <sub>3</sub> /L	Hardness	681	250	498	579
mg CaCO <sub>3</sub> /L	Alkalinity	134	60	118	115
mg/L	Total Dissolved Solids	1020	350	800	828
mg/L	Total Suspended Solids	<2	<2	<2	<2
mg/L	Chloride	<0.1	0.3	0.2	0.49
mg/L	Sulfate	520	197	360	398
mg /L	Ammonia	0.007	0.017	<0.01	0.02
mg/L	Nitrate	3	0.6	0.8	1.03
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	<0.005	0.047	0.028	0.019
mg/L	Antimony	0.0019	0.0027	0.0035	0.0023
mg/L	Arsenic	0.0126	0.0328	0.0272	0.0172
mg/L	Barium	0.026	0.062	0.034	0.03
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.005	0.005	0.007	0.006
mg/L	Cadmium	0.00006	0.00004	0.00006	0.00003
mg/L	Calcium	146	55.3	110	126
mg/L	Chromium	<0.0005	<0.0005	0.0006	0.0006
mg/L	Cobalt	0.0002	<0.0001	<0.0001	<0.0001
mg/L	Copper	<0.001	<0.001	<0.001	0.001
mg/L	Iron	<0.1	<0.1	<0.1	<0.1
mg/L	Lead	0.0002	0.0003	0.0006	0.0002
mg/L	Lithium	<0.001	<0.001	0.002	0.001
mg/L	Magnesium	76.7	27.3	54.5	64
mg/L	Manganese	<0.005	0.006	<0.005	<0.005
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.001	0.0009	<0.0005	<0.0005
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	1.1	0.9	1.2	1.2
mg/L	Selenium	0.0382	0.0154	0.0222	0.0286
mg/L	Silicon	1.54	0.86	0.97	1.42
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	0.6	<0.4	1	1.4
mg/L	Strontium	1.28	0.545	1.04	1.16
mg/L	Sulphur	167	61.2	125	150
mg/L	Thallium	0.00008	0.00006	0.0001	0.00008
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0125	0.0378	0.0076	0.0099
mg/L	Uranium	0.003	0.0008	0.0023	0.0026
mg/L	Vanadium	0.0001	0.0002	0.0002	0.0002
mg/L	Zinc	0.007	0.005	0.008	0.009

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**In Pit Stations**

		536014-15	554371-13	569512-10	594520-15
	Station	BC17	BC-17	BC17	BC-17
Units	Date	27-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	-2.48	-0.5	-1.4	-2.6
pH units	pH (field)	7.64	8.18	8.18	7.41
pH units	pH (lab)	8.04	8.04	8.22	7.97
uS/cm	Conductivity (field)	698	511	555	598
uS/cm	Conductivity (lab)	816	593	699	704
°C	Temperature (field)	0.2	14	15.5	0.2
mg CaCO <sub>3</sub> /L	Hardness	436	328	393	385
mg CaCO <sub>3</sub> /L	Alkalinity	213	151	192	191
mg/L	Total Dissolved Solids	592	416	638	472
mg/L	Total Suspended Solids	<2	<2	<2	42
mg/L	Chloride	0.6	0.7	0.4	0.92
mg/L	Sulfate	230	188	225	200
mg /L	Ammonia	0.016	0.005	<0.01	<0.01
mg /L	Nitrate	0.3	0.2	<0.1	0.08
mg/L	Total Cyanide			<0.001	
mg/L	WAD Cyanide			<0.002	
<b>Total Metals</b>		<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	<0.005	0.054	0.013	0.196
mg/L	Antimony	0.0334	0.043	0.05	0.0363
mg/L	Arsenic	0.0241	0.021	0.0263	0.0208
mg/L	Barium	0.026	0.042	0.04	0.043
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.005	0.005	0.006	0.005
mg/L	Cadmium	0.00003	0.00004	0.00004	0.0001
mg/L	Calcium	102	79	94.3	94.3
mg/L	Chromium	<0.0005	<0.0005	<0.0005	0.0009
mg/L	Cobalt	0.0004	0.0001	<0.0001	0.0004
mg/L	Copper	<0.001	<0.001	<0.001	<0.001
mg/L	Iron	<0.1	<0.1	<0.1	0.5
mg/L	Lead	0.0002	0.0003	0.0003	0.001
mg/L	Lithium	0.009	0.007	0.012	0.01
mg/L	Magnesium	44.1	31.7	38.2	36.2
mg/L	Manganese	0.08	0.015	0.009	0.027
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	0.006	0.007	0.006	0.006
mg/L	Nickel	0.002	0.0012	<0.0005	<0.0005
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	1.4	1.3	1.6	1.3
mg/L	Selenium	0.0006	0.0027	0.0016	0.0024
mg/L	Silicon	3.54	2.79	3.39	3.6
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	1.5	1.2	2	2.3
mg/L	Strontium	0.873	0.62	0.783	0.757
mg/L	Sulphur	73.6	60.3	70.2	65.6
mg/L	Thallium	0.00011	0.00012	0.00017	0.00013
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	<0.0005	0.0483	0.0044	0.008
mg/L	Uranium	0.0141	0.0101	0.0111	0.0127
mg/L	Vanadium	0.0001	0.0003	0.0002	0.0018
mg/L	Zinc	0.008	0.006	0.007	0.014

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**In Pit Stations**

	Station	BC-18	BC-18	BC18	BC-18
Units	Date	27-Mar-07	14-Jun-07	22-Aug-07	19-Dec-07
m3/sec, m	Water Level or Flow				
pH units	pH (field)				
pH units	pH (lab)				
uS/cm	Conductivity (field)				
uS/cm	Conductivity (lab)				
°C	Temperature (field)				
mg CaCO <sub>3</sub> /L	Hardness				
mg CaCO <sub>3</sub> /L	Alkalinity				
mg/L	Total Dissolved Solids				
mg/L	Total Suspended Solids				
mg/L	Chloride				
mg/L	Sulfate				
mg /L	Ammonia				
mg /L	Nitrate				
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Total Metals</b>				
mg/L	Aluminum				
mg/L	Antimony				
mg/L	Arsenic				
mg/L	Barium				
mg/L	Beryllium				
mg/L	Bismuth				
mg/L	Boron				
mg/L	Cadmium				
mg/L	Calcium				
mg/L	Chromium				
mg/L	Cobalt				
mg/L	Copper				
mg/L	Iron				
mg/L	Lead				
mg/L	Lithium				
mg/L	Magnesium				
mg/L	Manganese				
mg/L	Mercury				
mg/L	Molybdenum				
mg/L	Nickel				
mg/L	Phosphorus				
mg/L	Potassium				
mg/L	Selenium				
mg/L	Silicon				
mg/L	Silver				
mg/L	Sodium				
mg/L	Strontium				
mg/L	Sulphur				
mg/L	Thallium				
mg/L	Tin				
mg/L	Titanium				
mg/L	Uranium				
mg/L	Vanadium				
mg/L	Zinc				

dry - no water found

dry - no water found

dry - no water found

dry - no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**In Pit Stations**

		536014-5	554371-25	569512-24	594520-25
	Station	BC51W	BC51W	BC51W	BC51W
Units	Date	25-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	-6.81	-9.45	-7.21	-7.03
pH units	pH (field)	4.77	4.18	3.45	4.15
pH units	pH (lab)	3.25	3.65	3.18	3.14
uS/cm	Conductivity (field)	1080	324	769	1310
uS/cm	Conductivity (lab)	1250	393	999	1420
°C	Temperature (field)	0.3	17	18.6	0.2
mg CaCO <sub>3</sub> /L	Hardness	461	122	327	532
mg CaCO <sub>3</sub> /L	Alkalinity	<5	<5	<5	<5
mg/L	Total Dissolved Solids	886	252	700	1120
mg/L	Total Suspended Solids	<2	4	16	<2
mg/L	Chloride	2	1.7	2.5	4.08
mg/L	Sulfate	600	167	420	701
mg /L	Ammonia	0.101	0.014	<0.01	0.15
mg /L	Nitrate	0.2	<0.1	<0.1	<0.02
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Total Metals</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>	<b>TM</b>
mg/L	Aluminum	9.12	3.72	9.58	12.8
mg/L	Antimony	0.0031	0.0045	0.0041	0.0042
mg/L	Arsenic	0.0113	0.0176	0.0224	0.0174
mg/L	Barium	0.082	0.129	0.084	0.115
mg/L	Beryllium	0.0259	0.0071	0.0229	0.0357
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.012	0.007	0.009	0.017
mg/L	Cadmium	0.00874	0.00249	0.00613	0.0118
mg/L	Calcium	102	29.2	75.9	121
mg/L	Chromium	0.0049	0.0018	0.0058	0.0075
mg/L	Cobalt	0.132	0.0335	0.0969	0.174
mg/L	Copper	0.89	0.262	0.74	1.22
mg/L	Iron	8.4	2.3	6.8	10.3
mg/L	Lead	0.0005	0.0008	0.001	0.0005
mg/L	Lithium	0.018	0.005	0.016	0.025
mg/L	Magnesium	49.9	12	33.3	55.9
mg/L	Manganese	5.96	1.36	4.08	6.96
mg/L	Mercury	<0.0001	0.04	0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.318	0.0904	0.239	0.427
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	2.1	1.5	2.4	3.5
mg/L	Selenium	0.0055	0.002	0.0047	0.0069
mg/L	Silicon	12.2	4.77	10.8	12.2
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	1.2	0.6	1.4	2.4
mg/L	Strontium	0.688	0.182	0.497	0.825
mg/L	Sulphur	179	53.6	140	225
mg/L	Thallium	0.00016	0.00006	0.00016	0.00016
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0145	0.0528	0.0244	0.0127
mg/L	Uranium	0.0086	0.0031	0.0092	0.0123
mg/L	Vanadium	<0.0001	0.0008	0.002	<0.0001
mg/L	Zinc	0.878	0.252	0.688	1.18

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-18	555696-1		594520-5
	Station	BC19	BC19	BC19	BC19
Units	Date	27-Mar-07	24-Jun-07	23-Aug-07	18-Dec-07
m3/sec, m	Water Level or Flow	43.7	nm	43.79	40.79
pH units	pH (field)	7.50	7.70		6.82
pH units	pH (lab)	7.27	7.19		7.06
uS/cm	Conductivity (field)	549	668		621
uS/cm	Conductivity (lab)	710	660		676
°C	Temperature (field)	0.7	nm		0.5
mg CaCO <sub>3</sub> /L	Hardness	360	359		357
mg CaCO <sub>3</sub> /L	Alkalinity	226	243		235
mg/L	Total Dissolved Solids	470	480		446
mg/L	Total Suspended Solids	20	<2		26
mg/L	Chloride	0.3	1.2		0.62
mg/L	Sulfate	151	160		146
mg /L	Ammonia	0.023	0.062		0.04
mg /L	Nitrate	0.5	0.3		0.21
mg/L	Total Cyanide	<0.001	0.001		0.001
mg/L	WAD Cyanide	0.002	<0.002		0.002
	<b>Dissolved Metals</b>	<b>DM</b>	<b>DM</b>		<b>DM</b>
mg/L	Aluminum	<0.005	0.006		0.04
mg/L	Antimony	0.0007	0.0007		0.0011
mg/L	Arsenic	0.0011	0.0011		0.0015
mg/L	Barium	0.017	0.013		0.025
mg/L	Beryllium	<0.0001	<0.0001		<0.0001
mg/L	Bismuth	<0.0005	<0.0005		<0.0005
mg/L	Boron	0.024	0.026		0.024
mg/L	Cadmium	0.00044	0.00079		0.00037
mg/L	Calcium	80.5	81.2		80.4
mg/L	Chromium	0.0016	<0.0005		0.0008
mg/L	Cobalt	0.0002	0.0002		0.0002
mg/L	Copper	0.016	0.012		0.01
mg/L	Iron	<0.01	<0.01		0.1
mg/L	Lead	0.0003	0.0006		0.0023
mg/L	Lithium	0.031	0.033		0.033
mg/L	Magnesium	38.6	38		38
mg/L	Manganese	0.019	0.026		0.042
mg/L	Mercury	<0.0001	<0.02		<0.0001
mg/L	Molybdenum	<0.001	<0.001		<0.001
mg/L	Nickel	0.0111	0.0091		0.0067
mg/L	Phosphorus	<0.02	0.04		
mg/L	Potassium	2.4	2.9		2.3
mg/L	Selenium	0.0022	0.0021		0.0017
mg/L	Silicon	8.16	8.11		7.9
mg/L	Silver	<0.0001	<0.0001		<0.0001
mg/L	Sodium	10.3	11		10.4
mg/L	Strontium	0.298	0.331		0.305
mg/L	Sulphur	49.7	50.4		50
mg/L	Thallium	<0.00005	<0.00005		<0.00005
mg/L	Tin	<0.001	<0.001		<0.001
mg/L	Titanium	0.0046	0.004		0.0054
mg/L	Uranium	<0.0005	<0.0005		<0.0005
mg/L	Vanadium	0.0033	0.0003		0.0002
mg/L	Zinc	0.073	0.08		0.051

Dry no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

	Station	BC-20	BC-20	BC-20	BC-20
Units	Date	27-Mar-07	24-Jun-07	23-Aug-07	18-Dec-07
m3/sec, m	Water Level or Flow				
pH units	pH (field)				
pH units	pH (lab)				
uS/cm	Conductivity (field)				
uS/cm	Conductivity (lab)				
°C	Temperature (field)				
mg CaCO <sub>3</sub> /L	Hardness				
mg CaCO <sub>3</sub> /L	Alkalinity				
mg/L	Total Dissolved Solids				
mg/L	Total Suspended Solids				
mg/L	Chloride				
mg/L	Sulfate				
mg /L	Ammonia				
mg /L	Nitrate				
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Dissolved Metals</b>				
mg/L	Aluminum				
mg/L	Antimony				
mg/L	Arsenic				
mg/L	Barium				
mg/L	Beryllium				
mg/L	Bismuth				
mg/L	Boron				
mg/L	Cadmium				
mg/L	Calcium				
mg/L	Chromium				
mg/L	Cobalt				
mg/L	Copper				
mg/L	Iron				
mg/L	Lead				
mg/L	Lithium				
mg/L	Magnesium				
mg/L	Manganese				
mg/L	Mercury				
mg/L	Molybdenum				
mg/L	Nickel				
mg/L	Phosphorus				
mg/L	Potassium				
mg/L	Selenium				
mg/L	Silicon				
mg/L	Silver				
mg/L	Sodium				
mg/L	Strontium				
mg/L	Sulphur				
mg/L	Thallium				
mg/L	Tin				
mg/L	Titanium				
mg/L	Uranium				
mg/L	Vanadium				
mg/L	Zinc				

dry - no water found

dry - no water found

dry - no water found

dry - no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-4	554371-1	569512-11	594520-26
	Station	BC21	BC-21	BC21	BC-21
Units	Date	25-Mar-07	13-Jun-07	19-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	31.58	32.99	33.01	33.3
pH units	pH (field)	7.52	7.13	7.37	6.61
pH units	pH (lab)	6.91	6.8	6.93	6.4
uS/cm	Conductivity (field)	338	260	264	287
uS/cm	Conductivity (lab)	306	285	293	329
°C	Temperature (field)	0.3	3	2.4	0.3
mg CaCO <sub>3</sub> /L	Hardness	128	126	122	127
mg CaCO <sub>3</sub> /L	Alkalinity	86	115	113	21
mg/L	Total Dissolved Solids	192	164	266	226
mg/L	Total Suspended Solids	9	15	6	10
mg/L	Chloride	32	9.7	15	80.2
mg/L	Sulfate	26	25.9	21.9	28.8
mg /L	Ammonia	0.035	0.004	<0.01	0.02
mg /L	Nitrate	2	0.6	0.5	0.67
mg/L	Total Cyanide	<0.001	<0.001	<0.001	<0.001
mg/L	WAD Cyanide	<0.002	<0.002	<0.002	0.002
<b>Dissolved Metals</b>		<b>DM</b>	<b>DM</b>	<b>DM</b>	<b>DM</b>
mg/L	Aluminum	<0.005	<0.005	<0.005	0.016
mg/L	Antimony	0.0005	0.0002	0.001	0.0011
mg/L	Arsenic	0.0031	0.0043	0.0028	0.0037
mg/L	Barium	0.046	0.033	0.035	0.055
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.019	0.021	0.024	0.014
mg/L	Cadmium	0.00026	0.00006	0.00014	0.00045
mg/L	Calcium	22.2	19.7	19.5	28.3
mg/L	Chromium	0.0009	0.0007	0.0008	0.0012
mg/L	Cobalt	0.0002	<0.0001	0.0001	0.0007
mg/L	Copper	0.003	0.002	0.003	0.007
mg/L	Iron	<0.01	<0.01	<0.01	0.04
mg/L	Lead	0.0002	<0.0001	0.0001	0.0013
mg/L	Lithium	0.017	0.02	0.018	0.022
mg/L	Magnesium	17.5	18.8	17.9	13.6
mg/L	Manganese	0.052	0.011	0.023	0.136
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.0099	0.0021	0.0038	0.0216
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	2.4	2.3	2.3	2.5
mg/L	Selenium	0.016	0.0194	0.0202	0.0026
mg/L	Silicon	6.27	5.08	5.22	8.56
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	8.6	8.9	9.4	6.7
mg/L	Strontium	0.125	0.124	0.122	0.153
mg/L	Sulphur	8.5	7.7	6.5	8.8
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0008	0.0452	0.0005	0.0013
mg/L	Uranium	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Vanadium	0.0014	0.0006	0.0007	<0.0001
mg/L	Zinc	0.015	0.007	0.02	0.035

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-19	554371-24	569512-12	594520-6
	Station	BC22	BC22	BC22	BC22
Units	Date	27-Mar-07	14-Jun-07	23-Aug-07	18-Dec-07
m3/sec, m	Water Level or Flow	49.18	45.16	49.15	49.07
pH units	pH (field)	6.81	6.15	5.96	6.34
pH units	pH (lab)	6.12	5.91	5.76	5.89
uS/cm	Conductivity (field)	1075	1282	1301	1206
uS/cm	Conductivity (lab)	1460	1420	1400	1390
°C	Temperature (field)	0.4	4	2.4	0.3
mg CaCO <sub>3</sub> /L	Hardness	818	793	780	792
mg CaCO <sub>3</sub> /L	Alkalinity	84	91	96	89
mg/L	Total Dissolved Solids	1240	1240	1330	1210
mg/L	Total Suspended Solids	<2	10	<2	<2
mg/L	Chloride	1.3	0.3	1.3	1.37
mg/L	Sulfate	700	720	720	646
mg /L	Ammonia	0.013	0.027	0.03	0.11
mg /L	Nitrate	3.4	3.2	3.3	3.37
mg/L	Total Cyanide	<0.001	0.001	<0.001	0.001
mg/L	WAD Cyanide	0.002	<0.002	<0.002	0.002
<b>Dissolved Metals</b>		<b>DM</b>	<b>DM</b>	<b>DM</b>	<b>DM</b>
mg/L	Aluminum	0.448	0.673	0.541	0.461
mg/L	Antimony	<0.0002	<0.0002	<0.0002	0.0008
mg/L	Arsenic	0.0028	0.0035	0.0049	0.0042
mg/L	Barium	0.008	0.009	0.01	0.013
mg/L	Beryllium	0.0002	0.0004	0.0002	0.0003
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.039	0.059	0.042	0.046
mg/L	Cadmium	0.0123	0.0125	0.0124	0.0122
mg/L	Calcium	211	204	201	205
mg/L	Chromium	0.0017	0.0008	0.001	0.0006
mg/L	Cobalt	0.0097	0.0104	0.0098	0.0095
mg/L	Copper	0.003	0.004	0.006	0.006
mg/L	Iron	<0.01	0.01	<0.01	0.04
mg/L	Lead	0.0004	0.0003	0.0004	0.001
mg/L	Lithium	0.082	0.136	0.093	0.1
mg/L	Magnesium	70.7	68.9	67.3	68.2
mg/L	Manganese	0.845	0.825	0.8	0.807
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.136	0.153	0.143	0.147
mg/L	Phosphorus	<0.02	0.03		
mg/L	Potassium	4.5	4.4	4.4	4.4
mg/L	Selenium	0.101	0.103	0.0964	0.095
mg/L	Silicon	15.1	14.4	14.4	14.3
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	17.7	17.4	17.6	17.8
mg/L	Strontium	0.36	0.423	0.386	0.384
mg/L	Sulphur	243	235	231	238
mg/L	Thallium	0.00008	0.00008	0.00009	0.00008
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0214	0.0796	0.0159	0.0188
mg/L	Uranium	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Vanadium	0.0039	0.0006	0.0014	0.0002
mg/L	Zinc	0.269	0.316	0.298	0.316



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Ground Water Stations**

	Station	BC23	BC23	BC23	BC23
Units	Date	25-Mar-07	13-Jun-07	23-Aug-07	20-Dec-07
m	Well Depth			18.9	18.4
pH units	pH (field)				
pH units	pH (lab)				
uS/cm	Conductivity (field)				
uS/cm	Conductivity (lab)				
°C	Temperature (field)				
mg CaCO <sub>3</sub> /L	Hardness				
mg CaCO <sub>3</sub> /L	Alkalinity				
mg/L	Total Dissolved Solids				
mg/L	Total Suspended Solids				
mg/L	Chloride				
mg/L	Sulfate				
mg /L	Ammonia				
mg /L	Nitrate				
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Dissolved Metals</b>				
mg/L	Aluminum				
mg/L	Antimony				
mg/L	Arsenic				
mg/L	Barium				
mg/L	Beryllium				
mg/L	Bismuth				
mg/L	Boron				
mg/L	Cadmium				
mg/L	Calcium				
mg/L	Chromium				
mg/L	Cobalt				
mg/L	Copper				
mg/L	Iron				
mg/L	Lead				
mg/L	Lithium				
mg/L	Magnesium				
mg/L	Manganese				
mg/L	Mercury				
mg/L	Molybdenum				
mg/L	Nickel				
mg/L	Phosphorus				
mg/L	Potassium				
mg/L	Selenium				
mg/L	Silicon				
mg/L	Silver				
mg/L	Sodium				
mg/L	Strontium				
mg/L	Sulphur				
mg/L	Thallium				
mg/L	Tin				
mg/L	Titanium				
mg/L	Uranium				
mg/L	Vanadium				
mg/L	Zinc				

Dry no samples taken

Dry no samples taken

Dry no samples taken

Dry no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Ground Water Stations**

	Station	BC24	BC24	BC23	BC24
Units	Date	27-Mar-07	14-Jun-07	23-Aug-07	18-Dec-07
m	Well Depth				
pH units	pH (field)				
pH units	pH (lab)				
uS/cm	Conductivity (field)				
uS/cm	Conductivity (lab)				
°C	Temperature (field)				
mg CaCO <sub>3</sub> /L	Hardness				
mg CaCO <sub>3</sub> /L	Alkalinity				
mg/L	Total Dissolved Solids				
mg/L	Total Suspended Solids				
mg/L	Chloride				
mg/L	Sulfate				
mg /L	Ammonia				
mg /L	Nitrate				
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Dissolved Metals</b>				
mg/L	Aluminum				
mg/L	Antimony				
mg/L	Arsenic				
mg/L	Barium				
mg/L	Beryllium				
mg/L	Bismuth				
mg/L	Boron				
mg/L	Cadmium				
mg/L	Calcium				
mg/L	Chromium				
mg/L	Cobalt				
mg/L	Copper				
mg/L	Iron				
mg/L	Lead				
mg/L	Lithium				
mg/L	Magnesium				
mg/L	Manganese				
mg/L	Mercury				
mg/L	Molybdenum				
mg/L	Nickel				
mg/L	Phosphorus				
mg/L	Potassium				
mg/L	Selenium				
mg/L	Silicon				
mg/L	Silver				
mg/L	Sodium				
mg/L	Strontium				
mg/L	Sulphur				
mg/L	Thallium				
mg/L	Tin				
mg/L	Titanium				
mg/L	Uranium				
mg/L	Vanadium				
mg/L	Zinc				

Dry no samples taken

Dry no samples taken

Dry no samples taken

Dry no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Ground Water Stations**

	Station	BC25	BC25	BC25	BC25
Units	Date	25-Mar-07	13-Jun-07	23-Aug-07	20-Dec-07
m	Well Depth			9	8.65
pH units	pH (field)				
pH units	pH (lab)				
uS/cm	Conductivity (field)				
uS/cm	Conductivity (lab)				
°C	Temperature (field)				
mg CaCO <sub>3</sub> /L	Hardness				
mg CaCO <sub>3</sub> /L	Alkalinity				
mg/L	Total Dissolved Solids				
mg/L	Total Suspended Solids				
mg/L	Chloride				
mg/L	Sulfate				
mg /L	Ammonia				
mg /L	Nitrate				
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Dissolved Metals</b>				
mg/L	Aluminum				
mg/L	Antimony				
mg/L	Arsenic				
mg/L	Barium				
mg/L	Beryllium				
mg/L	Bismuth				
mg/L	Boron				
mg/L	Cadmium				
mg/L	Calcium				
mg/L	Chromium				
mg/L	Cobalt				
mg/L	Copper				
mg/L	Iron				
mg/L	Lead				
mg/L	Lithium				
mg/L	Magnesium				
mg/L	Manganese				
mg/L	Mercury				
mg/L	Molybdenum				
mg/L	Nickel				
mg/L	Phosphorus				
mg/L	Potassium				
mg/L	Selenium				
mg/L	Silicon				
mg/L	Silver				
mg/L	Sodium				
mg/L	Strontium				
mg/L	Sulphur				
mg/L	Thallium				
mg/L	Tin				
mg/L	Titanium				
mg/L	Uranium				
mg/L	Vanadium				
mg/L	Zinc				
		Dry no samples taken	Dry no samples taken	Dry no samples taken	Dry no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**Ground Water Stations**

	Station	BC26	BC26	BC26	BC26
Units	Date	25-Mar-07	13-Jun-07	23-Aug-07	20-Dec-07
m	Well Depth				
pH units	pH (field)				
pH units	pH (lab)				
uS/cm	Conductivity (field)				
uS/cm	Conductivity (lab)				
°C	Temperature (field)				
mg CaCO <sub>3</sub> /L	Hardness				
mg CaCO <sub>3</sub> /L	Alkalinity				
mg/L	Total Dissolved Solids				
mg/L	Total Suspended Solids				
mg/L	Chloride				
mg/L	Sulfate				
mg /L	Ammonia				
mg /L	Nitrate				
mg/L	Total Cyanide				
mg/L	WAD Cyanide				
	<b>Dissolved Metals</b>				
mg/L	Aluminum				
mg/L	Antimony				
mg/L	Arsenic				
mg/L	Barium				
mg/L	Beryllium				
mg/L	Bismuth				
mg/L	Boron				
mg/L	Cadmium				
mg/L	Calcium				
mg/L	Chromium				
mg/L	Cobalt				
mg/L	Copper				
mg/L	Iron				
mg/L	Lead				
mg/L	Lithium				
mg/L	Magnesium				
mg/L	Manganese				
mg/L	Mercury				
mg/L	Molybdenum				
mg/L	Nickel				
mg/L	Phosphorus				
mg/L	Potassium				
mg/L	Selenium				
mg/L	Silicon				
mg/L	Silver				
mg/L	Sodium				
mg/L	Strontium				
mg/L	Sulphur				
mg/L	Thallium				
mg/L	Tin				
mg/L	Titanium				
mg/L	Uranium				
mg/L	Vanadium				
mg/L	Zinc				

Dry no samples taken

Dry no samples taken

Dry no samples taken

Dry no samples taken

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-16	554371-14	569512-13	594520-16
	Station	BC27	BC27	BC27	BC27
Units	Date	27-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	9.45	8.41	8.7	8.87
pH units	pH (field)	7.79	7.62	7.73	7.29
pH units	pH (lab)	7.77	7.56	7.48	7.67
uS/cm	Conductivity (field)	526	563	575	594
uS/cm	Conductivity (lab)	673	659	662	676
°C	Temperature (field)	0.5	5.1	5.1	0.4
mg CaCO <sub>3</sub> /L	Hardness	351	343	352	364
mg CaCO <sub>3</sub> /L	Alkalinity	156	168	173	159
mg/L	Total Dissolved Solids	478	460	538	466
mg/L	Total Suspended Solids	9	73	11	20
mg/L	Chloride	0.6	0.6	0.4	0.57
mg/L	Sulfate	200	216	212	210
mg /L	Ammonia	0.079	0.105	0.02	0.17
mg /L	Nitrate	0.3	0.1	<0.1	0.15
mg/L	Total Cyanide	<0.001		<0.001	0.001
mg/L	WAD Cyanide	<0.002		<0.002	0.002
<b>Dissolved Metals</b>		<b>DM</b>	<b>DM</b>	<b>DM</b>	<b>DM</b>
mg/L	Aluminum	<0.005	<0.005	<0.005	0.007
mg/L	Antimony	0.0009	0.0008	0.0008	0.0005
mg/L	Arsenic	0.0289	0.181	0.112	0.127
mg/L	Barium	0.018	0.018	0.016	0.018
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.007	0.007	0.008	0.008
mg/L	Cadmium	0.00007	0.00006	<0.00001	0.00001
mg/L	Calcium	85.1	82.3	86	89.2
mg/L	Chromium	0.0007	0.0009	0.0019	0.0008
mg/L	Cobalt	<0.0001	0.0002	0.0001	0.0001
mg/L	Copper	0.001	0.002	<0.001	<0.001
mg/L	Iron	<0.01	1.81	0.81	0.47
mg/L	Lead	0.0002	0.0002	<0.0001	0.0005
mg/L	Lithium	0.01	0.012	0.012	0.013
mg/L	Magnesium	33.6	33.4	33.4	34.4
mg/L	Manganese	0.142	0.221	0.205	0.253
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	0.013	0.013	0.013	0.012
mg/L	Nickel	0.005	0.002	0.0034	0.0028
mg/L	Phosphorus	0.02	0.13		
mg/L	Potassium	1.4	1.5	1.4	1.6
mg/L	Selenium	<0.0002	<0.0002	<0.0002	<0.0002
mg/L	Silicon	3.6	3.44	3.56	3.57
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	1.9	2	2.7	2.9
mg/L	Strontium	0.643	0.717	0.71	0.688
mg/L	Sulphur	66	64.9	65.8	69.5
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.006	0.0581	0.0045	0.0053
mg/L	Uranium	0.0068	0.0073	0.0078	0.0073
mg/L	Vanadium	0.0016	0.0004	0.0009	<0.0001
mg/L	Zinc	0.013	0.013	0.012	0.008

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-20			594520-3
	Station	BC65	BC65	BC65	BC65
Units	Date	29-Mar-07	14-Jun-07	22-Aug-07	18-Dec-07
m3/sec, m	Water Level or Flow	83.75	84.01	83.96	84.38
pH units	pH (field)	7.10			7.76
pH units	pH (lab)	7.63			8.05
uS/cm	Conductivity (field)	466			273
uS/cm	Conductivity (lab)	320			338
°C	Temperature (field)	1.4			1.7
mg CaCO <sub>3</sub> /L	Hardness	151			163
mg CaCO <sub>3</sub> /L	Alkalinity	126			140
mg/L	Total Dissolved Solids	206			214
mg/L	Total Suspended Solids	51			6
mg/L	Chloride	0.3			0.32
mg/L	Sulfate	4000			39.1
mg /L	Ammonia	0.007			0.02
mg /L	Nitrate	0.4			0.05
mg/L	Total Cyanide	<0.001			0.001
mg/L	WAD Cyanide	<0.002			0.002
	<b>Dissolved Metals</b>	<b>DM</b>			<b>DM</b>
mg/L	Aluminum	<0.005			0.065
mg/L	Antimony	0.003			0.0038
mg/L	Arsenic	0.0007			0.0008
mg/L	Barium	0.014			0.027
mg/L	Beryllium	<0.0001			<0.0001
mg/L	Bismuth	<0.0005			<0.0005
mg/L	Boron	0.026			0.026
mg/L	Cadmium	<0.00001			0.00008
mg/L	Calcium	48.5			52.2
mg/L	Chromium	0.0008			0.0008
mg/L	Cobalt	<0.0001			0.0002
mg/L	Copper	0.002			0.002
mg/L	Iron	<0.01			0.19
mg/L	Lead	0.0003			0.0013
mg/L	Lithium	0.034			0.037
mg/L	Magnesium	7.3			7.9
mg/L	Manganese	<0.005			0.398
mg/L	Mercury	<0.0001			<0.0001
mg/L	Molybdenum	<0.001			<0.001
mg/L	Nickel	0.0009			0.0046
mg/L	Phosphorus	0.28			
mg/L	Potassium	1.9			1.8
mg/L	Selenium	0.0002			<0.0002
mg/L	Silicon	7.52			7.2
mg/L	Silver	<0.0001			<0.0001
mg/L	Sodium	6.9			7
mg/L	Strontium	0.225			0.237
mg/L	Sulphur	13			13.6
mg/L	Thallium	<0.00005			<0.00005
mg/L	Tin	<0.001			<0.001
mg/L	Titanium	0.0013			0.003
mg/L	Uranium	<0.0005			<0.0005
mg/L	Vanadium	0.0012			0.0005
mg/L	Zinc	0.002			0.016

dry - no water found

dry - no water found

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-21	554371-6	569512-26	594520-4
	<b>Station</b>	<b>BC66</b>	<b>BC66</b>	<b>BC66</b>	<b>BC66</b>
<b>Units</b>	<b>Date</b>	29-Mar-07	13-Jun-07	22-Aug-07	18-Dec-07
m3/sec, m	<b>Water Level or Flow</b>	53.85	53.71	56	54.39
pH units	<b>pH (field)</b>	6.57	7.07	6.98	7.05
pH units	<b>pH (lab)</b>	7.08	6.96	7.02	7.54
uS/cm	<b>Conductivity (field)</b>	422	290	303	423
uS/cm	<b>Conductivity (lab)</b>	320	320	327	507
°C	<b>Temperature (field)</b>	0.7	3.8	3.6	0.8
mg CaCO <sub>3</sub> /L	<b>Hardness</b>	110	120	120	217
mg CaCO <sub>3</sub> /L	<b>Alkalinity</b>	114	128	134	140
mg/L	<b>Total Dissolved Solids</b>	222	214	198	334
mg/L	<b>Total Suspended Solids</b>	29	72	18	23
mg/L	<b>Chloride</b>	0.9	7.1	6.5	7.45
mg/L	<b>Sulfate</b>	4000	22.7	22	22.6
mg /L	<b>Ammonia</b>	0.004	0.035	0.03	0.06
mg/L	<b>Nitrate</b>	5.8	2.9	4.2	23.1
mg/L	<b>Total Cyanide</b>	0.01	0.003	0.006	0.09
mg/L	<b>WAD Cyanide</b>	0.004	0.002	0.002	0.028
<b>Dissolved Metals</b>		<b>DM</b>	<b>DM</b>	<b>DM</b>	<b>DM</b>
mg/L	<b>Aluminum</b>	0.049	0.021	0.023	0.03
mg/L	<b>Antimony</b>	0.0151	0.0305	0.0269	0.0085
mg/L	<b>Arsenic</b>	0.0043	0.0034	0.0043	0.004
mg/L	<b>Barium</b>	0.043	0.055	0.053	0.06
mg/L	<b>Beryllium</b>	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Bismuth</b>	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	<b>Boron</b>	0.012	0.016	0.024	0.014
mg/L	<b>Cadmium</b>	0.00025	0.00047	0.00055	0.00042
mg/L	<b>Calcium</b>	26.9	34.7	33.9	49
mg/L	<b>Chromium</b>	0.0012	0.0012	0.002	0.0012
mg/L	<b>Cobalt</b>	0.0091	0.0027	0.0045	0.0792
mg/L	<b>Copper</b>	0.002	0.042	0.052	0.024
mg/L	<b>Iron</b>	0.03	0.01	0.01	0.06
mg/L	<b>Lead</b>	0.0003	0.0004	0.0002	0.0017
mg/L	<b>Lithium</b>	0.027	0.012	0.02	0.015
mg/L	<b>Magnesium</b>	9.4	8.6	9.1	23.1
mg/L	<b>Manganese</b>	0.008	0.037	0.091	0.162
mg/L	<b>Mercury</b>	<0.0001	0.03	<0.02	<0.0001
mg/L	<b>Molybdenum</b>	0.004	0.005	0.005	0.002
mg/L	<b>Nickel</b>	0.0053	0.0182	0.0281	0.0152
mg/L	<b>Phosphorus</b>	3.2	0.84		
mg/L	<b>Potassium</b>	2.2	3.1	3	2.4
mg/L	<b>Selenium</b>	0.0182	0.0051	0.0086	0.0135
mg/L	<b>Silicon</b>	7.47	5.15	5.73	5.56
mg/L	<b>Silver</b>	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	<b>Sodium</b>	24.9	17.7	19.8	23.4
mg/L	<b>Strontium</b>	0.134	0.153	0.168	0.259
mg/L	<b>Sulphur</b>	7	6.8	7	7
mg/L	<b>Thallium</b>	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	<b>Tin</b>	<0.001	<0.001	<0.001	<0.001
mg/L	<b>Titanium</b>	0.0016	0.0356	0.0011	0.0016
mg/L	<b>Uranium</b>	0.0008	0.0034	0.0027	0.002
mg/L	<b>Vanadium</b>	0.0022	0.0009	0.0015	0.0004
mg/L	<b>Zinc</b>	0.01	0.092	0.155	0.086

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

		536014-6	554371-16	569512-27	594520-22
	Station	BC67	BC67	BC67	BC67
Units	Date	25-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	47.2	46.58	45.33	45.29
pH units	pH (field)	6.89	7.54	7.48	6.95
pH units	pH (lab)	7.88	7.62	7.51	7.58
uS/cm	Conductivity (field)	513	511	516	545
uS/cm	Conductivity (lab)	617	606	603	607
°C	Temperature (field)	0.4	6.8	5.3	0.5
mg CaCO <sub>3</sub> /L	Hardness	327	323	323	315
mg CaCO <sub>3</sub> /L	Alkalinity	291	306	319	293
mg/L	Total Dissolved Solids	382	348	408	348
mg/L	Total Suspended Solids	126	1030	520	105
mg/L	Chloride	0.2	0.3	0.3	0.53
mg/L	Sulfate	49	50	50	44.2
mg /L	Ammonia	0.032	0.045	<0.01	0.03
mg/L	Nitrate	<0.1	0.4	0.1	<0.02
mg/L	Total Cyanide	<0.001	<0.001		
mg/L	WAD Cyanide	<0.002	<0.002		
<b>Dissolved Metals</b>		<b>DM</b>	<b>DM</b>	<b>DM</b>	<b>DM</b>
mg/L	Aluminum	<0.005	0.01	<0.005	0.014
mg/L	Antimony	0.0102	0.0175	0.0091	0.0087
mg/L	Arsenic	0.0042	0.0068	0.0093	0.0172
mg/L	Barium	0.06	0.074	0.04	0.038
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.012	0.012	0.014	0.013
mg/L	Cadmium	0.00002	0.00006	0.00006	0.00005
mg/L	Calcium	79.6	77.9	78.9	77.7
mg/L	Chromium	0.0013	0.0007	0.001	0.0008
mg/L	Cobalt	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Copper	<0.001	0.002	0.001	0.002
mg/L	Iron	<0.01	0.02	<0.01	0.06
mg/L	Lead	0.0002	0.0004	0.0001	0.0003
mg/L	Lithium	0.007	0.008	0.009	0.009
mg/L	Magnesium	31.2	31.2	30.5	29.4
mg/L	Manganese	<0.005	0.041	0.026	0.099
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.0018	0.0007	0.0011	0.0015
mg/L	Phosphorus	<0.02	<0.02		
mg/L	Potassium	1.8	1.8	1.7	1.8
mg/L	Selenium	<0.0002	<0.0002	<0.0002	<0.0002
mg/L	Silicon	3.22	3.19	3.2	3.17
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	3	2.9	3.7	3.6
mg/L	Strontium	0.401	0.43	0.436	0.401
mg/L	Sulphur	15.8	16.3	16	16
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0016	0.0362	0.0013	0.0019
mg/L	Uranium	0.002	0.0027	0.0021	0.0023
mg/L	Vanadium	0.003	0.001	0.0016	<0.0001
mg/L	Zinc	0.005	0.013	0.015	0.015

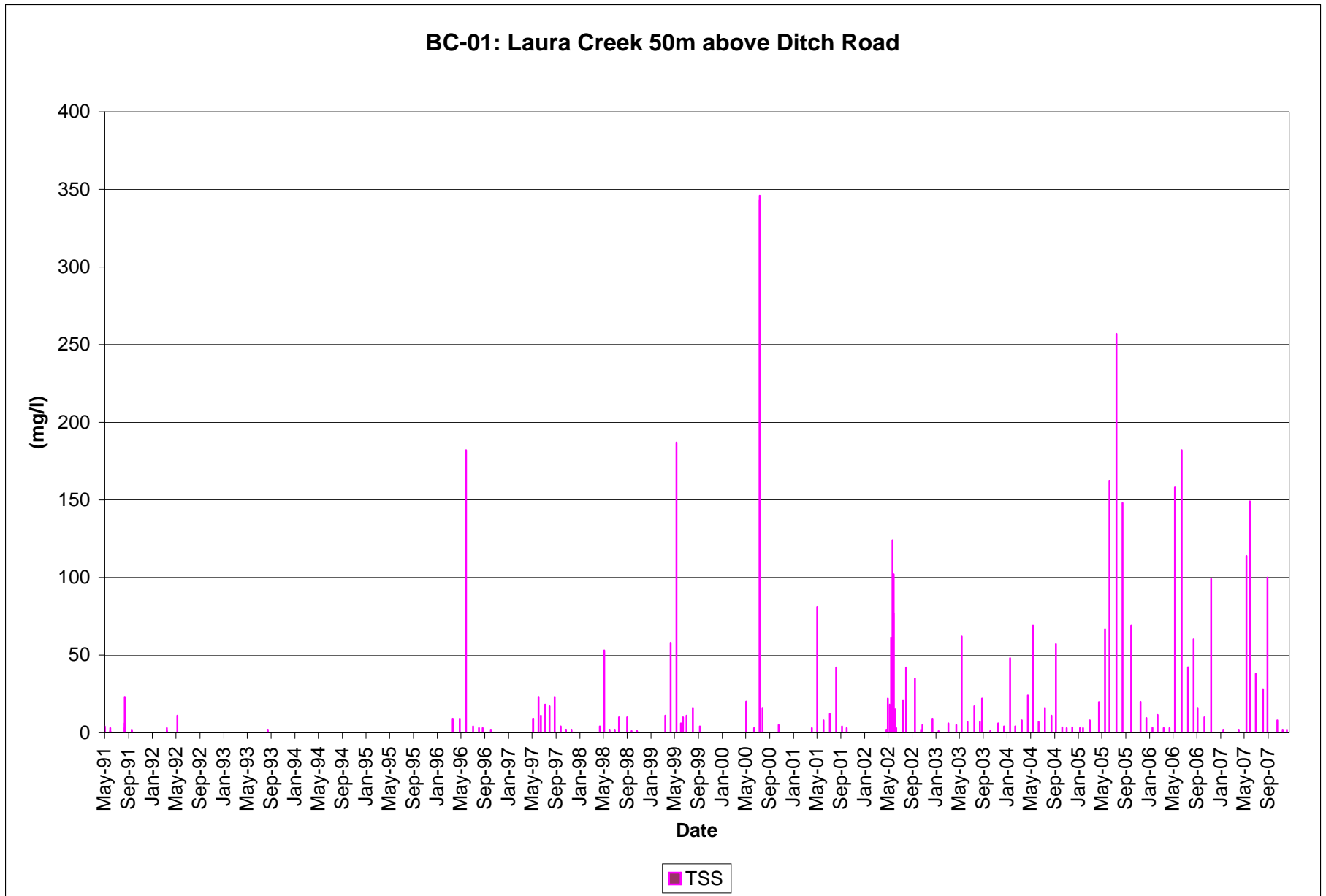


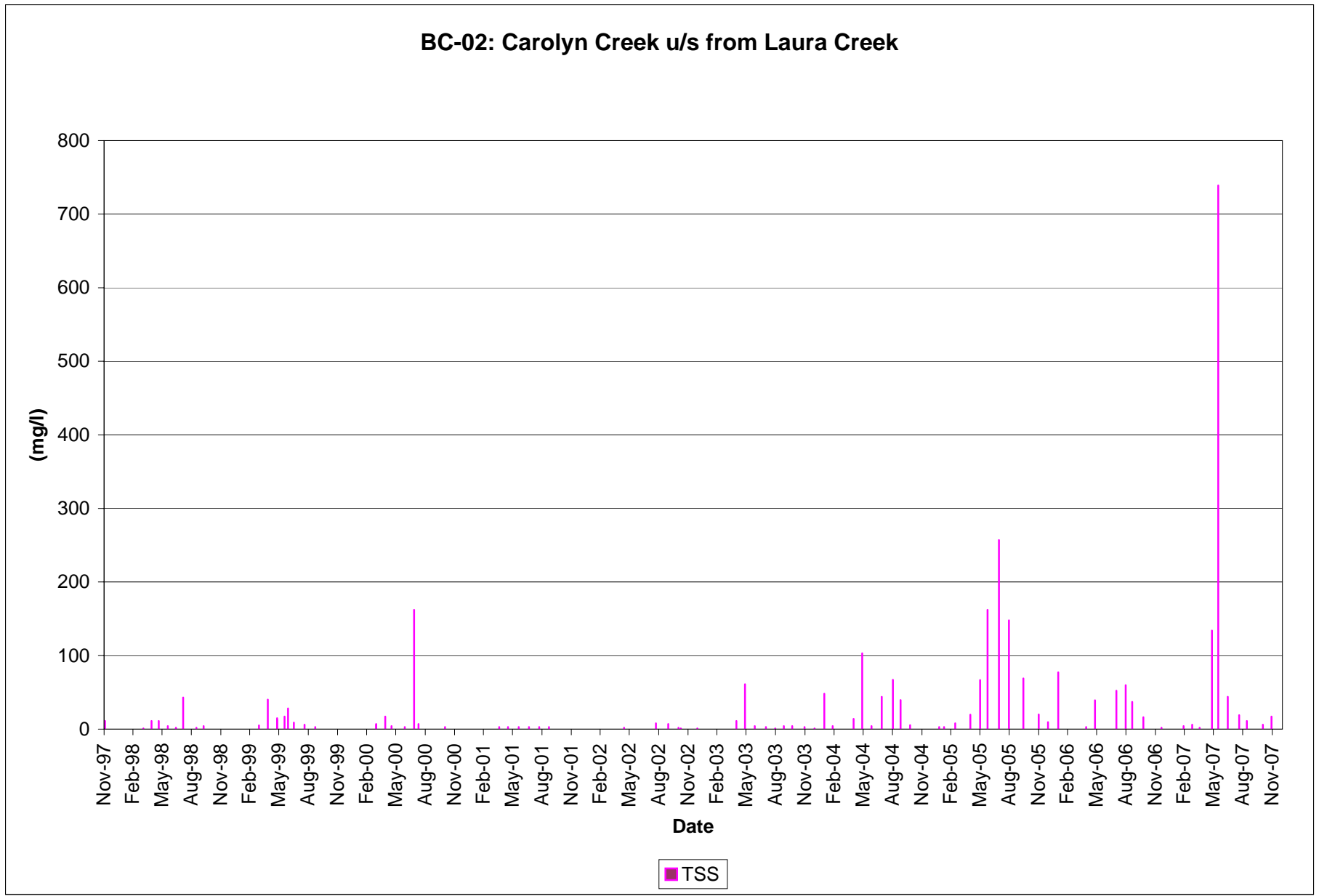
**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

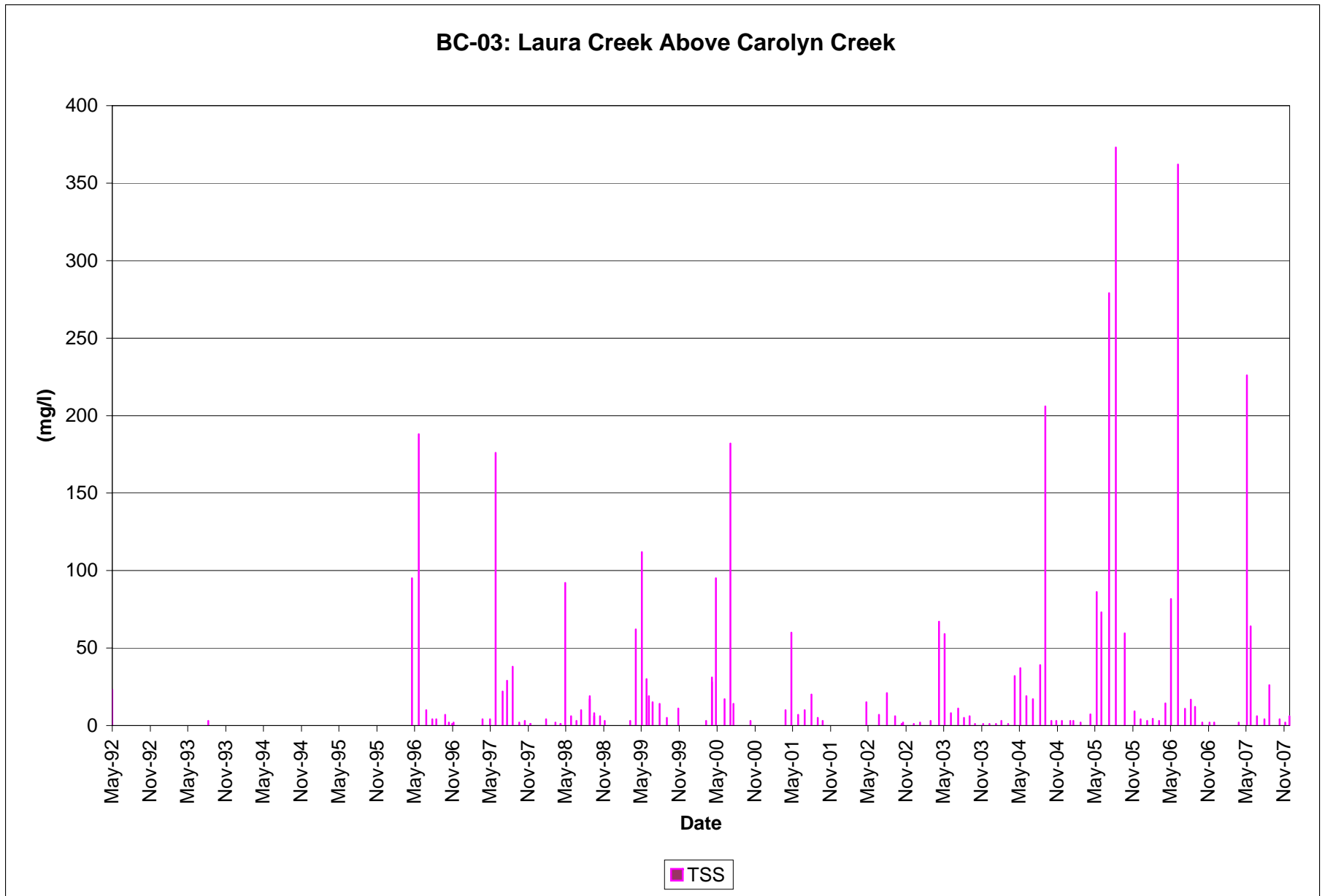
		536014-14	554371-20	569512-28	594520-23
	Station	BC68	BC68	BC68	BC68
Units	Date	27-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	68.12	65.85	55.55	65.31
pH units	pH (field)	7.28	7.29	7.33	7.19
pH units	pH (lab)	7.48	7.49	7.36	7.78
uS/cm	Conductivity (field)	692	533	548	584
uS/cm	Conductivity (lab)	657	632	633	632
°C	Temperature (field)	1.1	4.4	4.8	1
mg CaCO <sub>3</sub> /L	Hardness	345	336	335	334
mg CaCO <sub>3</sub> /L	Alkalinity	280	301	306	281
mg/L	Total Dissolved Solids	420	380	432	374
mg/L	Total Suspended Solids	228	106	80	22
mg/L	Chloride	0.6	0.3	0.3	0.38
mg/L	Sulfate	77	74	75	66.7
mg /L	Ammonia	0.024	0.087	0.02	<0.01
mg /L	Nitrate	0.5	0.3	0.3	0.16
mg/L	Total Cyanide	0.001	<0.001		
mg/L	WAD Cyanide	0.002	<0.002		
<b>Dissolved Metals</b>		<b>DM</b>	<b>TM</b>	<b>DM</b>	<b>DM</b>
mg/L	Aluminum	<0.005	<0.005	0.006	0.027
mg/L	Antimony	0.0196	0.0077	0.0058	0.0096
mg/L	Arsenic	0.0436	0.0431	0.0603	0.0206
mg/L	Barium	0.027	0.024	0.024	0.032
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.021	0.008	0.01	0.009
mg/L	Cadmium	0.0002	0.00003	<0.00001	0.00007
mg/L	Calcium	77.5	74.6	75.6	75.6
mg/L	Chromium	0.0014	0.0008	0.0013	0.0013
mg/L	Cobalt	0.002	0.0022	0.002	0.0018
mg/L	Copper	0.013	0.014	<0.001	0.004
mg/L	Iron	<0.01	0.5	0.62	0.27
mg/L	Lead	0.0002	0.0002	<0.0001	0.0008
mg/L	Lithium	0.01	0.009	0.011	0.011
mg/L	Magnesium	36.8	36.3	35.5	35.2
mg/L	Manganese	0.458	0.469	0.459	0.445
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	0.001	0.001	0.001	0.001
mg/L	Nickel	0.0403	0.0236	0.0217	0.0232
mg/L	Phosphorus	0.11	<0.02		
mg/L	Potassium	5.3	5.1	4.9	4.9
mg/L	Selenium	<0.0002	<0.0002	<0.0002	<0.0002
mg/L	Silicon	2.59	2.44	2.53	2.59
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	2.8	1.7	2.3	2.3
mg/L	Strontium	0.224	0.234	0.248	0.235
mg/L	Sulphur	24.7	23.9	23.8	24.1
mg/L	Thallium	<0.00005	<0.00005	<0.00005	<0.00005
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0024	0.0438	0.0019	0.0029
mg/L	Uranium	0.0066	0.0069	0.0072	0.0063
mg/L	Vanadium	0.003	0.0007	0.0019	0.0001
mg/L	Zinc	0.073	0.017	0.019	0.018

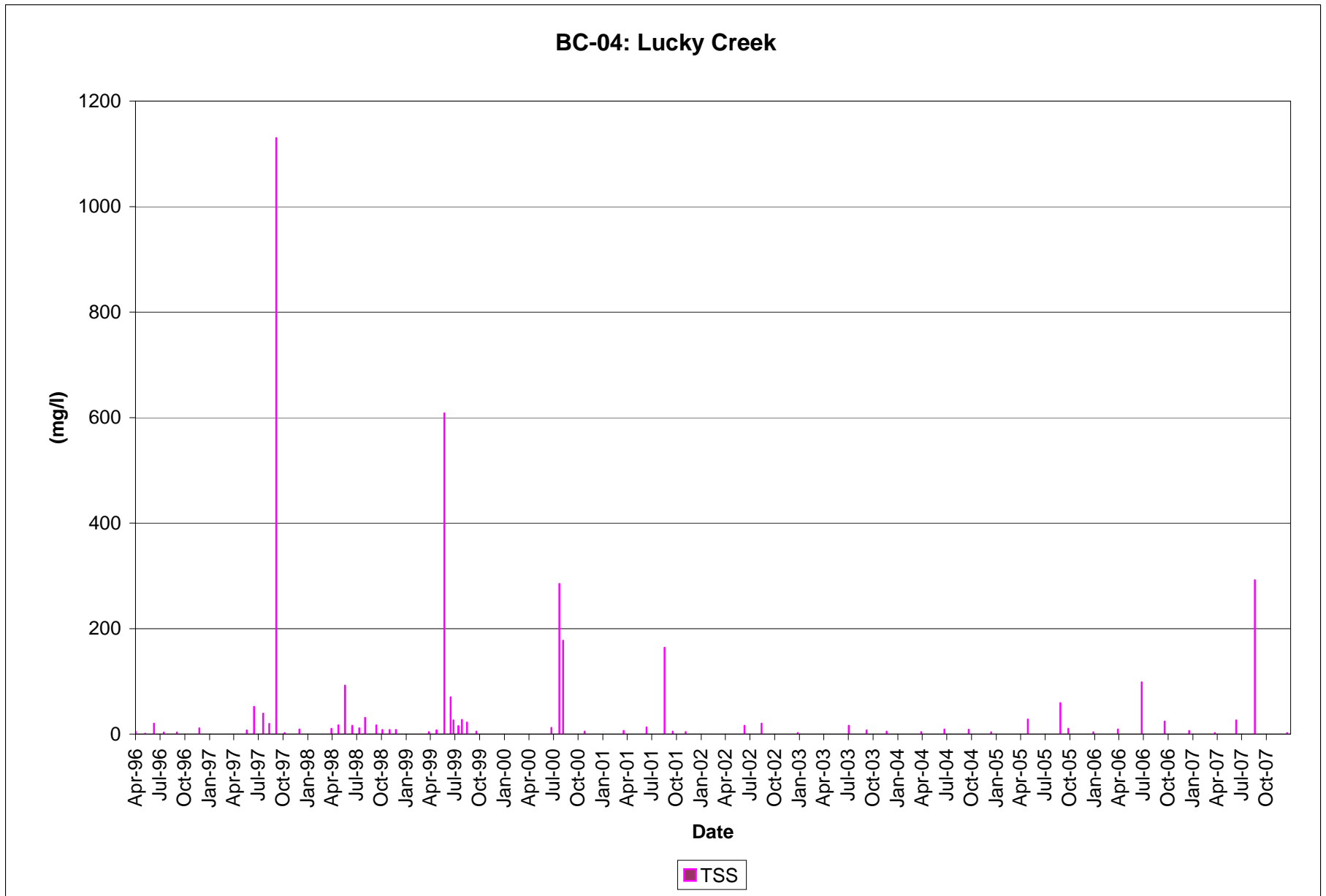
**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Monitoring Pursuant to Water License QZ96-007**  
**GroundWater Stations**

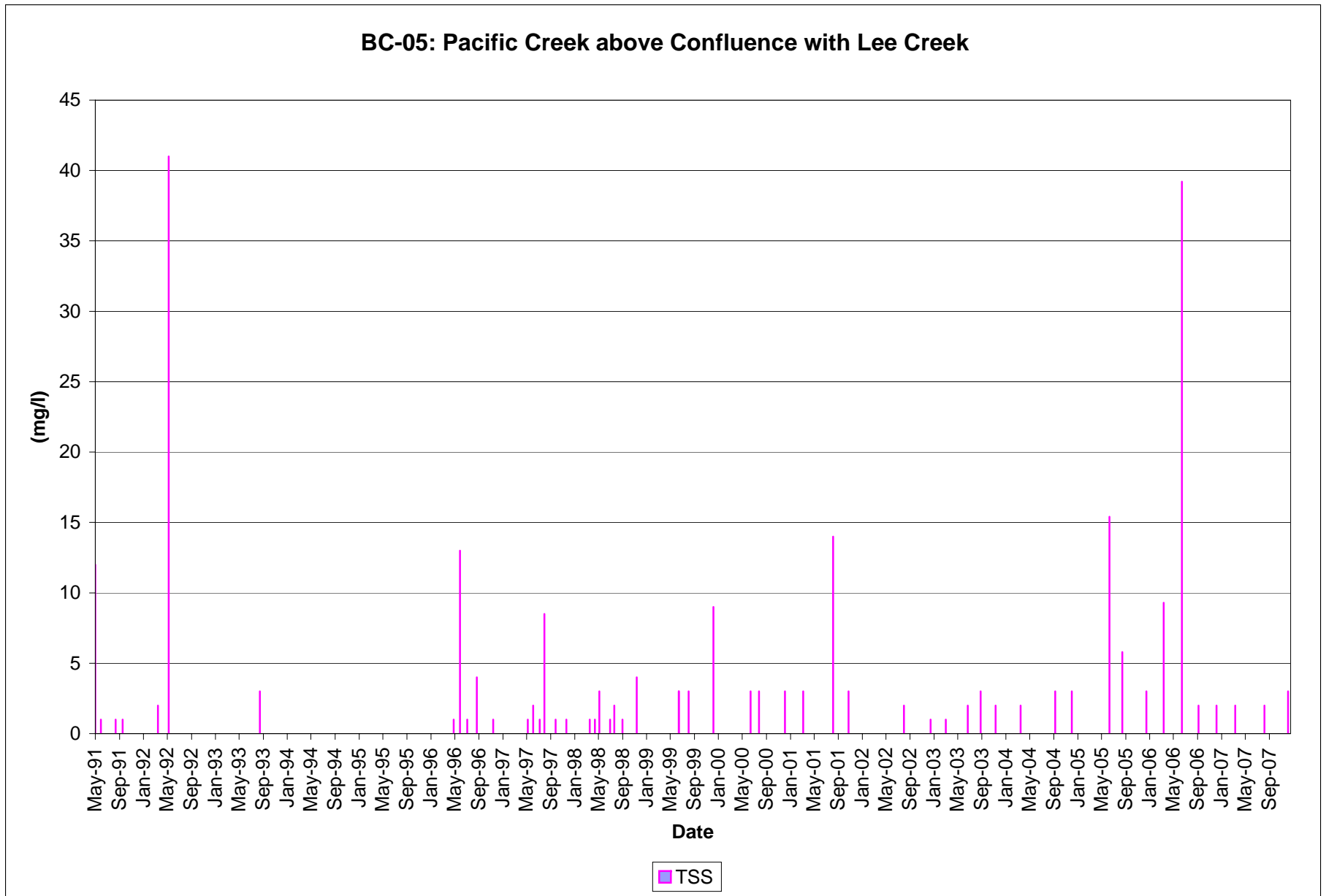
		536014-13	554371-18	569512-29	594520-24
	Station	BC69	BC69	BC69	BC69
Units	Date	26-Mar-07	14-Jun-07	22-Aug-07	20-Dec-07
m3/sec, m	Water Level or Flow	39.45	nm	39.82	39.79
pH units	pH (field)	7.14	7.35	7.27	7.26
pH units	pH (lab)	7.62	7.78	7.45	7.88
uS/cm	Conductivity (field)	574	660	776	615
uS/cm	Conductivity (lab)	680	775	808	697
°C	Temperature (field)	1.2	6.1	6.1	1.1
mg CaCO <sub>3</sub> /L	Hardness	355	418	500	422
mg CaCO <sub>3</sub> /L	Alkalinity	283	324	342	293
mg/L	Total Dissolved Solids	436	492	604	440
mg/L	Total Suspended Solids	493	960	344	246
mg/L	Chloride	0.5	0.3	0.3	0.47
mg/L	Sulfate	91	148	158	98.6
mg /L	Ammonia	0.056	0.018	<0.01	0.05
mg/L	Nitrate	<0.1	0.2	0.1	0.02
mg/L	Total Cyanide	<0.001	<0.001		
mg/L	WAD Cyanide	0.002	<0.002		
<b>Dissolved Metals</b>		<b>DM</b>	<b>DM</b>	<b>DM</b>	<b>DM</b>
mg/L	Aluminum	<0.005	0.009	0.006	0.011
mg/L	Antimony	0.0054	0.0061	0.0066	0.0058
mg/L	Arsenic	0.0233	0.0387	0.0468	0.0247
mg/L	Barium	0.029	0.029	0.026	0.035
mg/L	Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
mg/L	Boron	0.004	0.003	0.004	0.003
mg/L	Cadmium	0.00025	0.0007	0.00101	0.00047
mg/L	Calcium	60.4	76.6	92	79.4
mg/L	Chromium	0.0014	0.0006	0.001	0.0011
mg/L	Cobalt	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Copper	<0.001	0.001	0.001	0.004
mg/L	Iron	<0.01	0.01	<0.01	0.02
mg/L	Lead	0.0002	0.0002	0.0001	0.0002
mg/L	Lithium	0.01	0.011	0.012	0.012
mg/L	Magnesium	49.7	54.9	65.7	54.2
mg/L	Manganese	0.032	0.118	0.177	0.074
mg/L	Mercury	<0.0001	<0.02	<0.02	<0.0001
mg/L	Molybdenum	<0.001	<0.001	<0.001	<0.001
mg/L	Nickel	0.0038	0.0018	0.0139	0.0025
mg/L	Phosphorus	0.08	0.02		
mg/L	Potassium	6.1	6.5	6.9	6.6
mg/L	Selenium	0.001	0.0017	0.0022	0.0013
mg/L	Silicon	2.72	2.9	2.98	3.09
mg/L	Silver	<0.0001	<0.0001	<0.0001	<0.0001
mg/L	Sodium	1.9	1.8	2.6	2.6
mg/L	Strontium	0.38	0.471	0.575	0.462
mg/L	Sulphur	39.8	43.8	61.3	43
mg/L	Thallium	0.00021	0.00028	0.00032	0.00026
mg/L	Tin	<0.001	<0.001	<0.001	<0.001
mg/L	Titanium	0.0037	0.0369	0.0044	0.004
mg/L	Uranium	0.0024	0.0028	0.0038	0.0027
mg/L	Vanadium	0.003	0.001	0.0016	0.0002
mg/L	Zinc	0.04	0.105	0.128	0.08

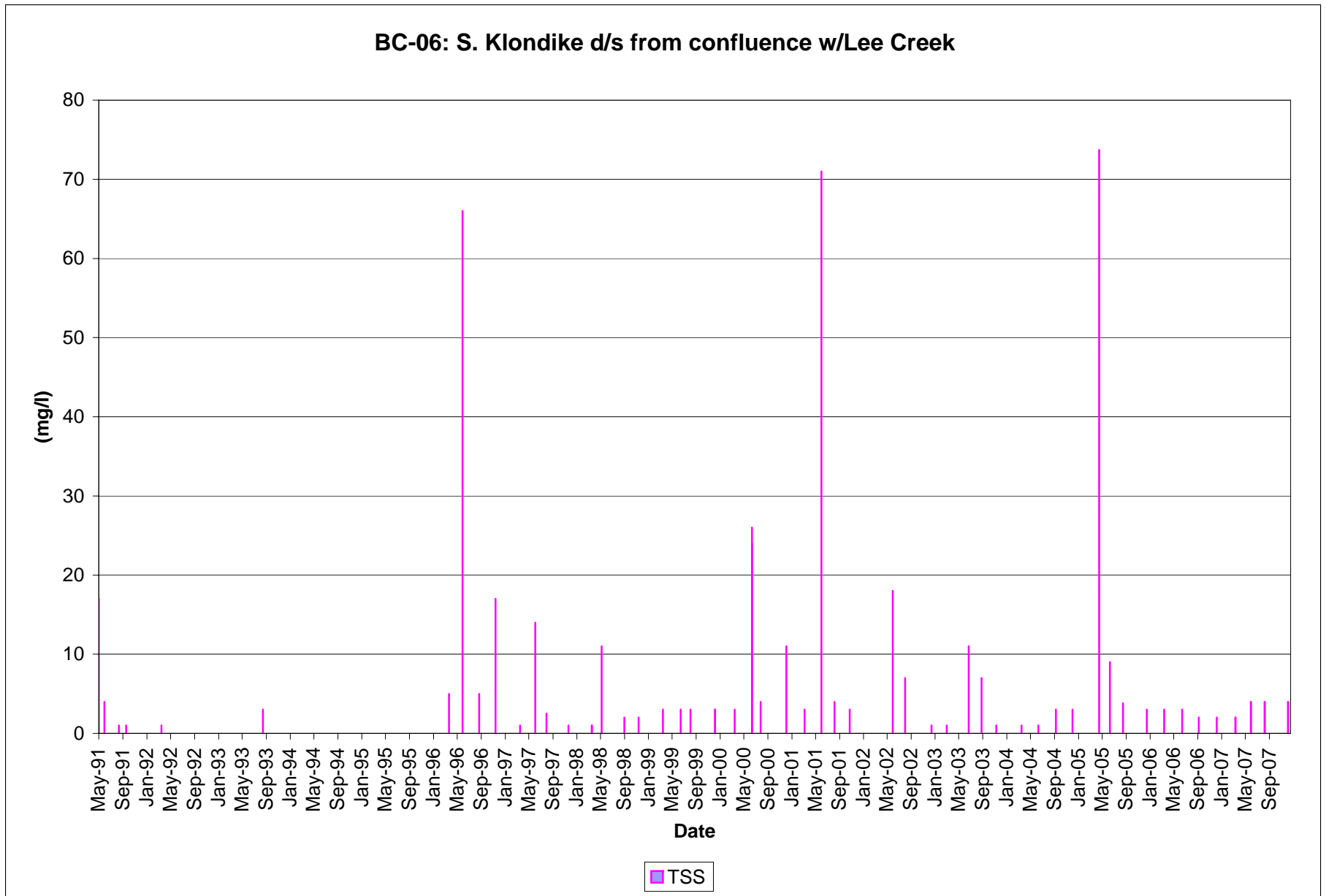




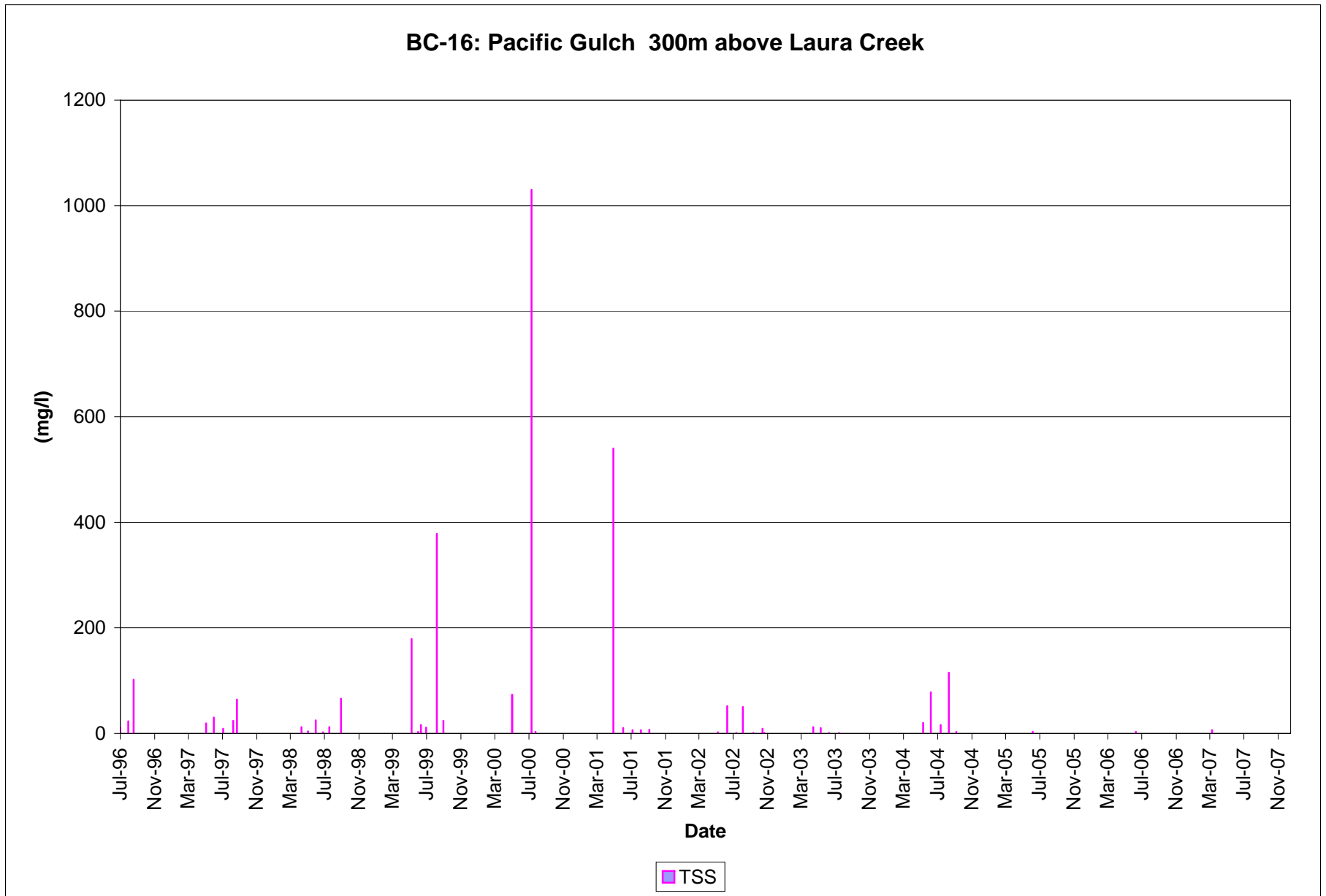


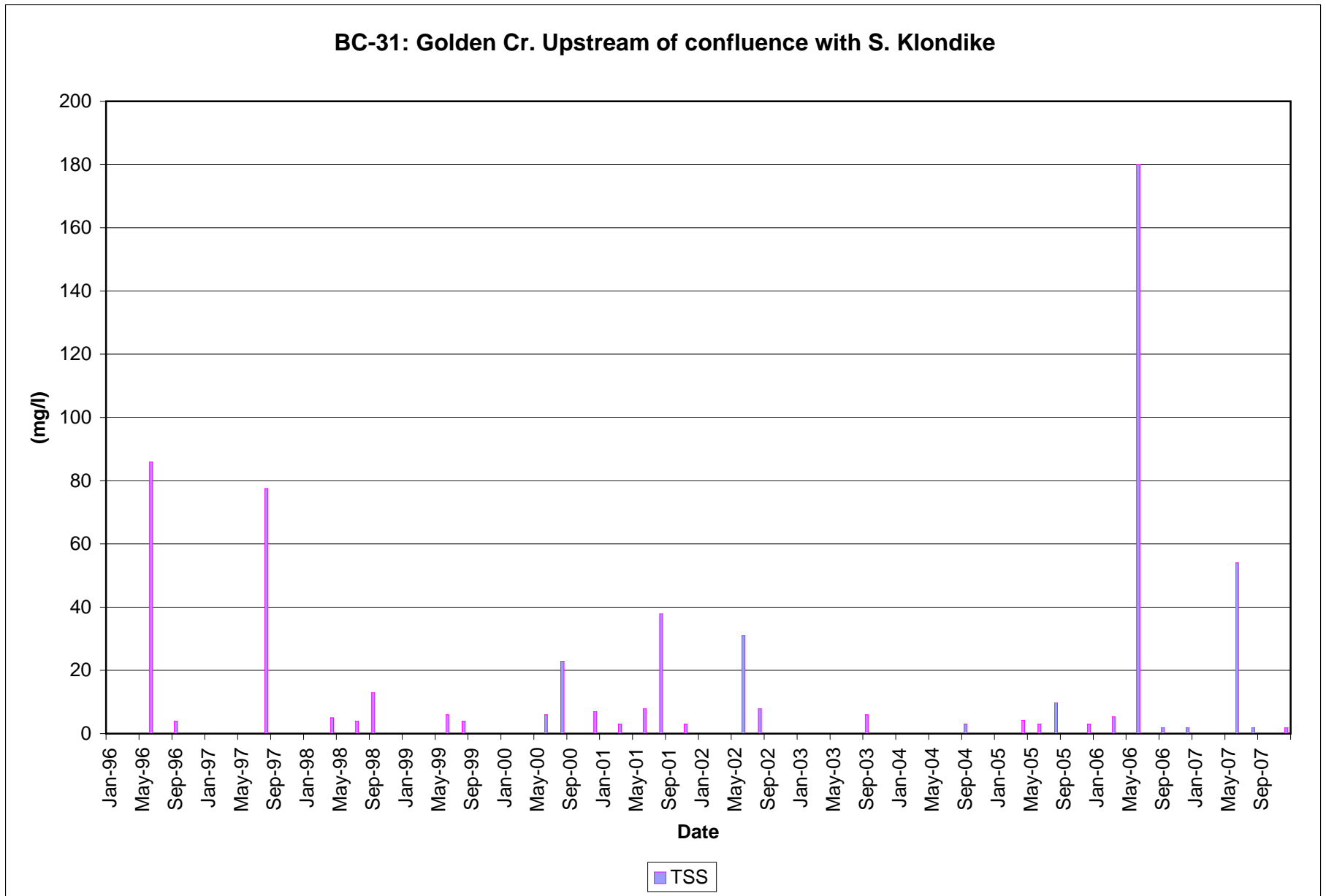


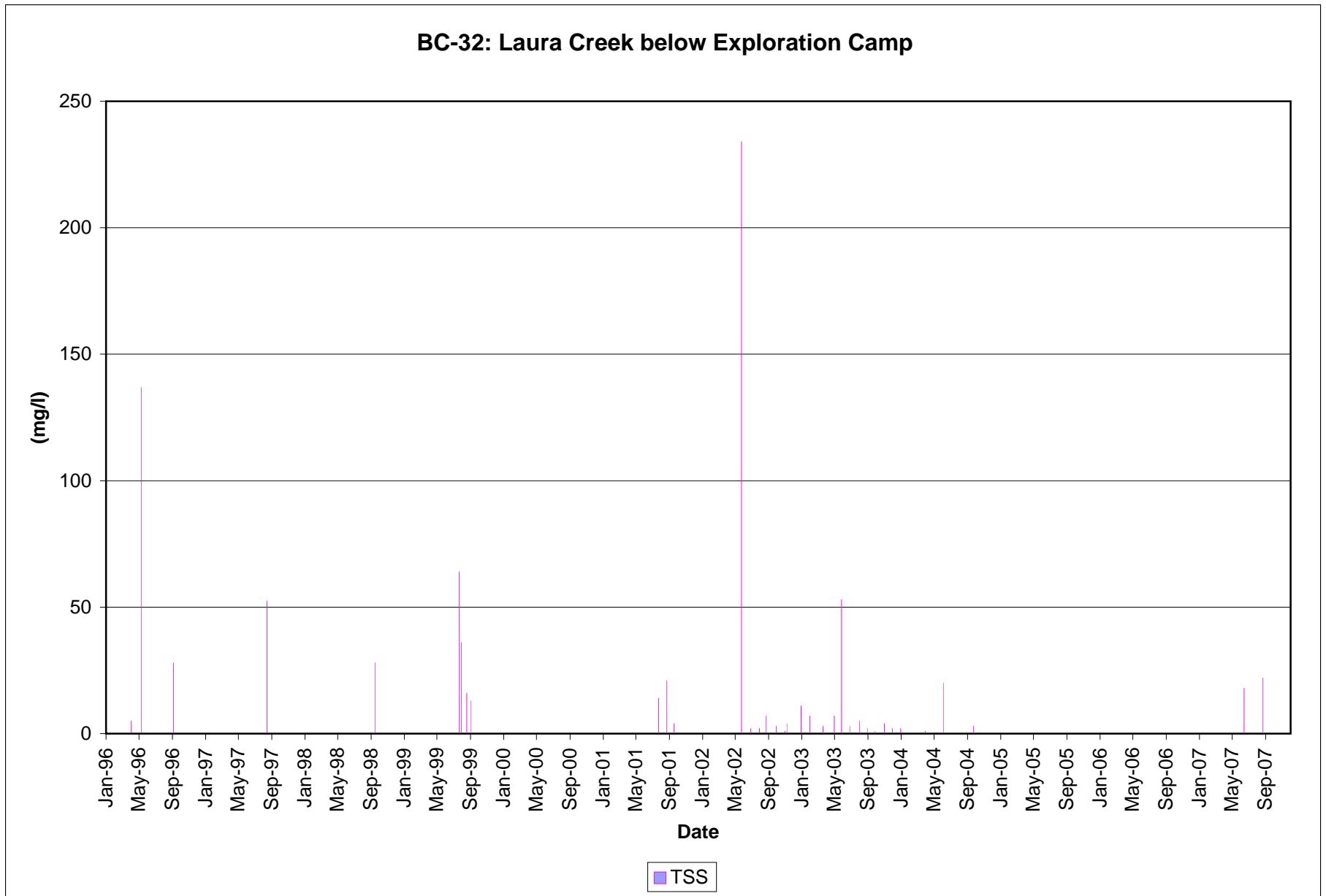


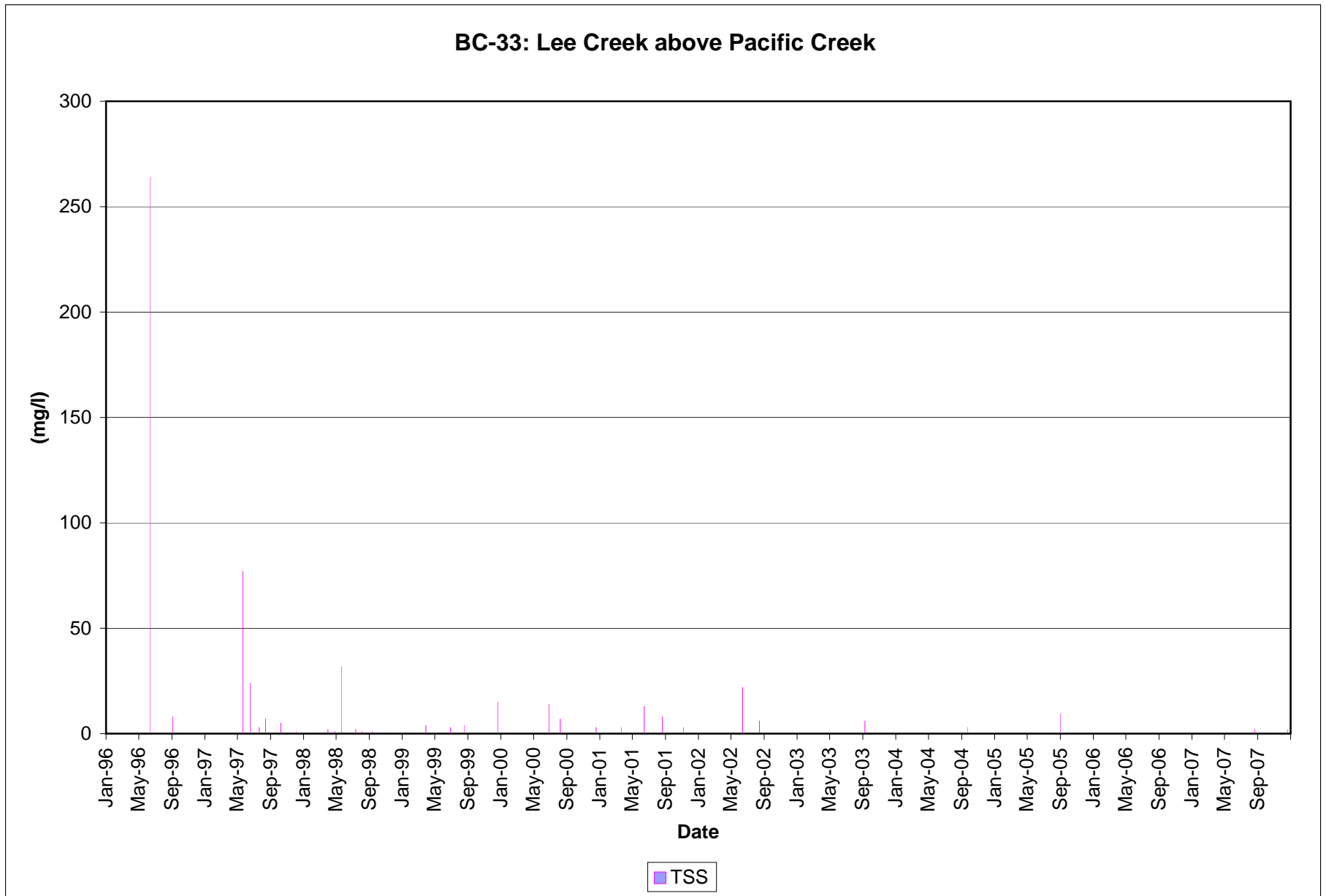


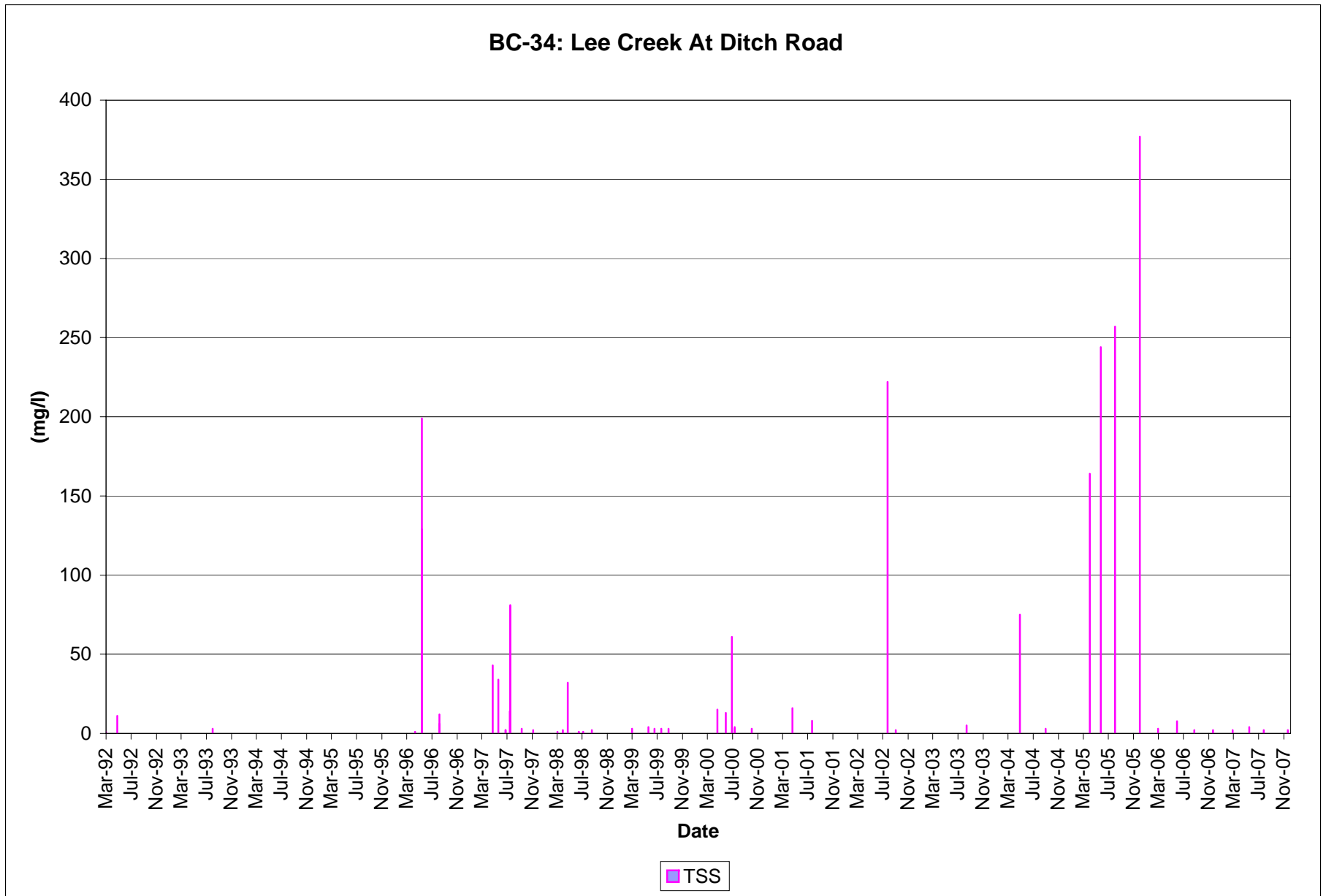


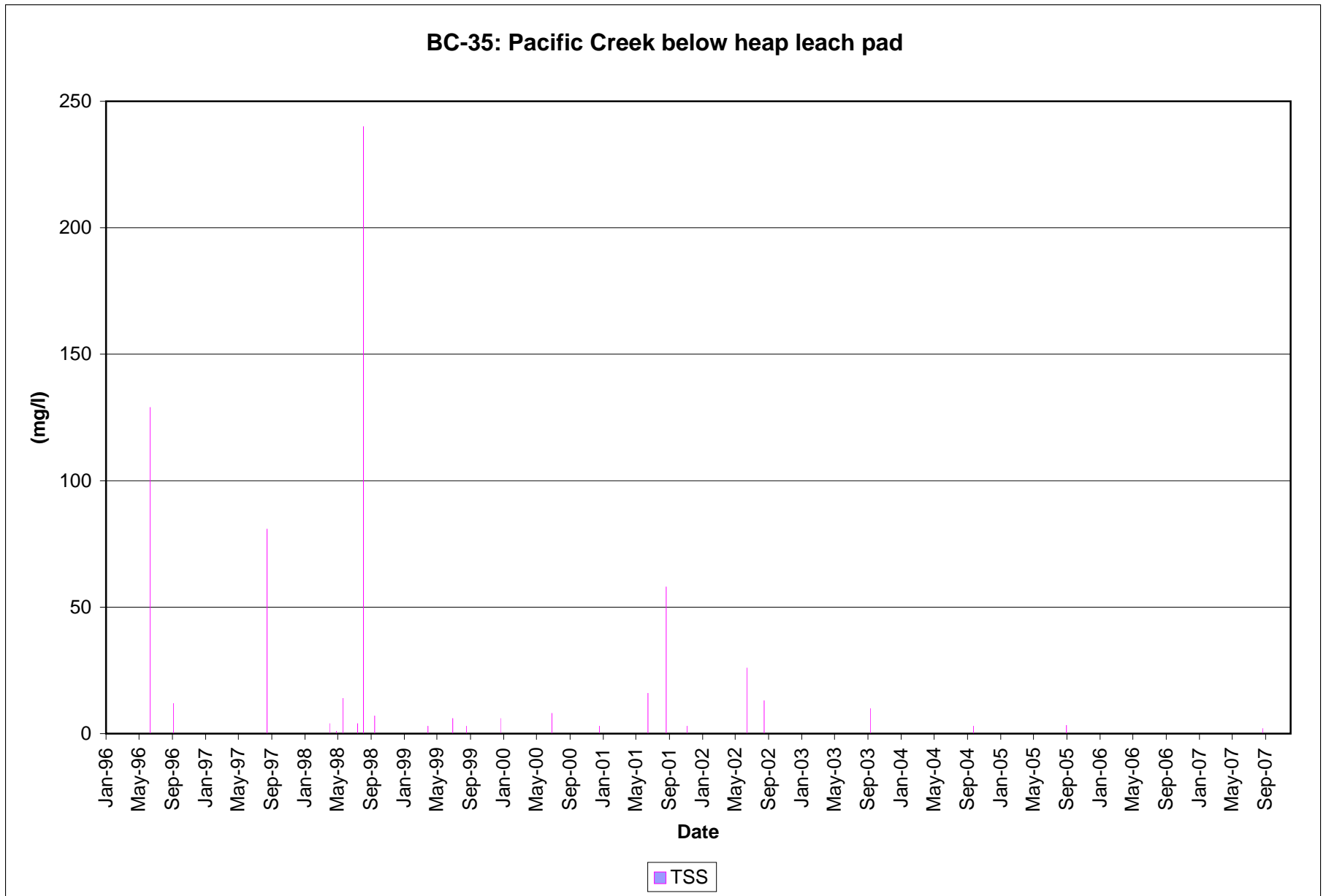


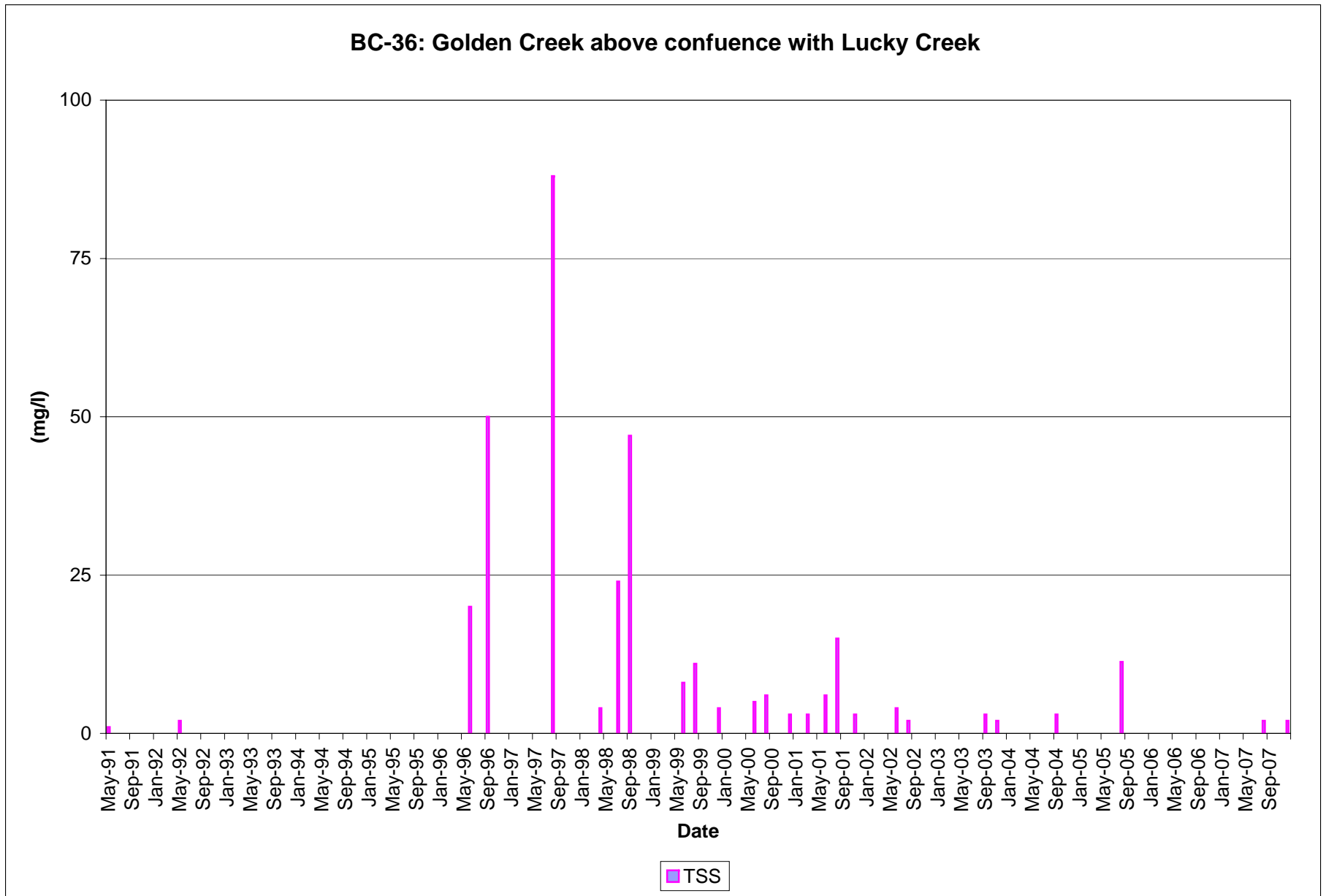


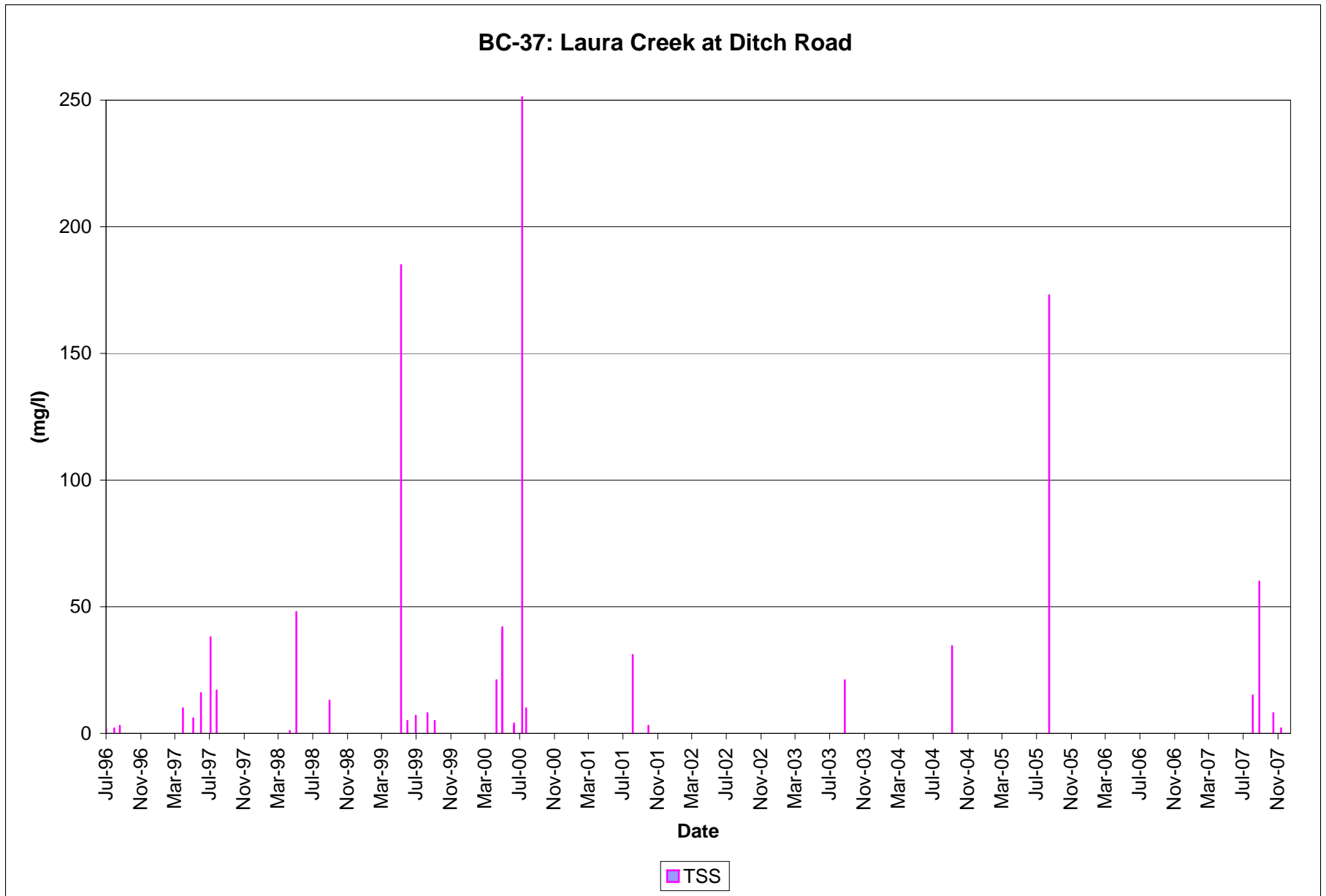




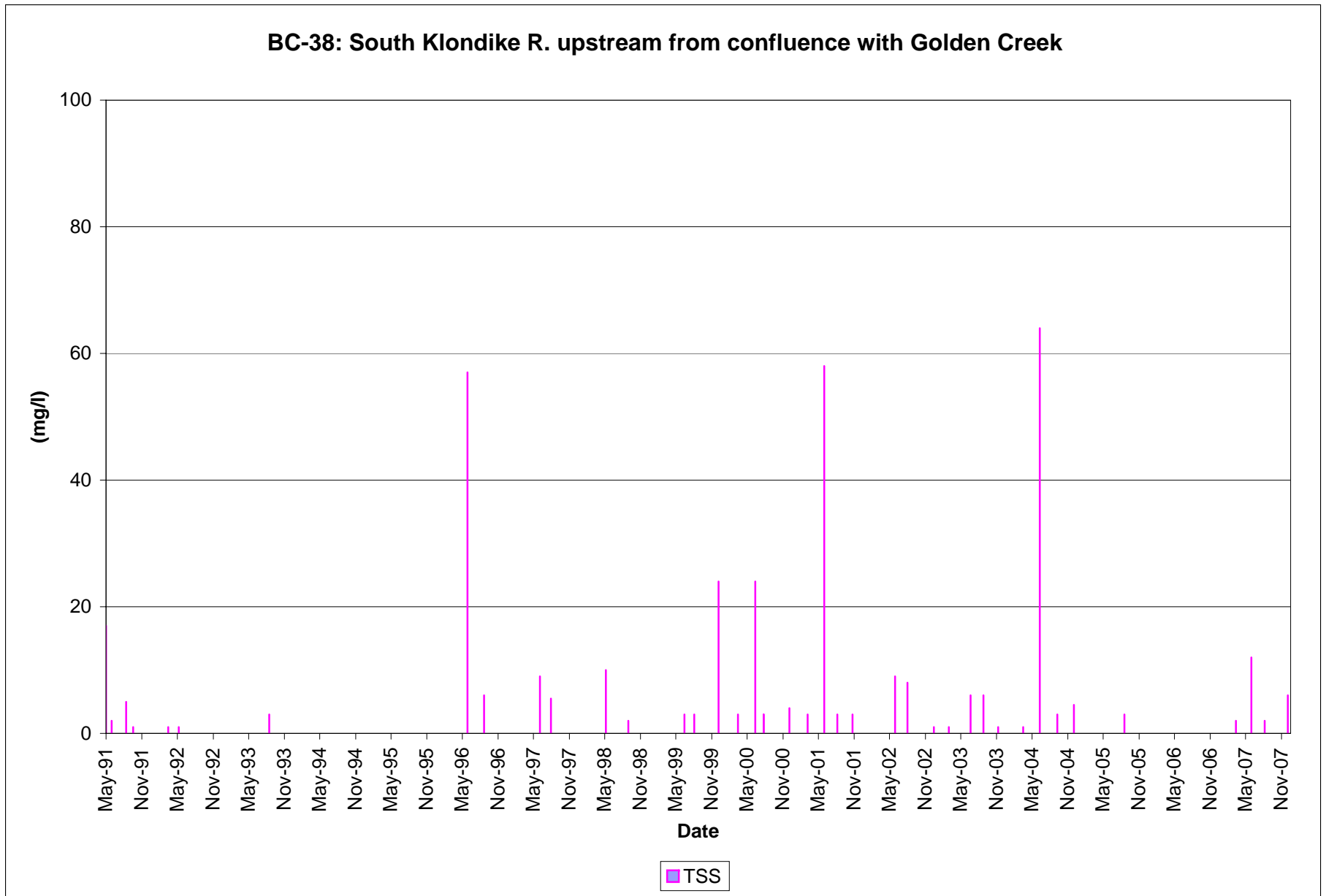


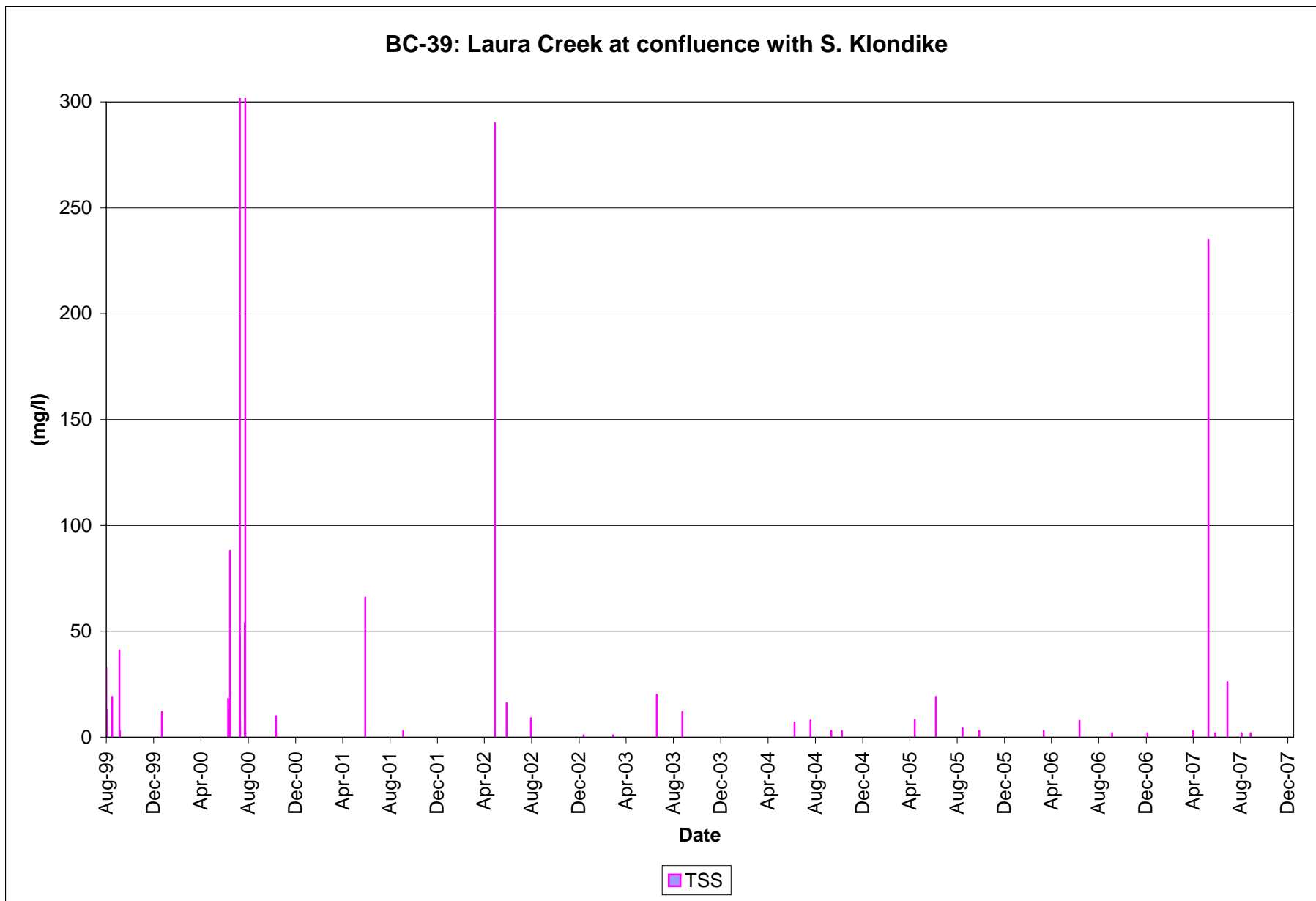


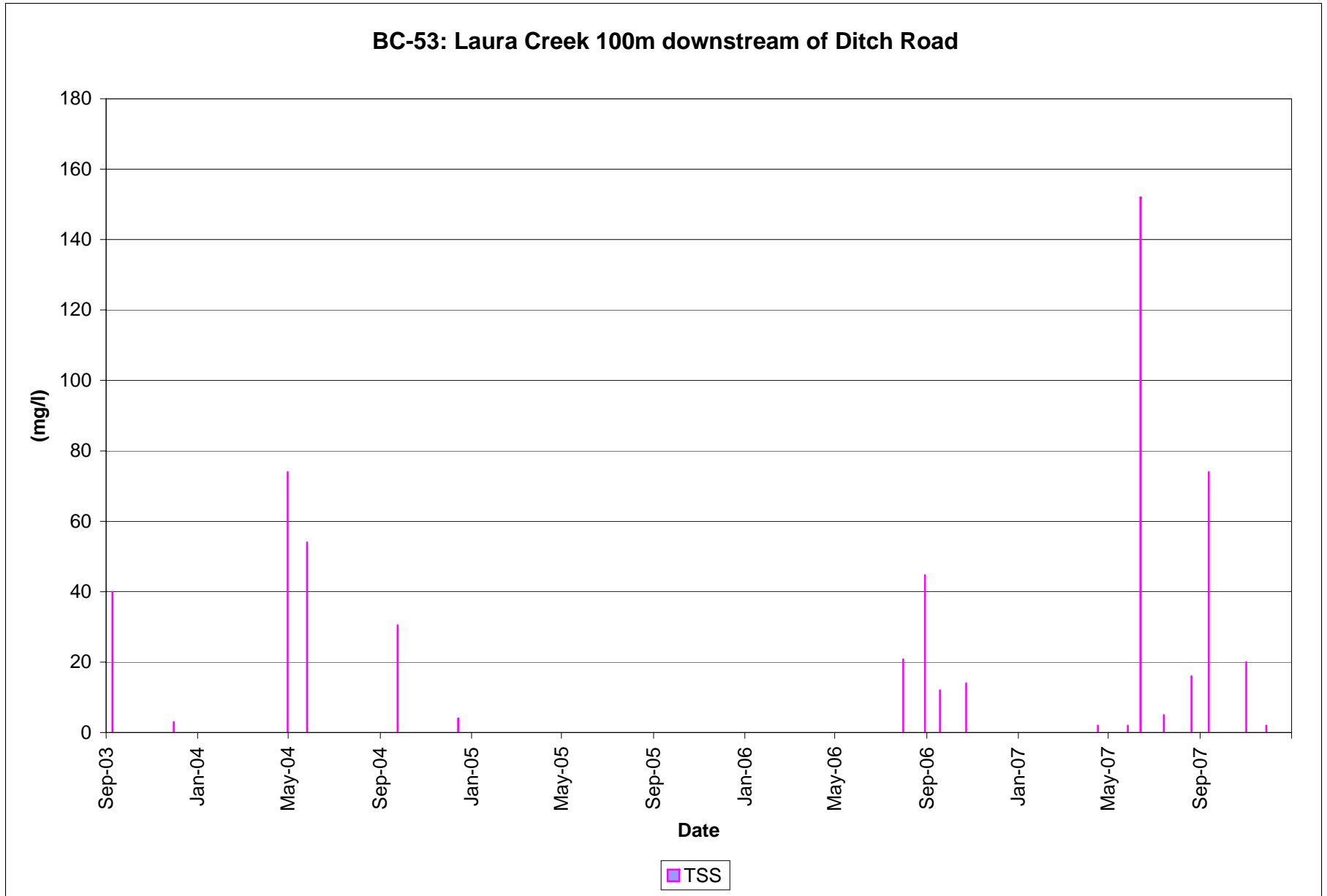


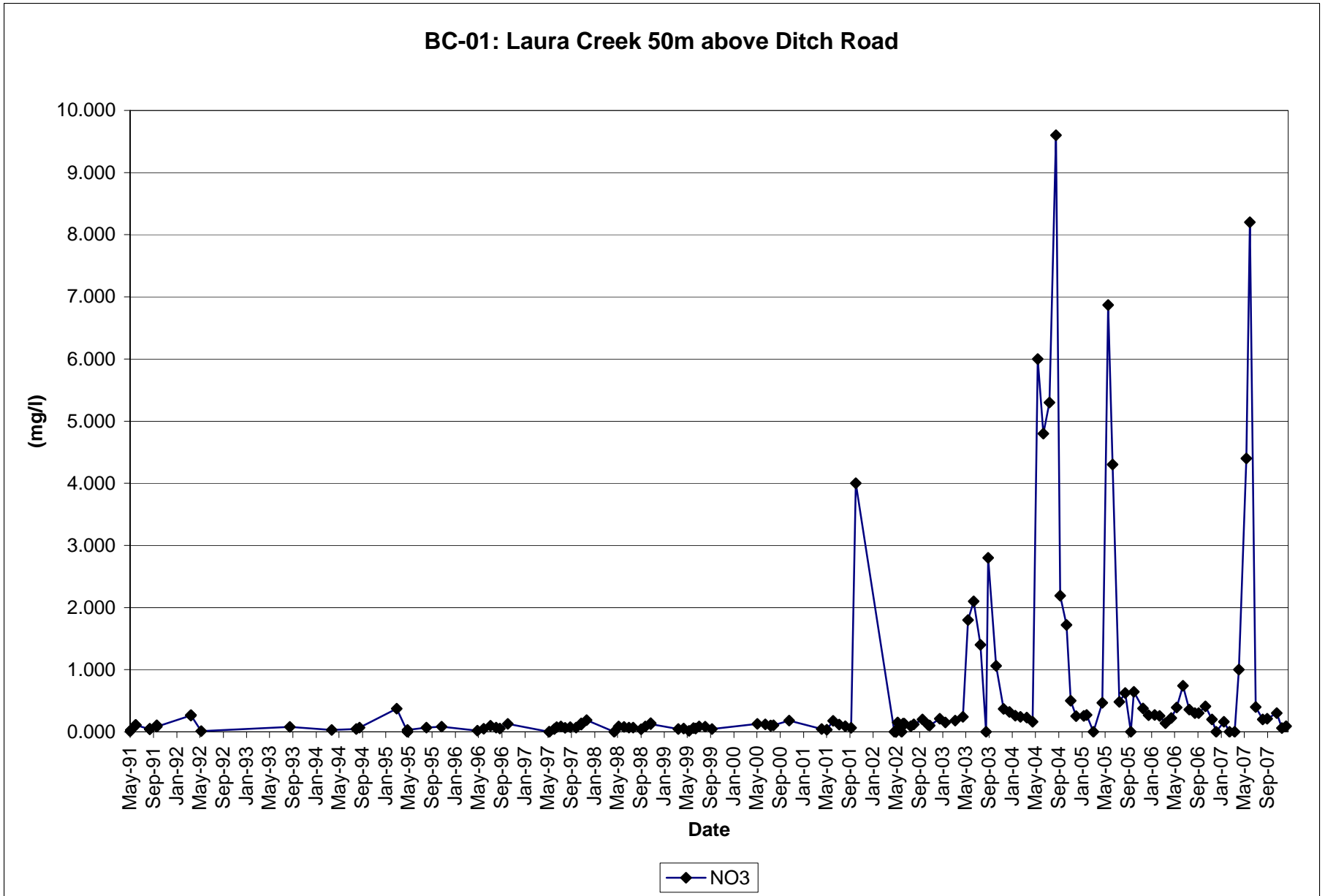


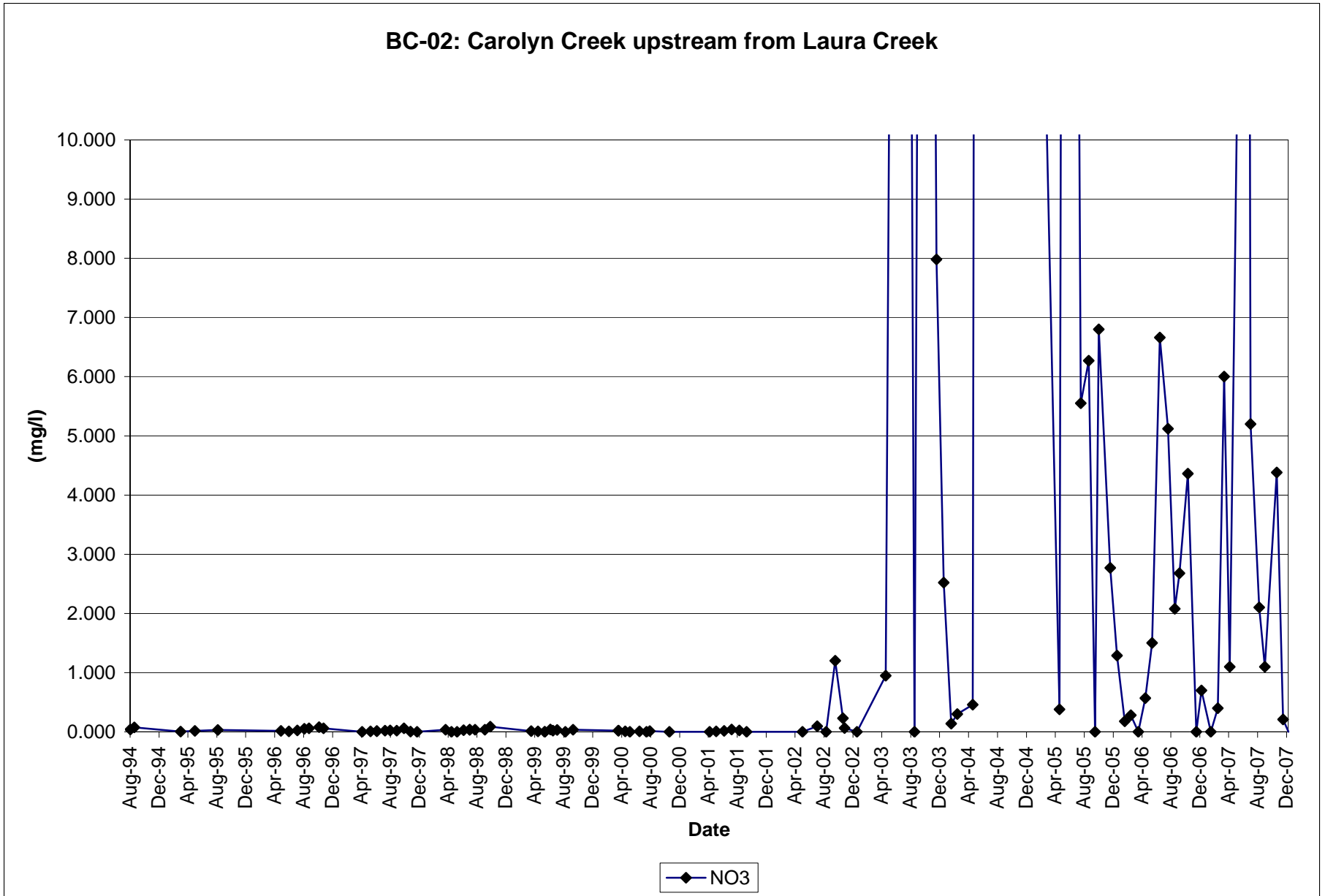




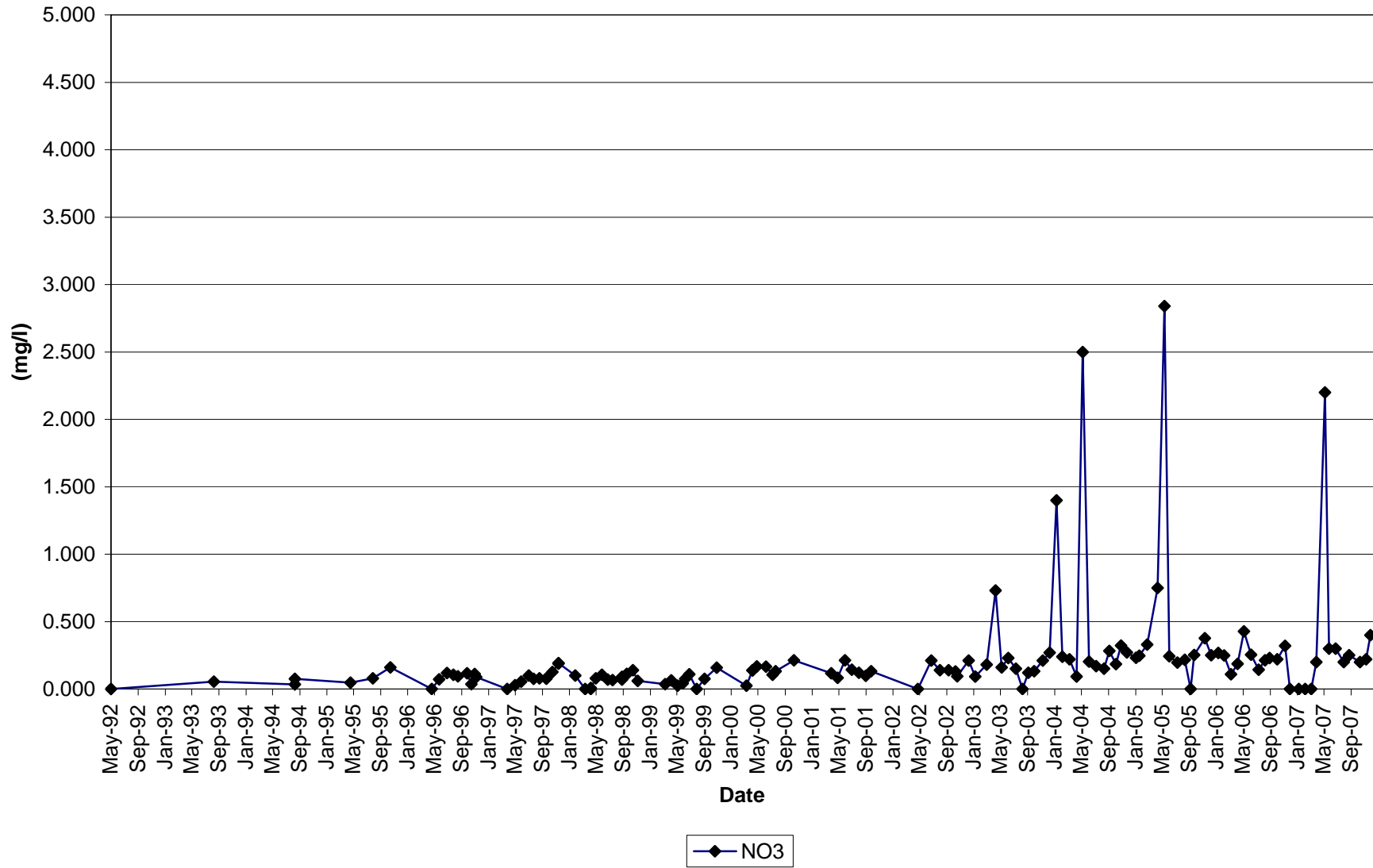


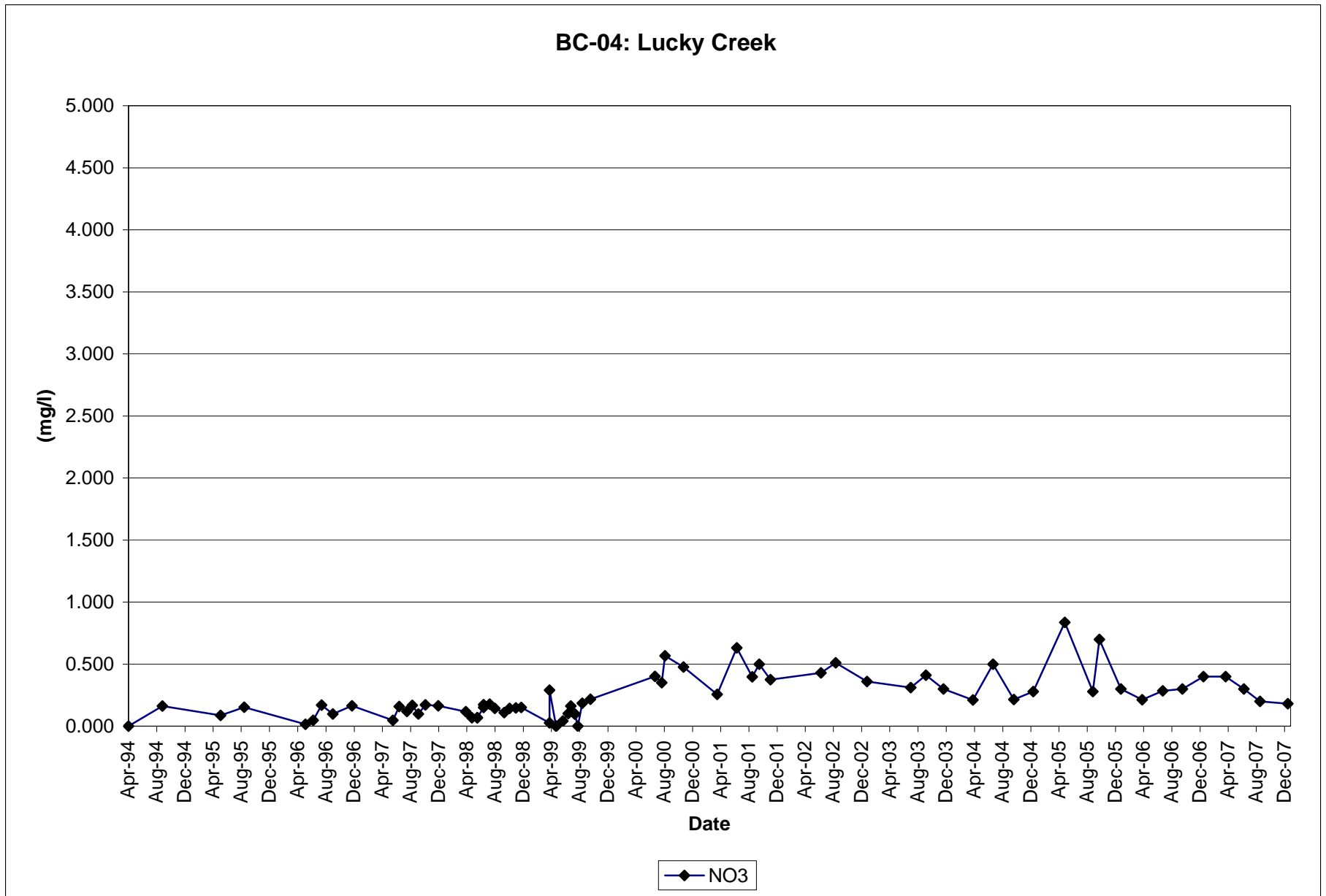


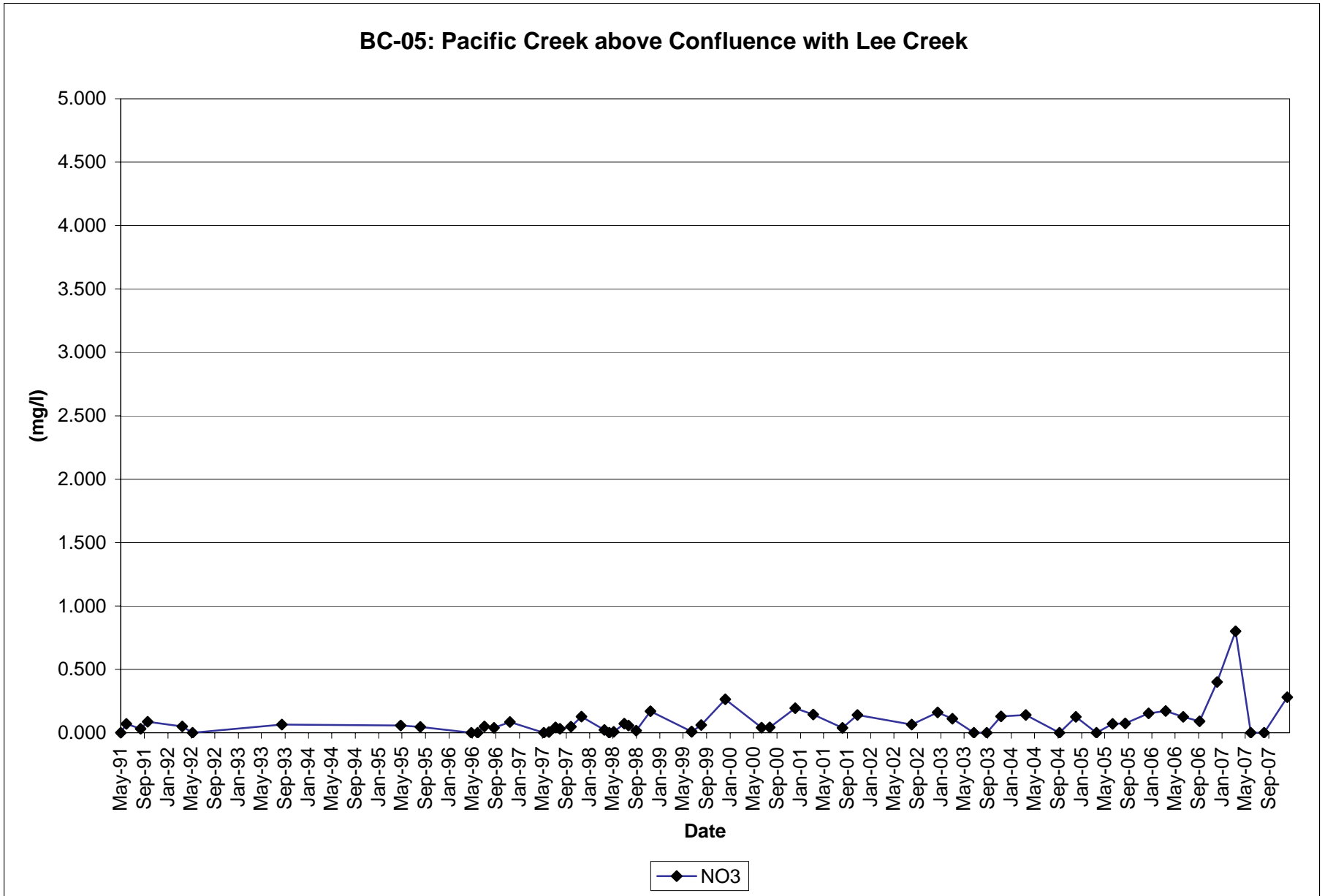




BC-03: Laura Creek Above Carolyn Creek

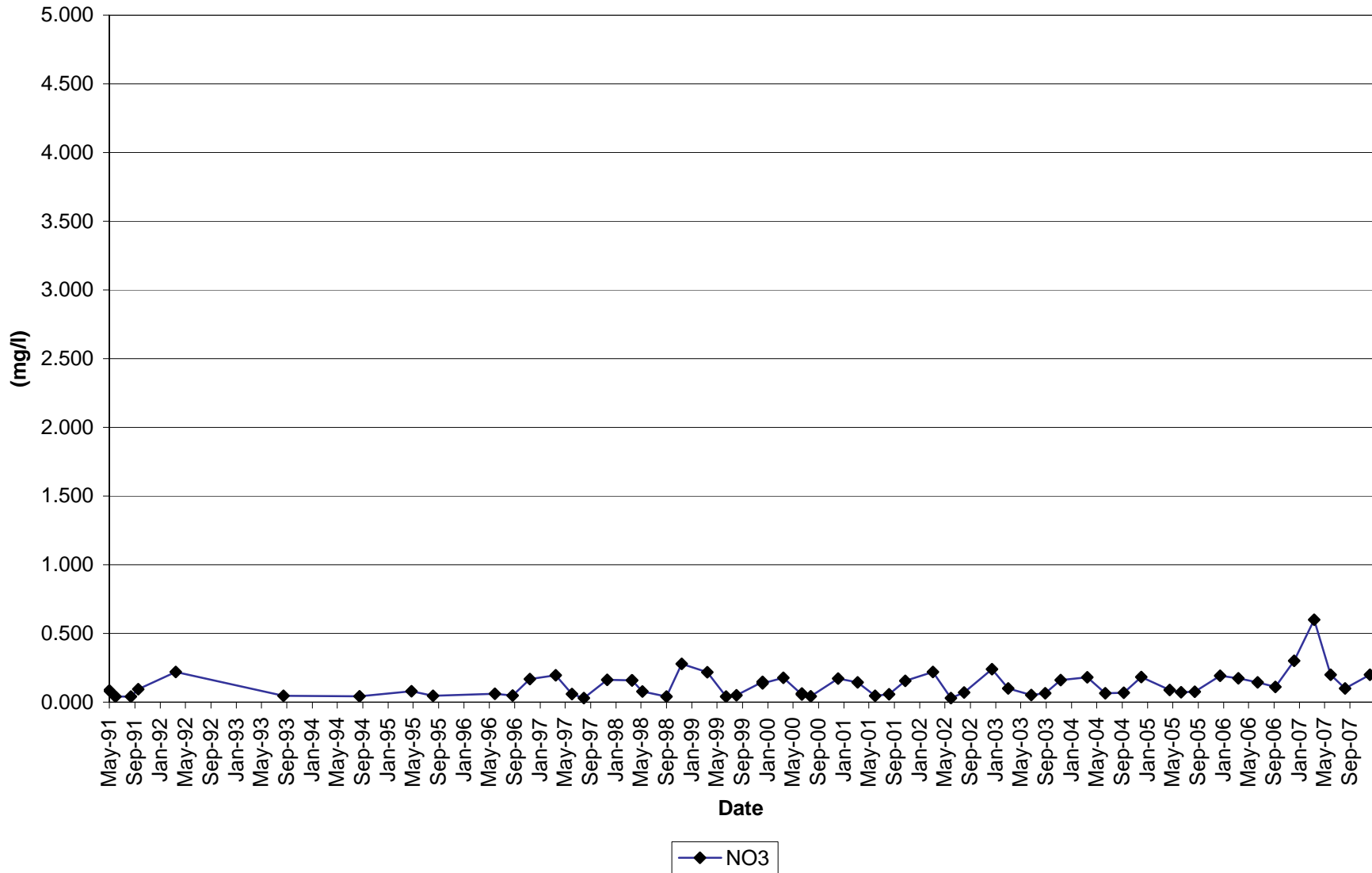


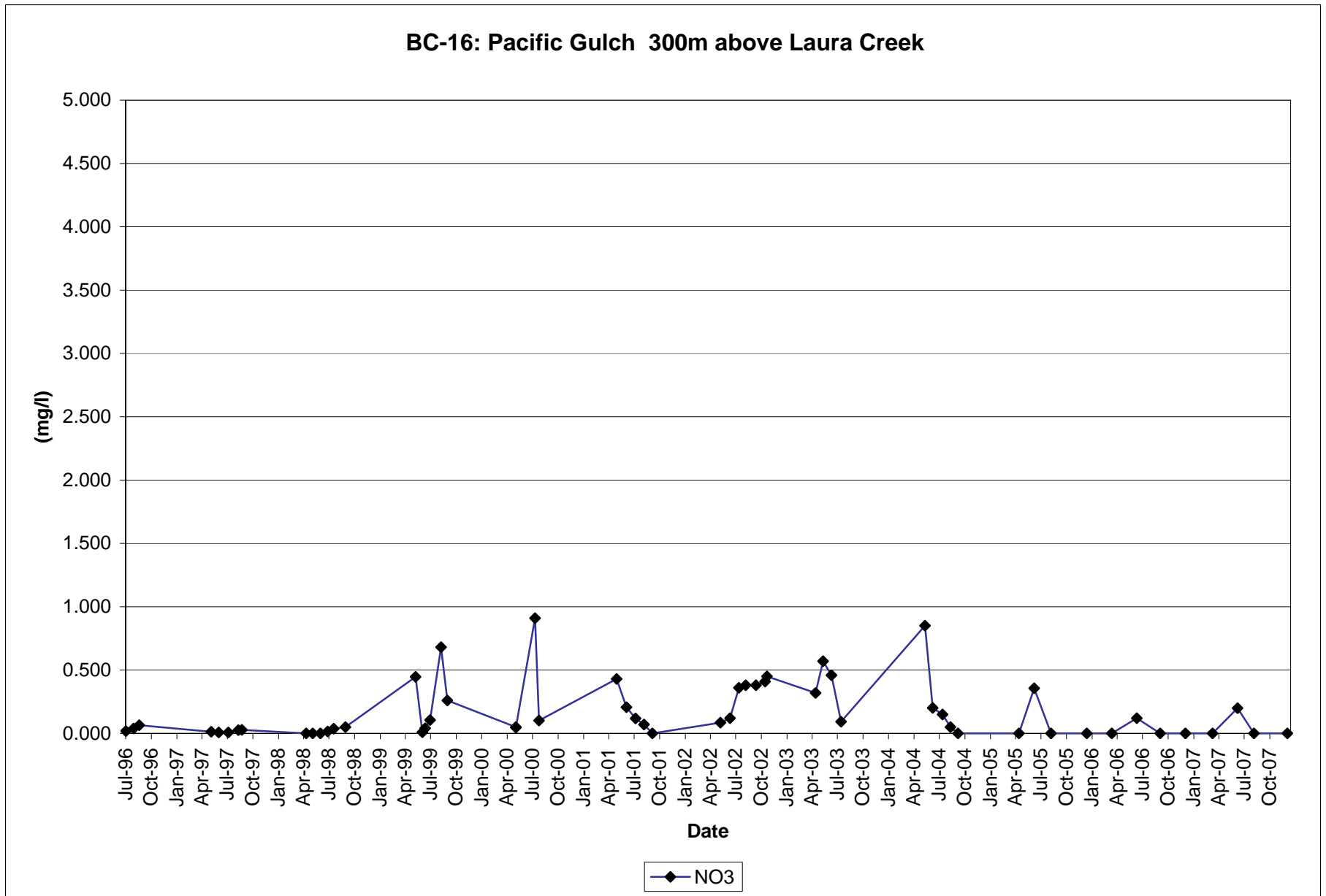


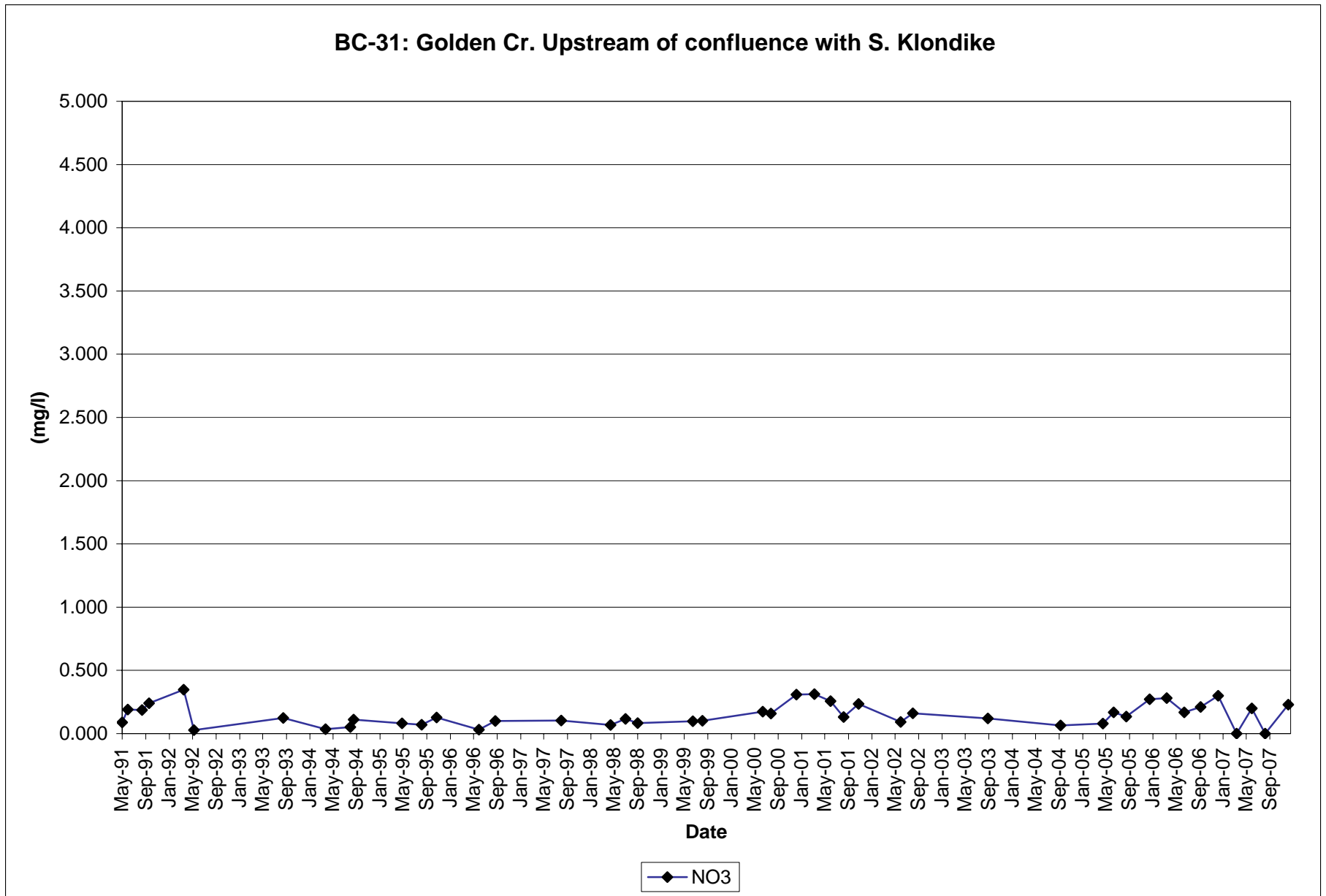


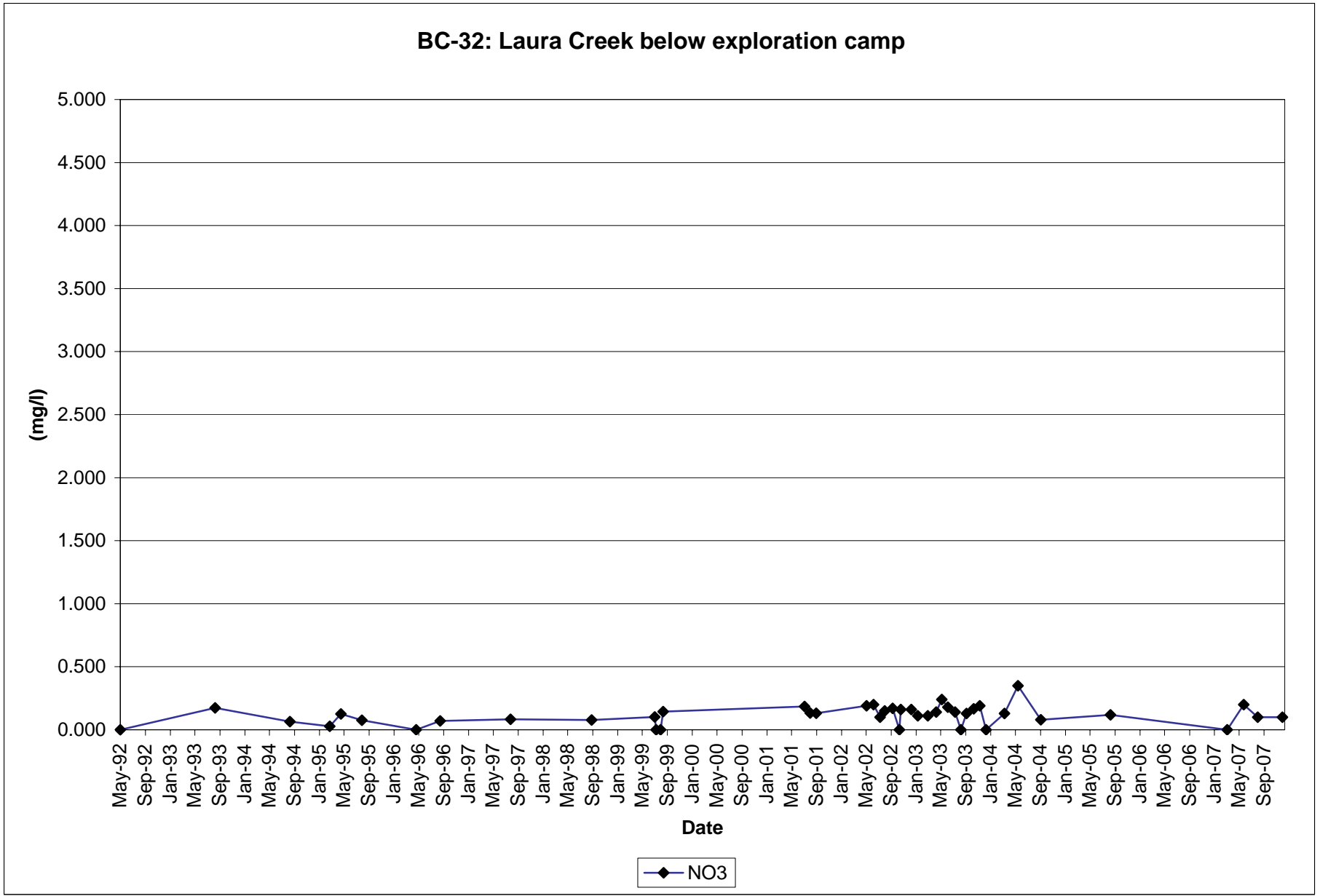


BC-06: South Klondike R. downstream from confluence with Lee Creek

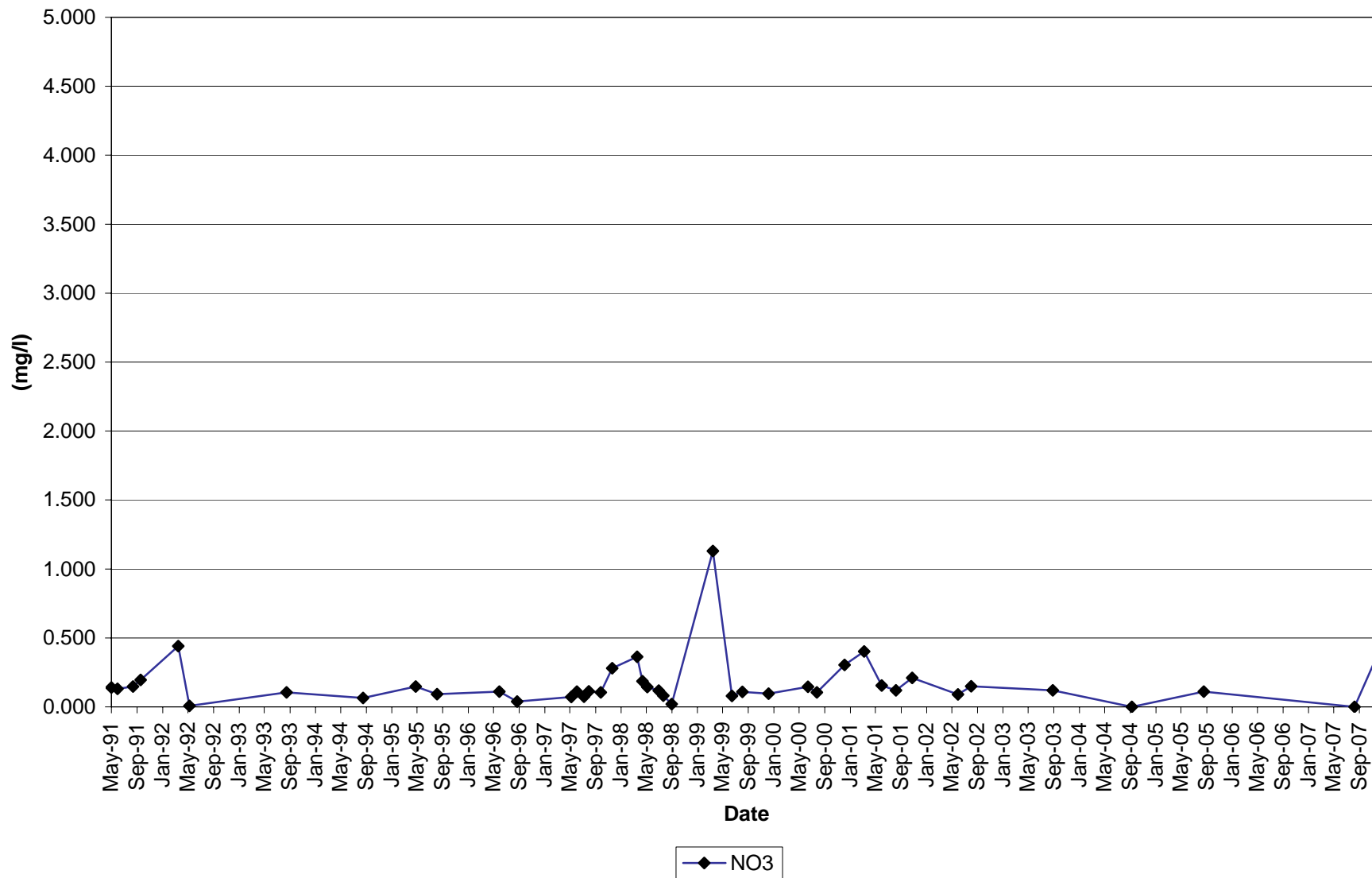


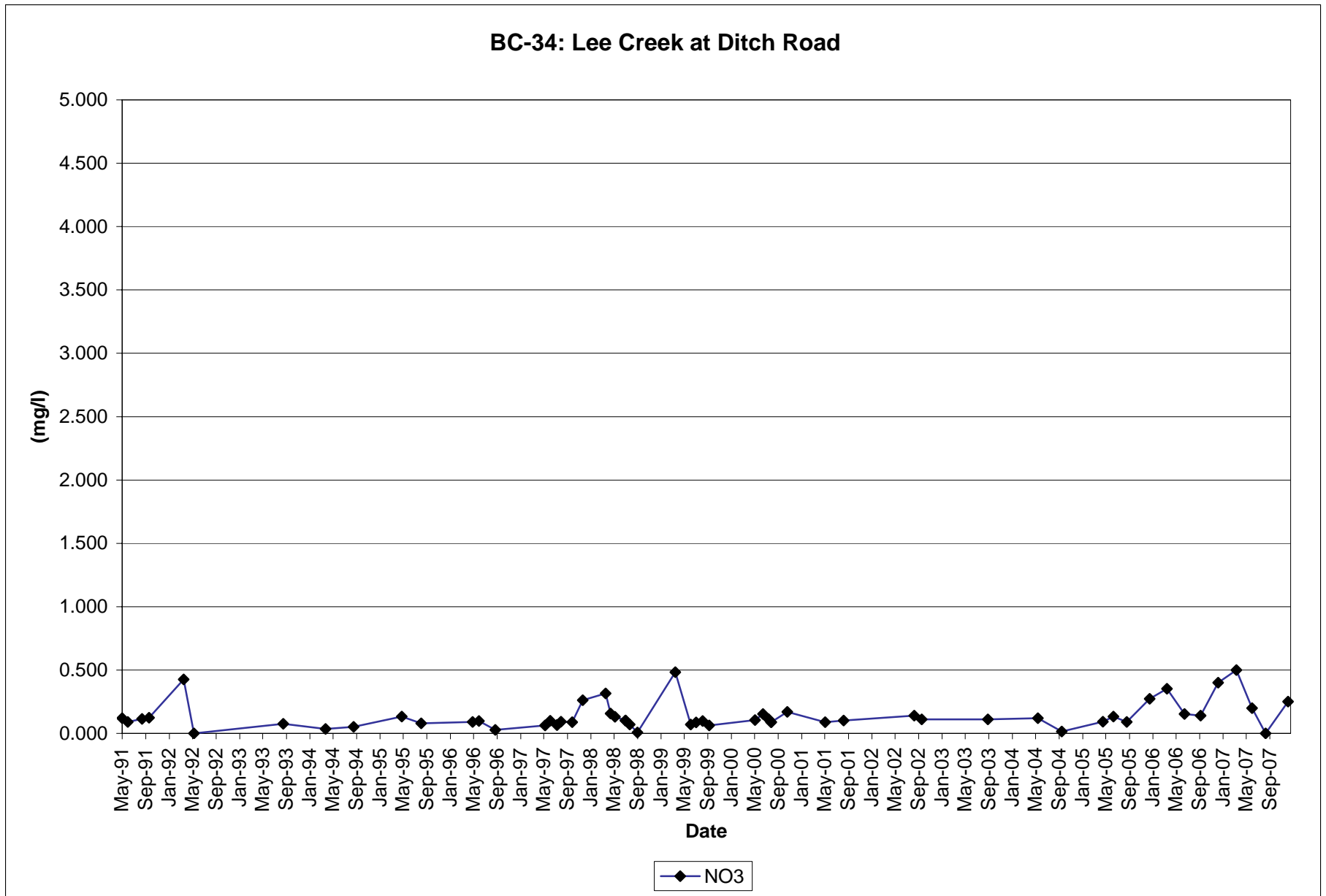




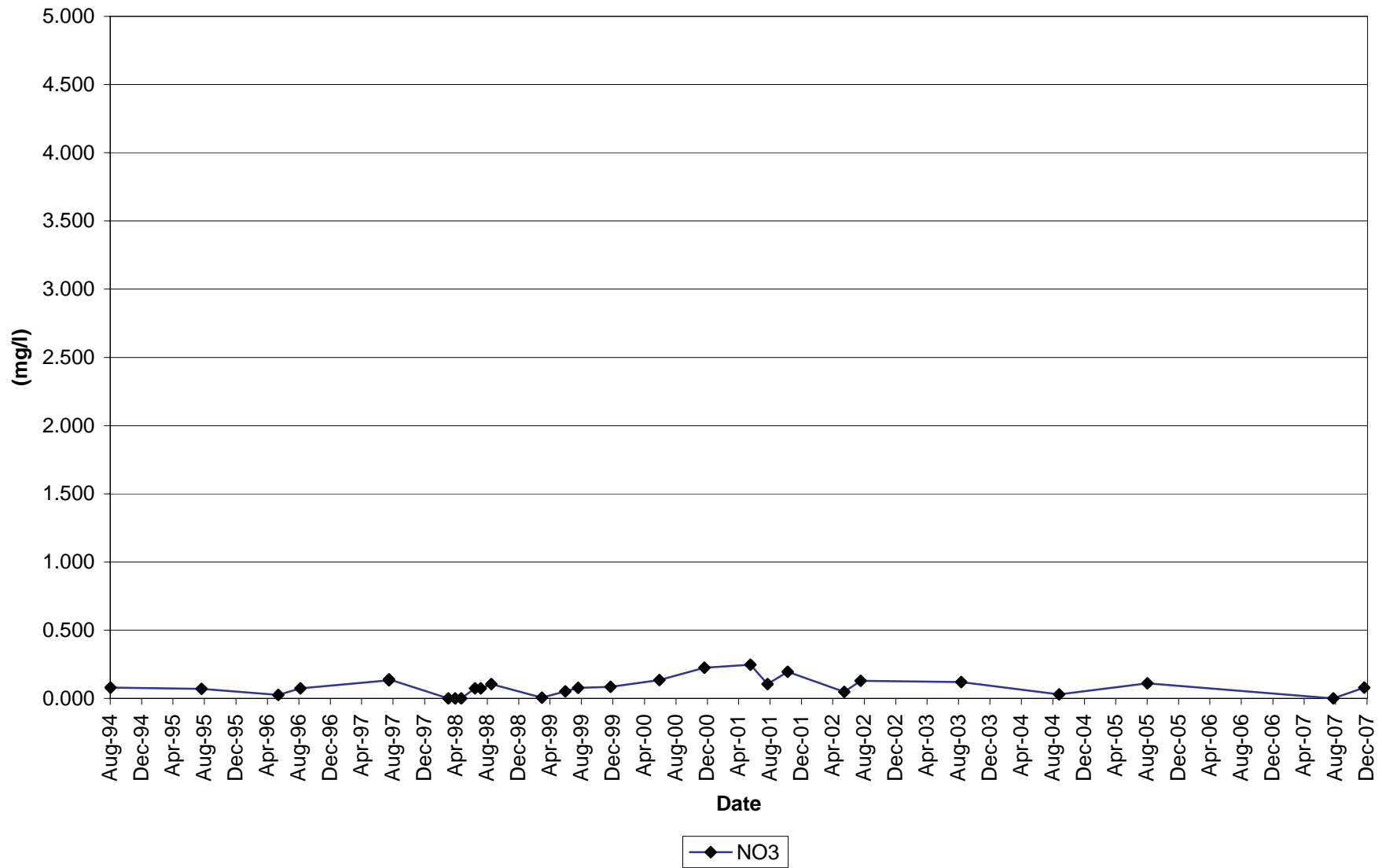


BC-33: Lee Creek above Pacific Creek

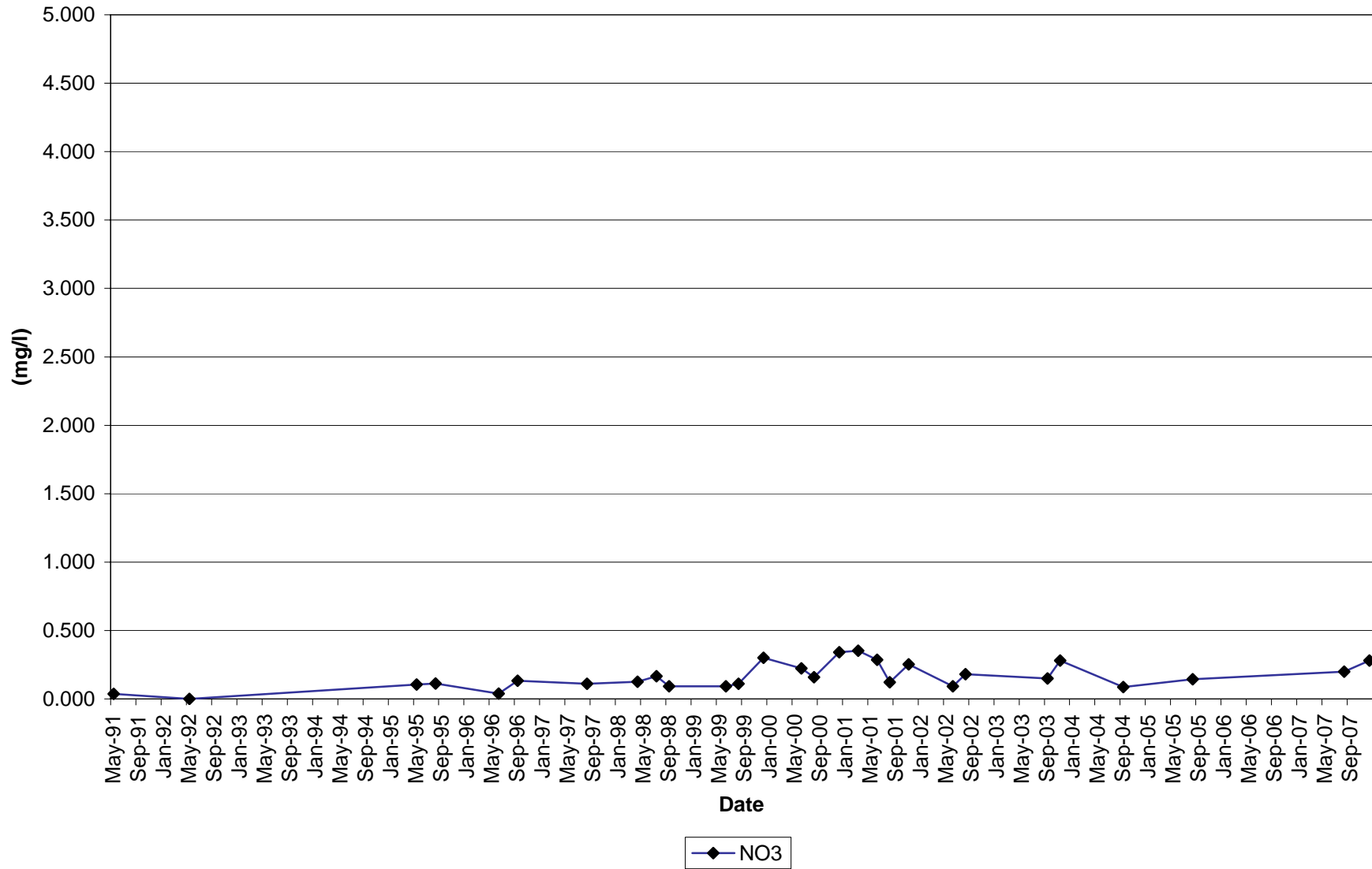




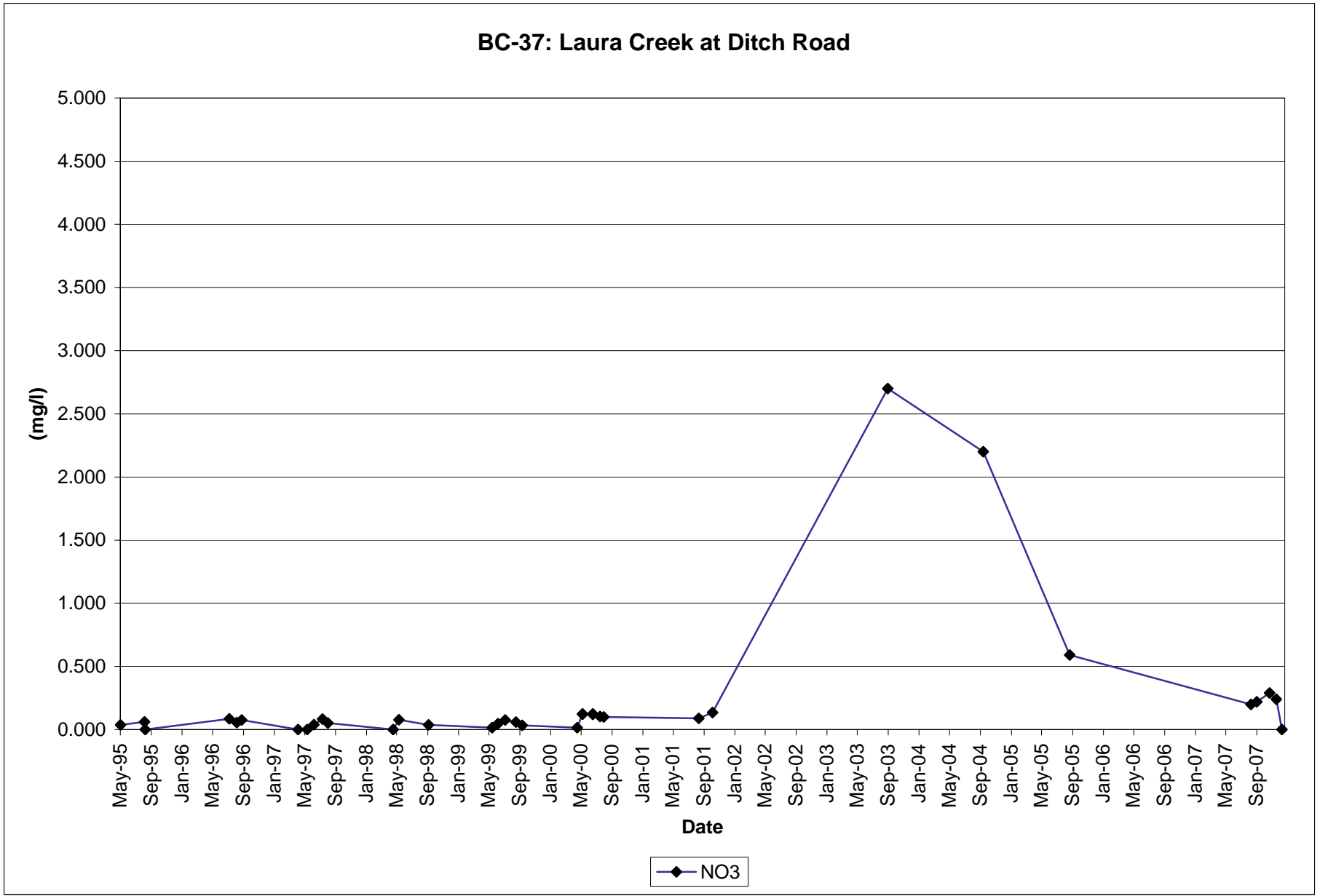
BC-35: Pacific Creek below Heap Leach Pad



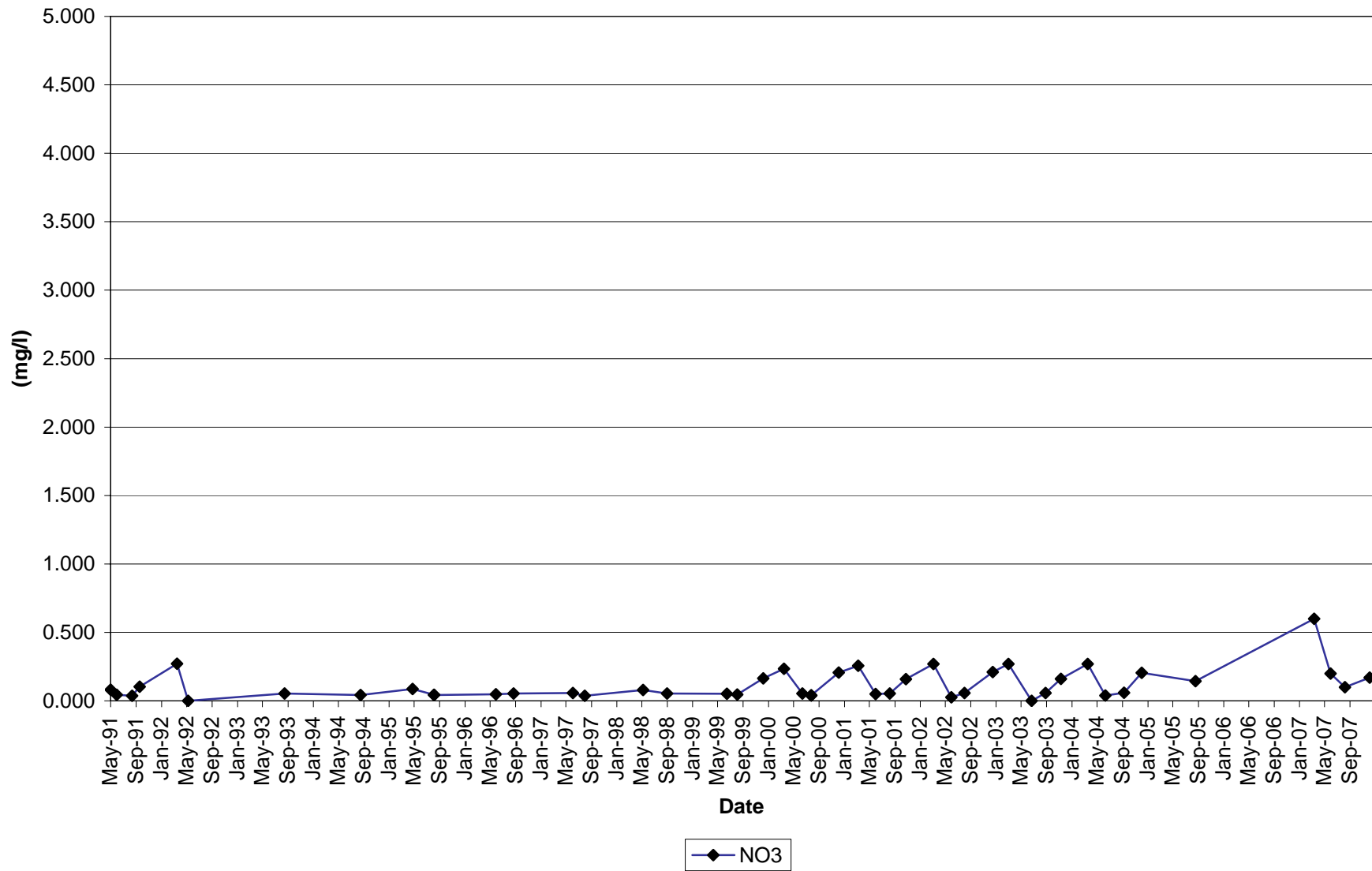
BC-36: Golden Creek above confluence with Lucky Creek

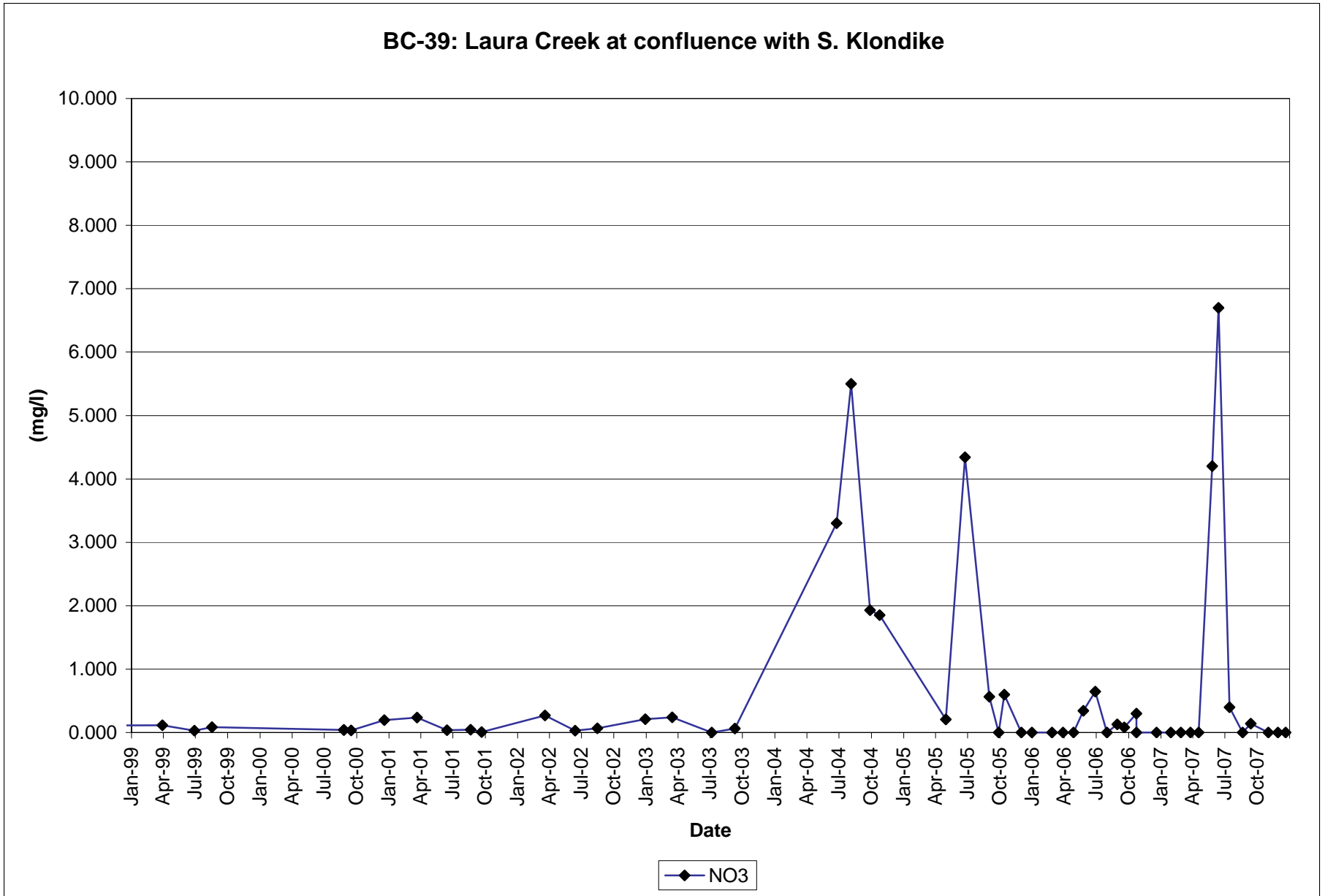


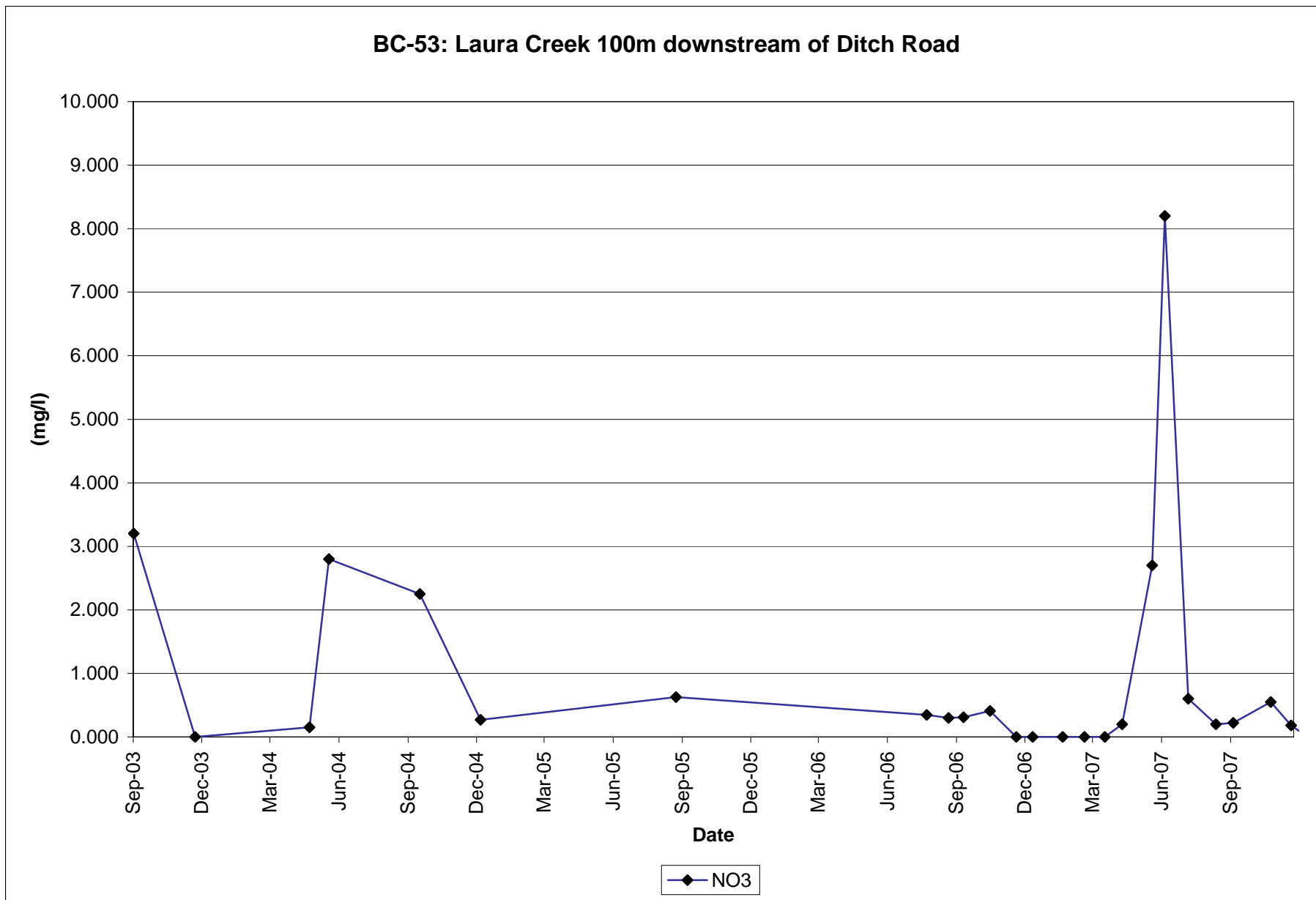




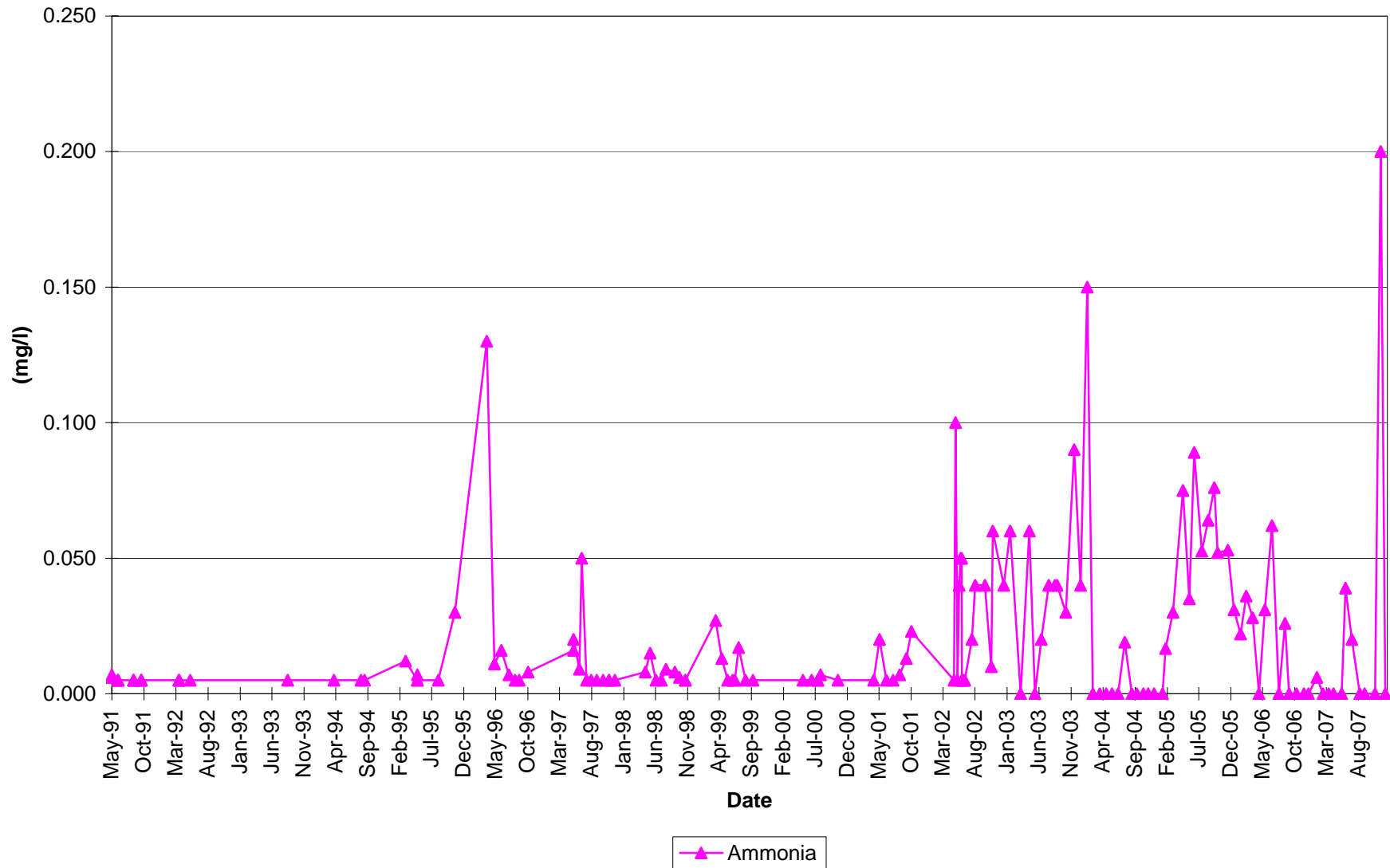
BC-38: South Klondike R. upstream from confluence of Golden Creek



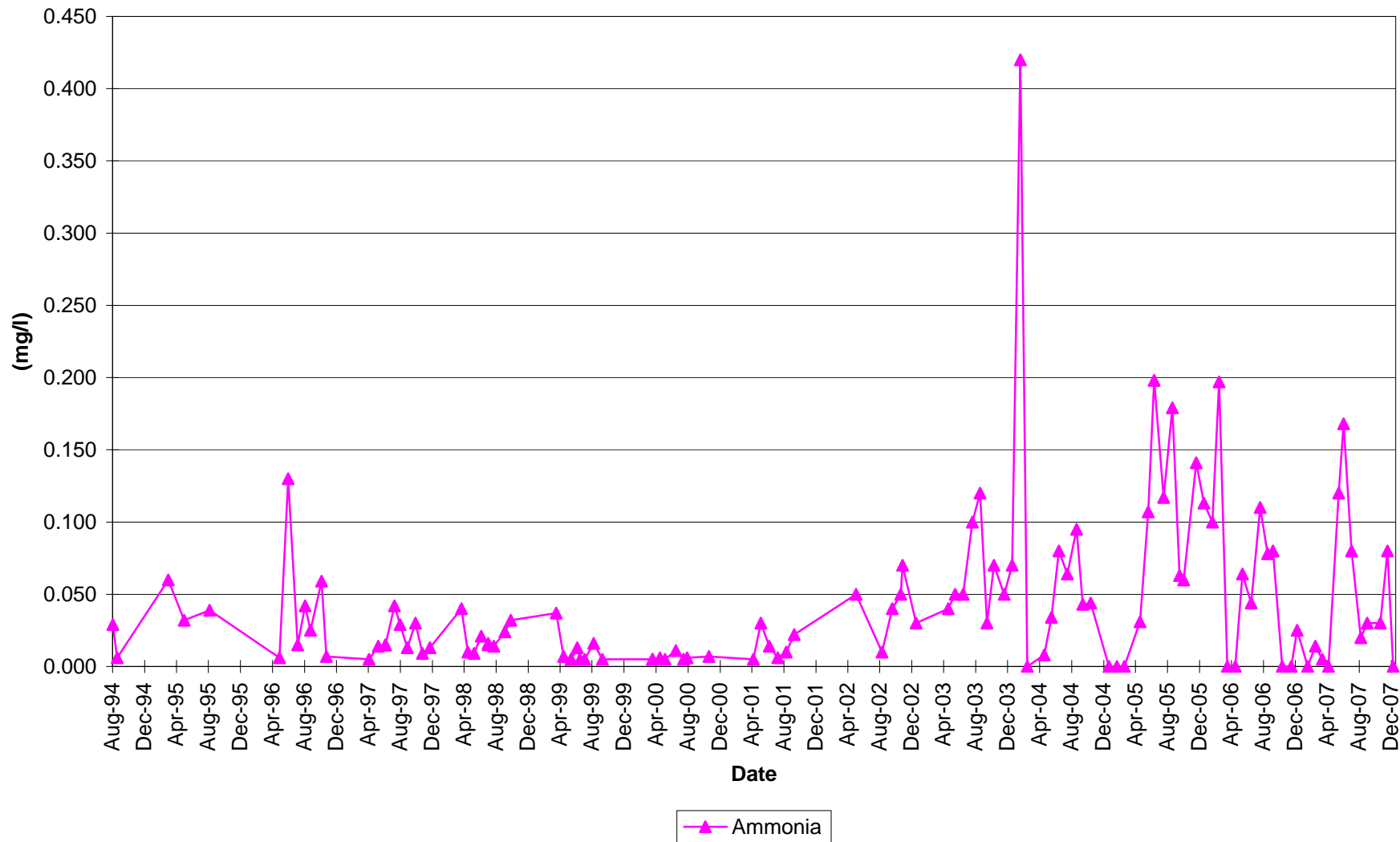




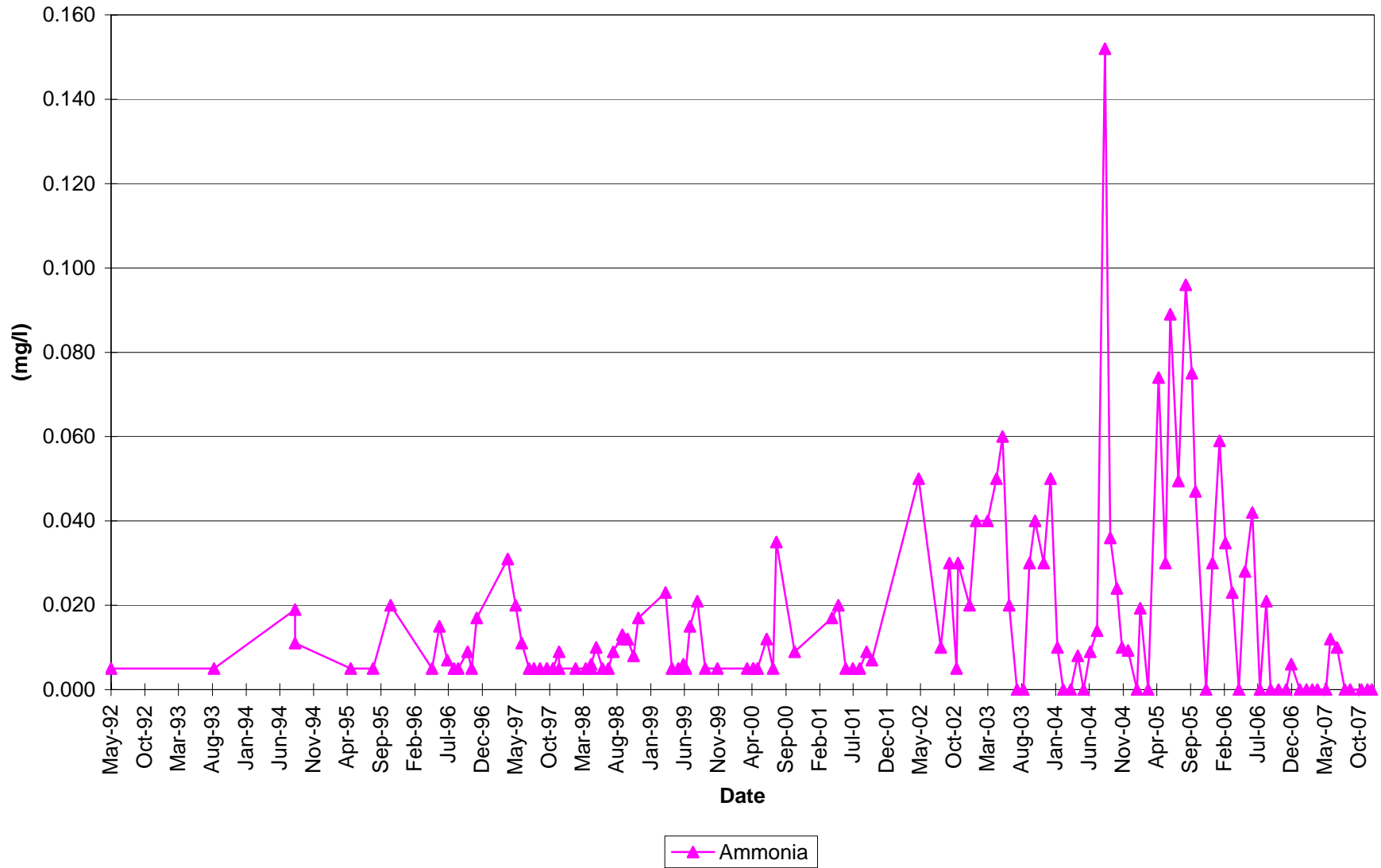
BC-01: Laura Creek 50m above Ditch Road



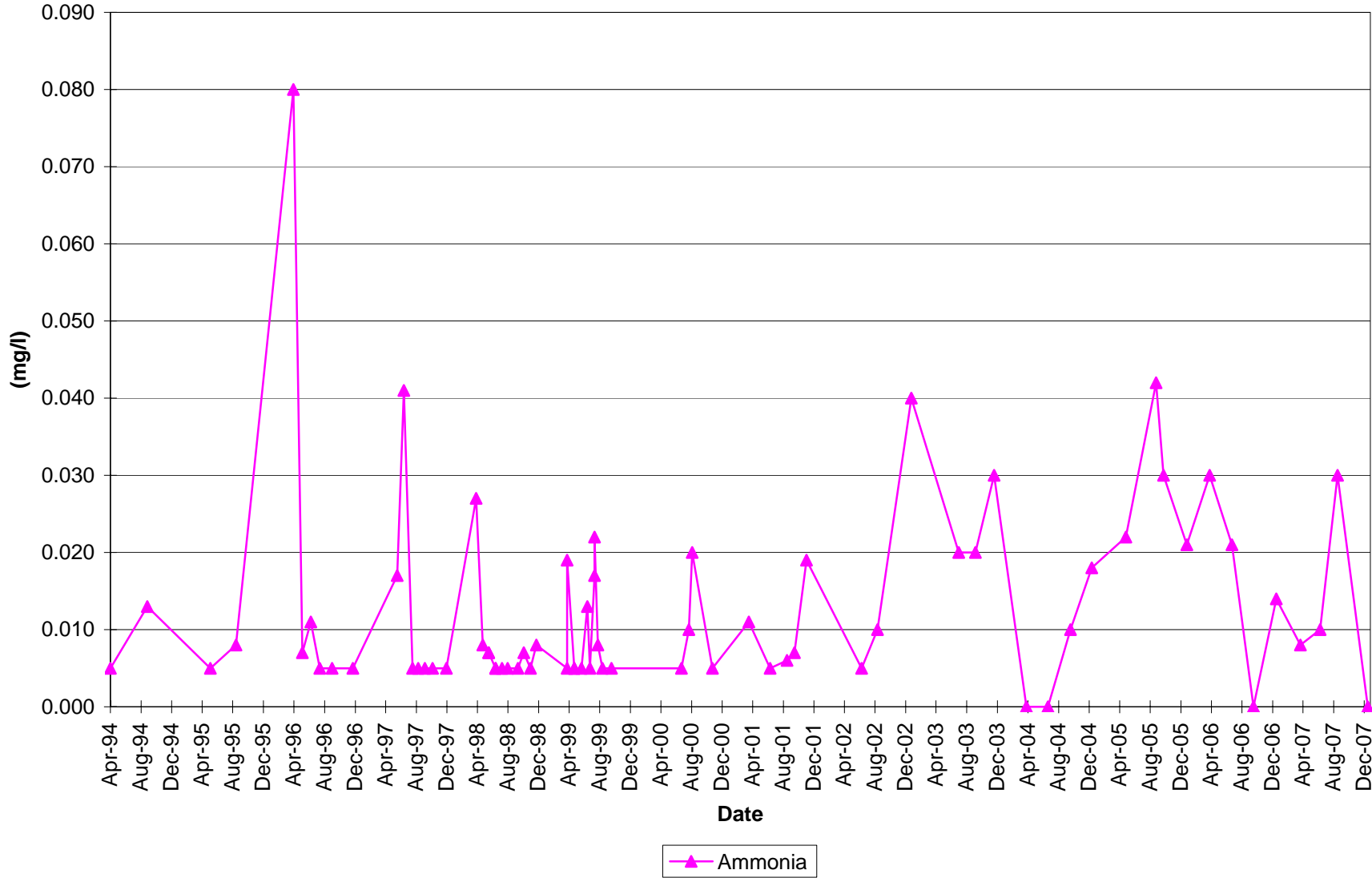
BC-02: Carolyn Creek upstream from Laura Creek



BC-03: Laura Creek above Carolyn Creek

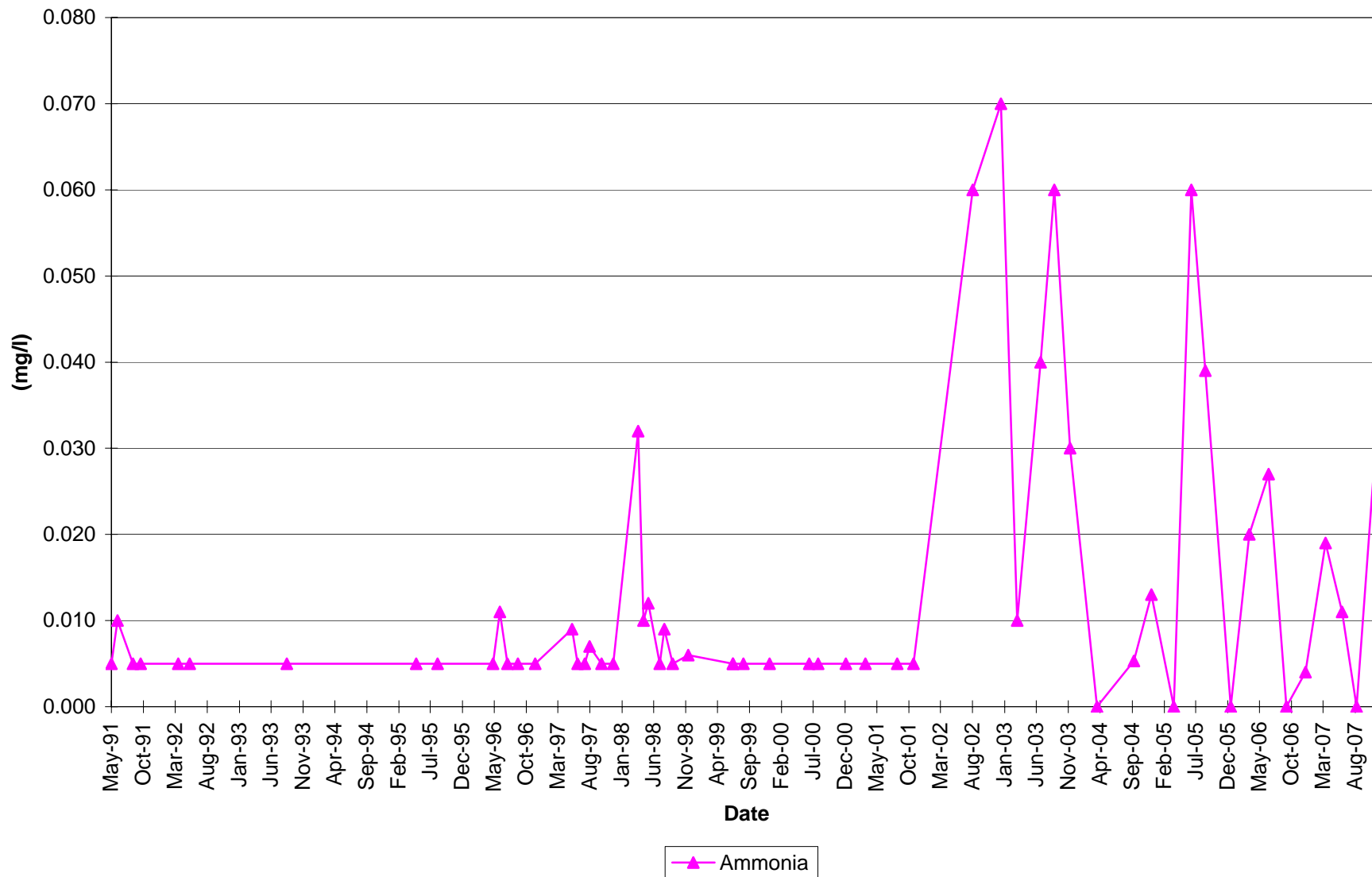


BC-04: Lucky Creek

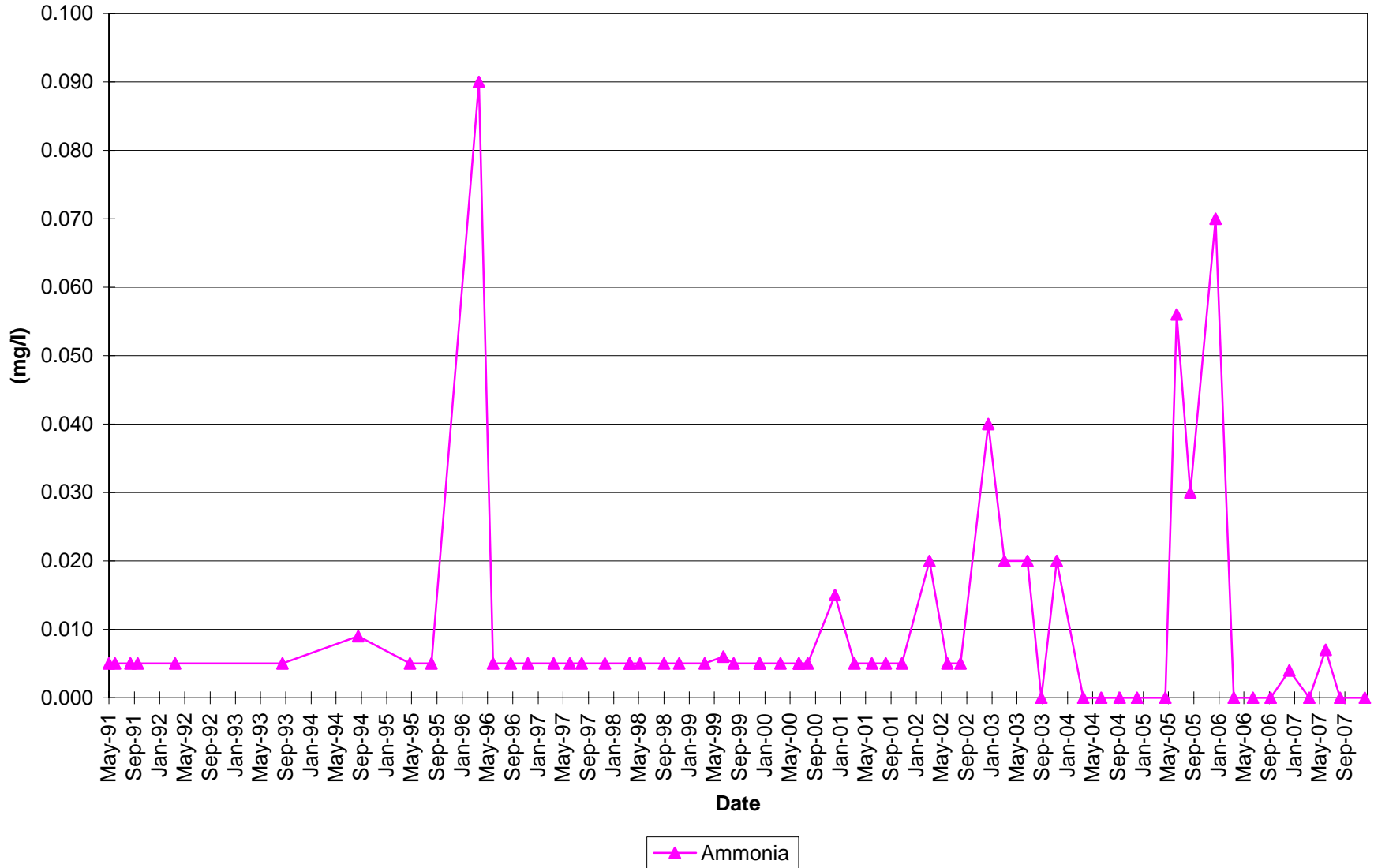




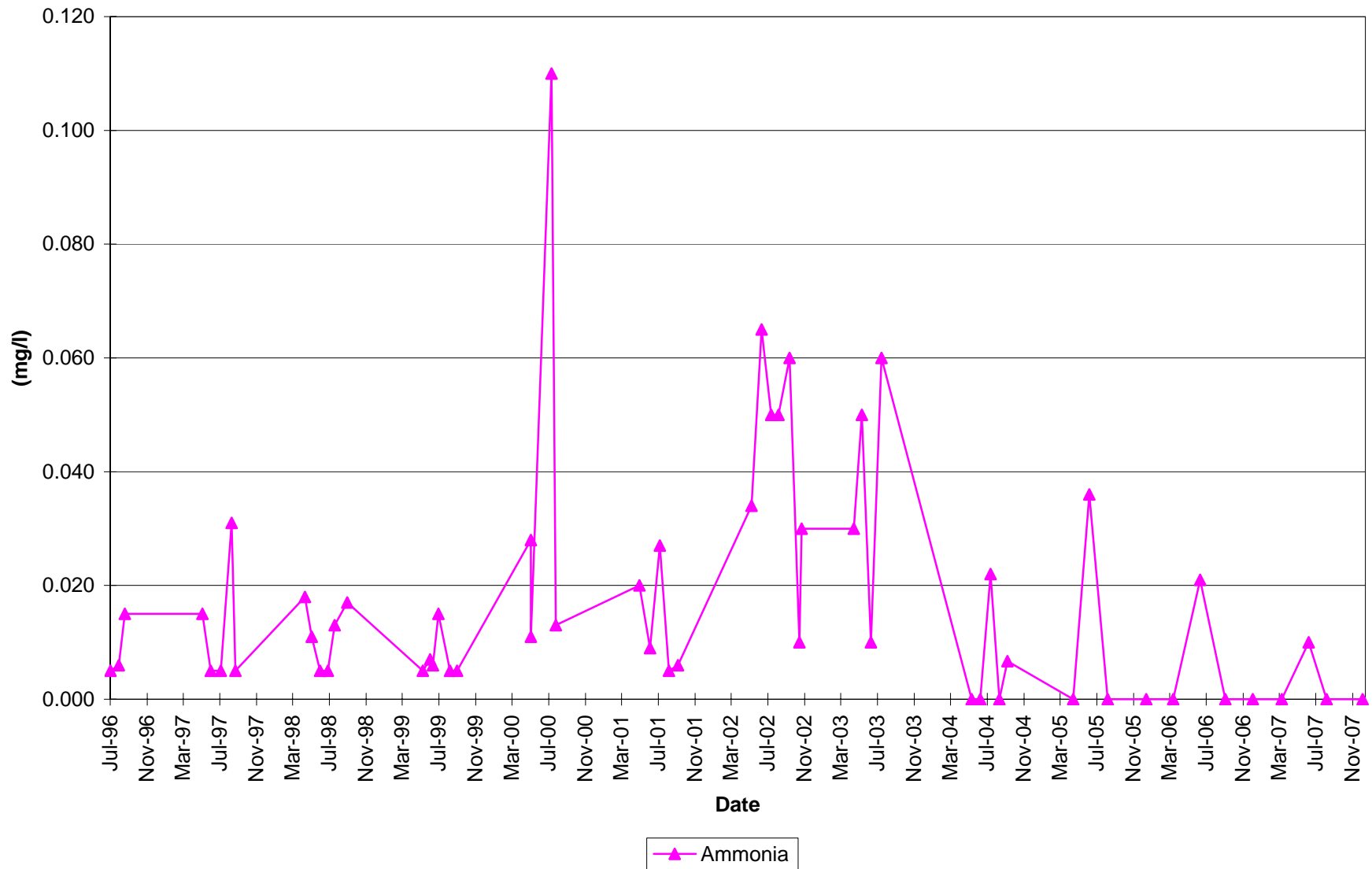
BC-05: Pacific Creek above confluence with Lee Creek



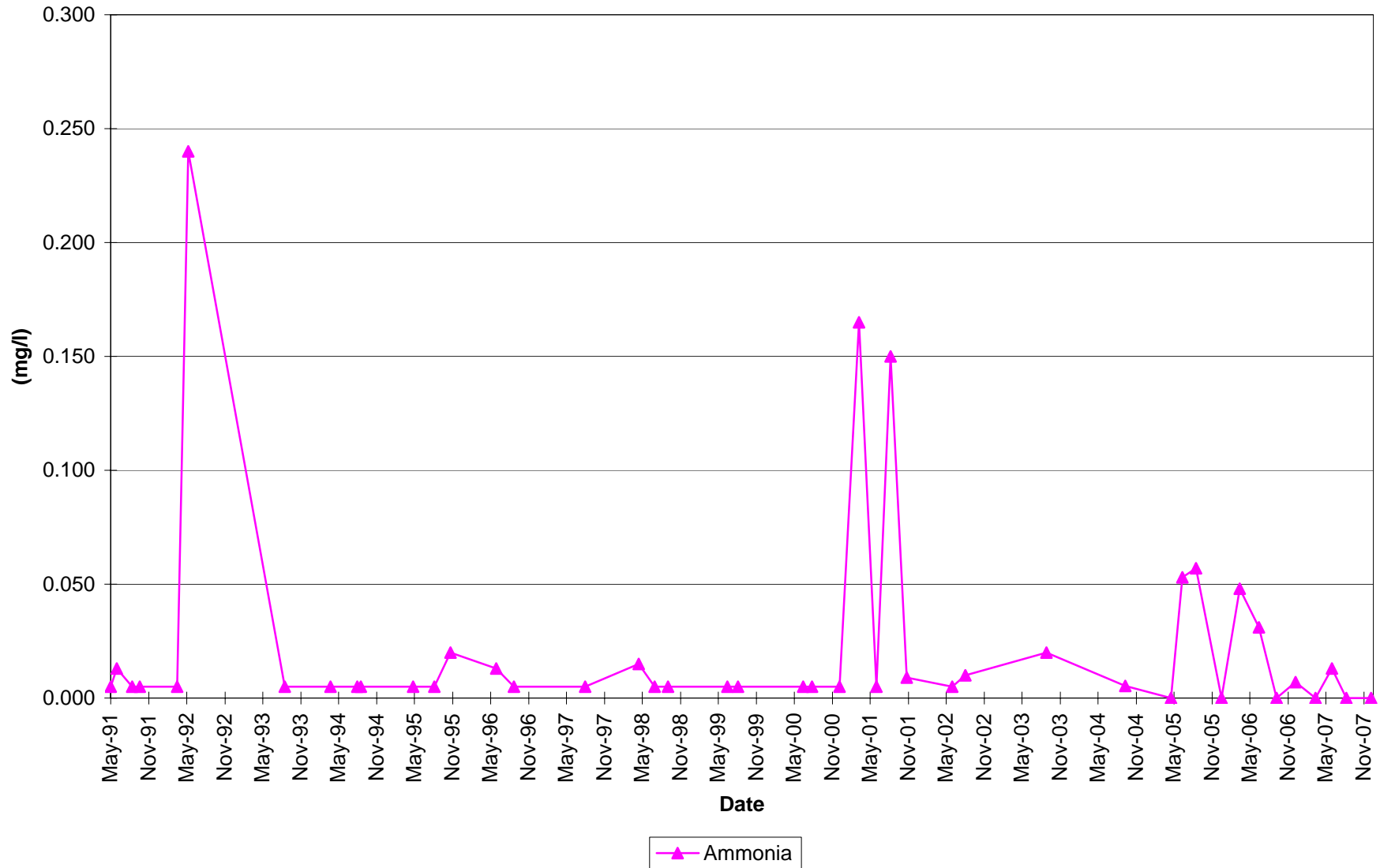
BC-06: South Klondike R. downstream from confluence with Lee Creek



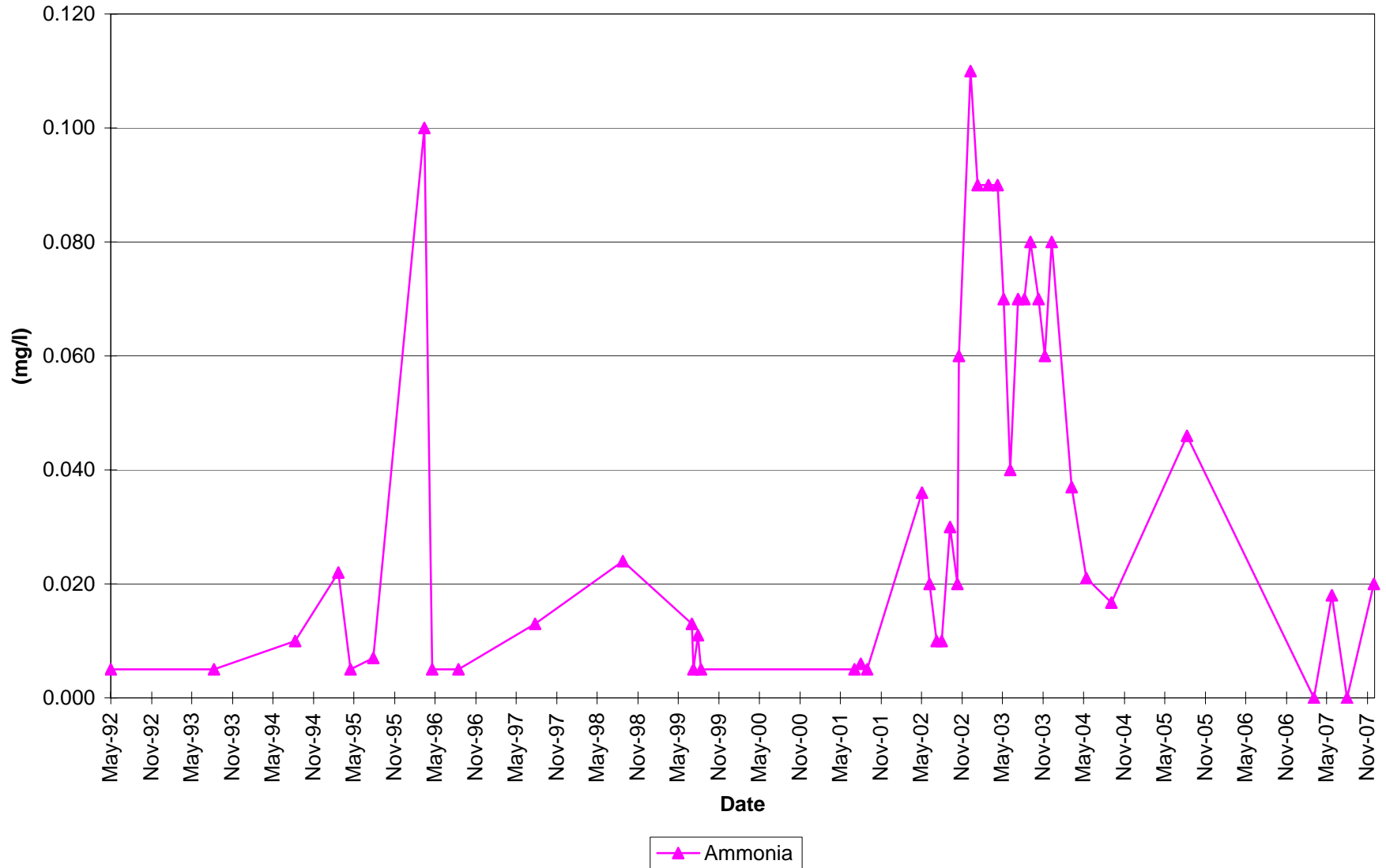
BC-16: Pacific Gulch 300m above Laura Creek



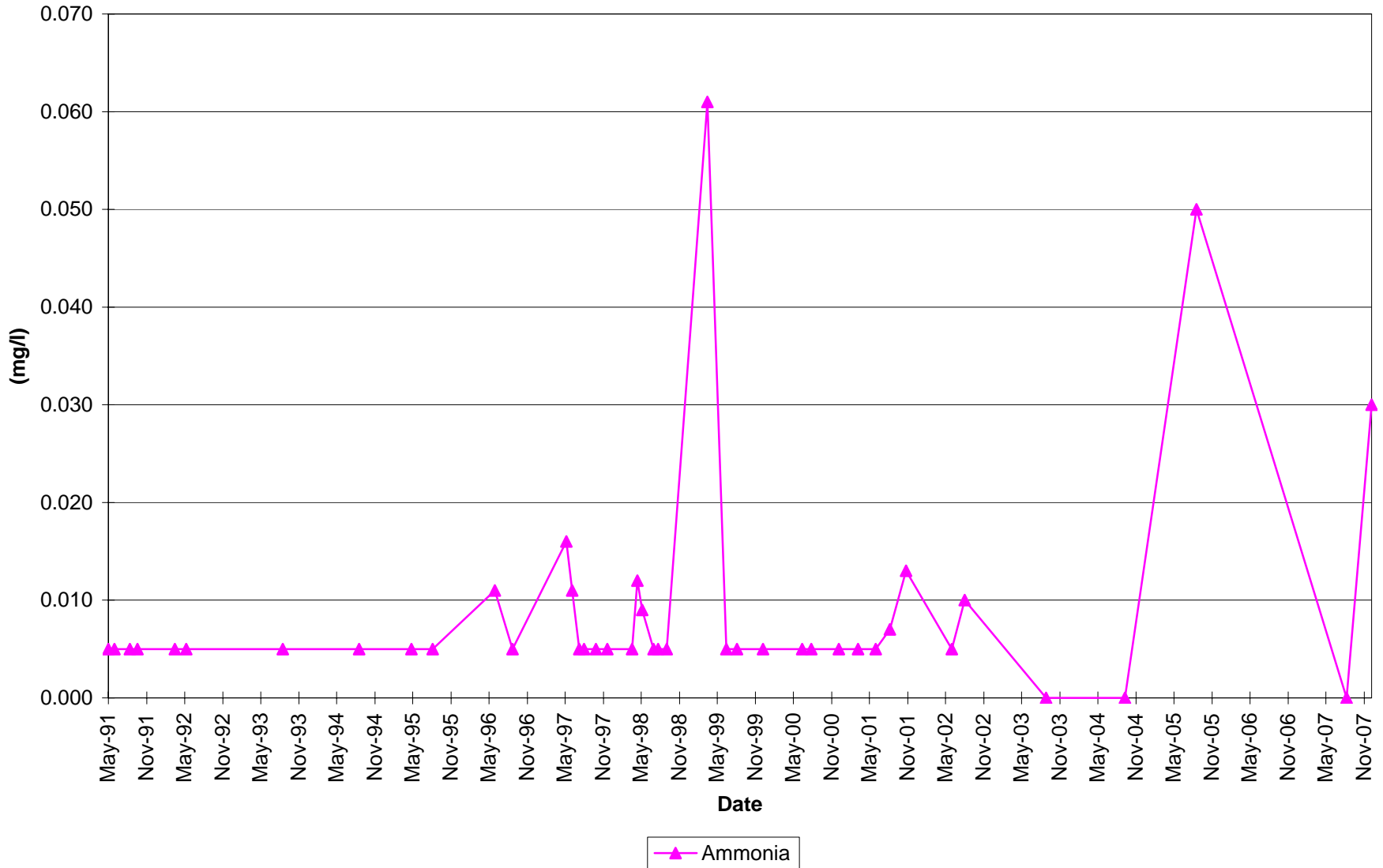
BC-31: Golden Creek upstream of confluence with South Klondike R.



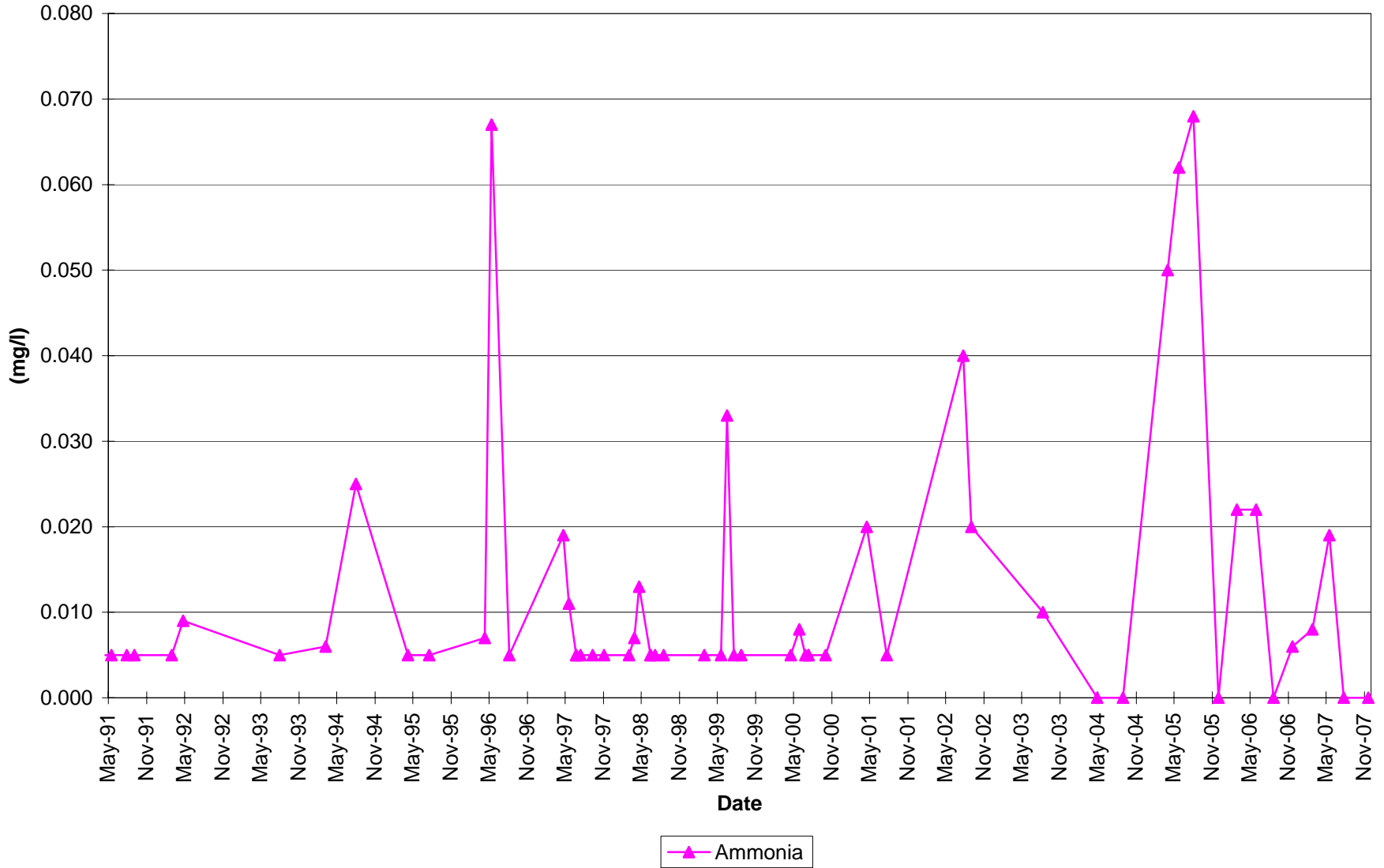
BC-32: Laura Creek below Exploration Camp



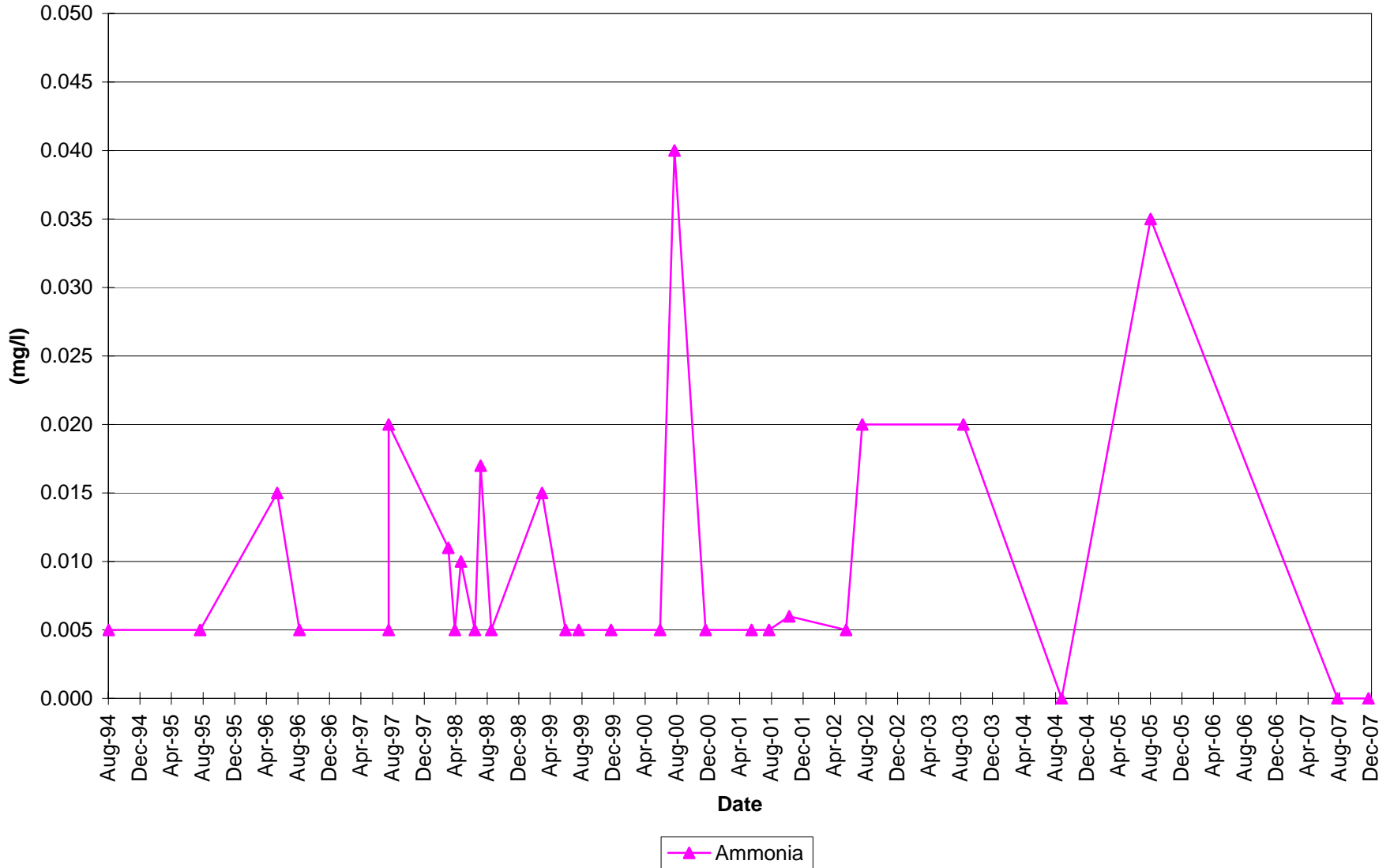
BC-33: Lee Creek above Pacific Creek



BC-34: Lee Creek at Ditch Road

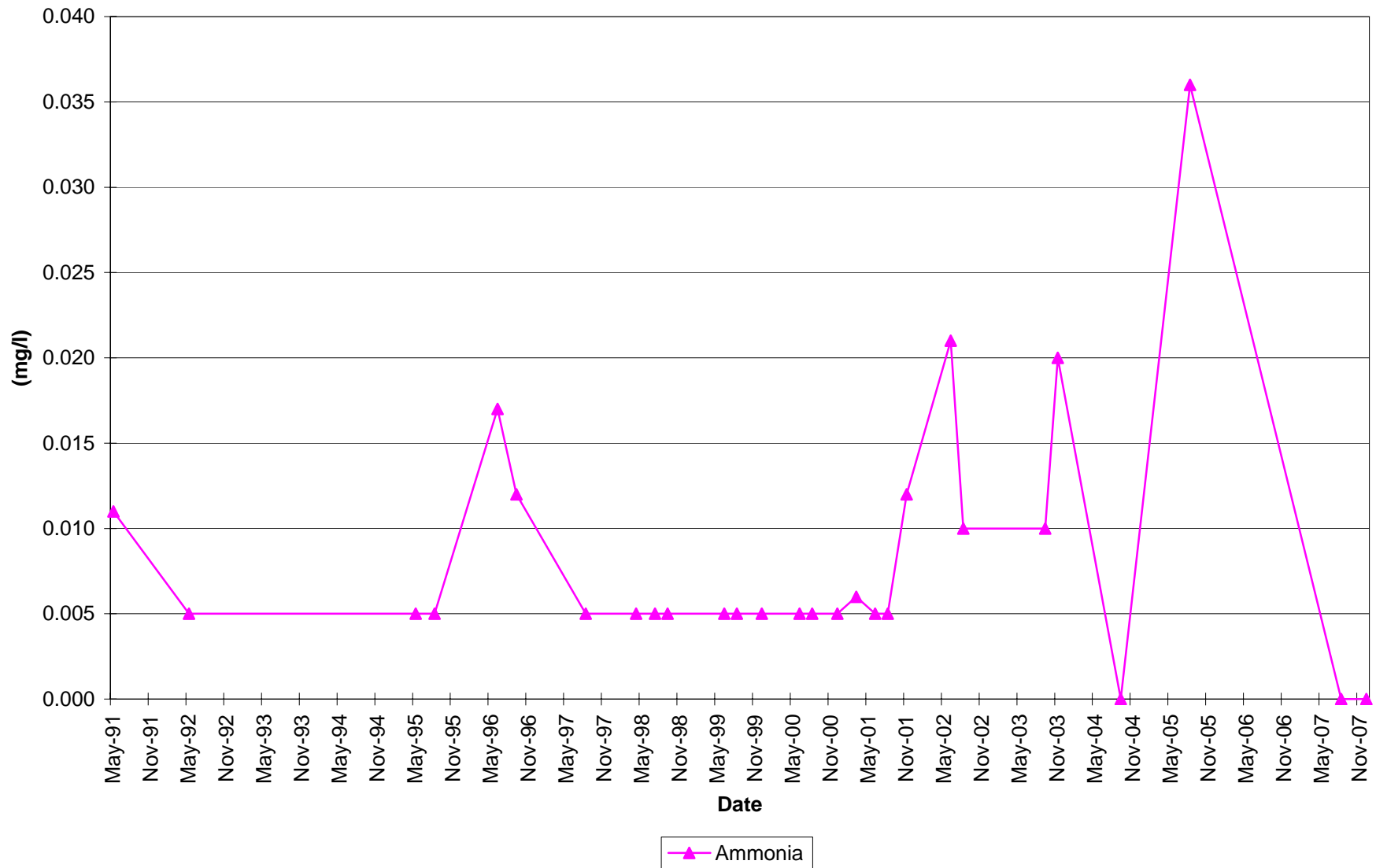


BC-35: Pacific Creek below heap leach pad

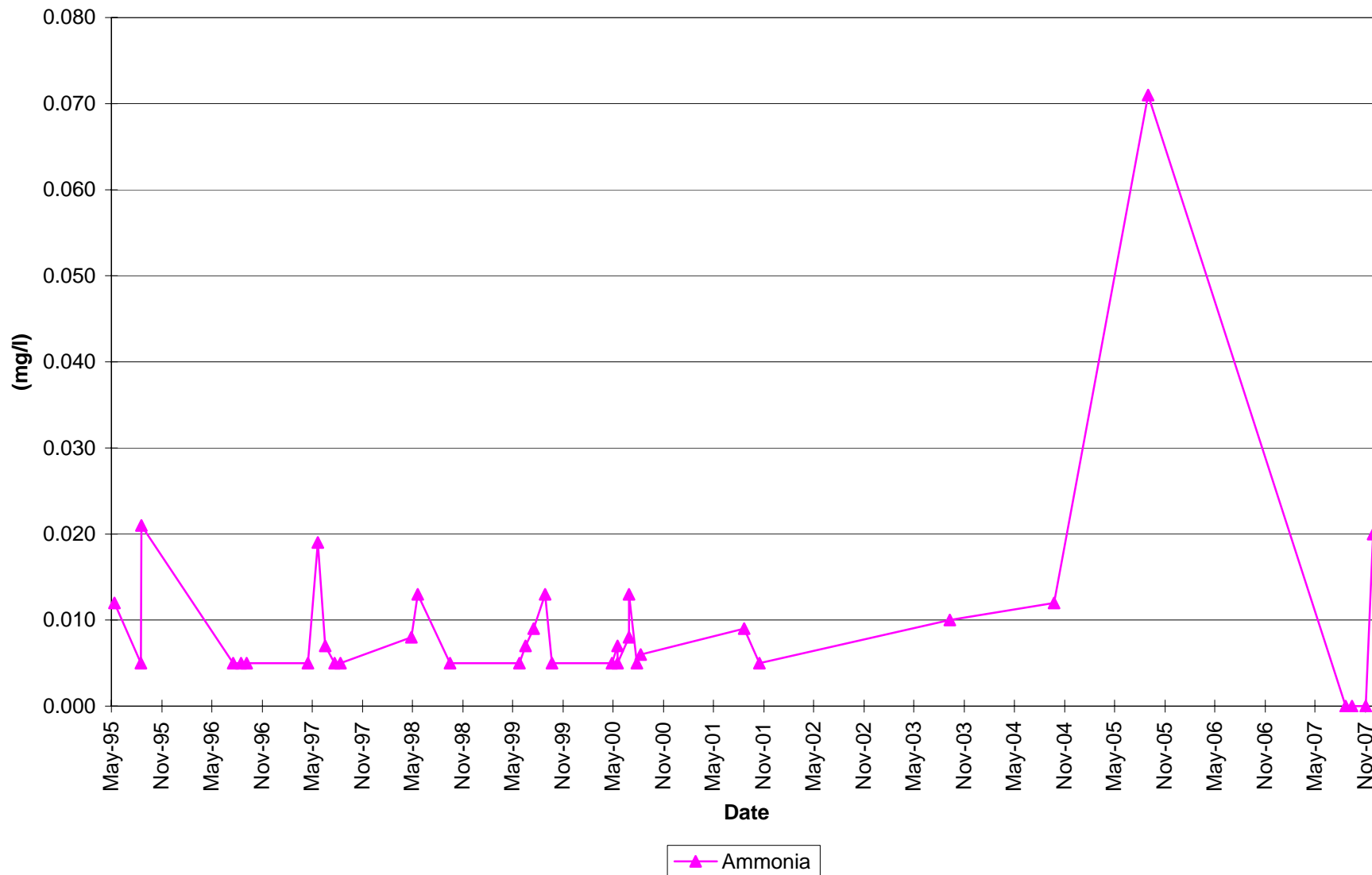




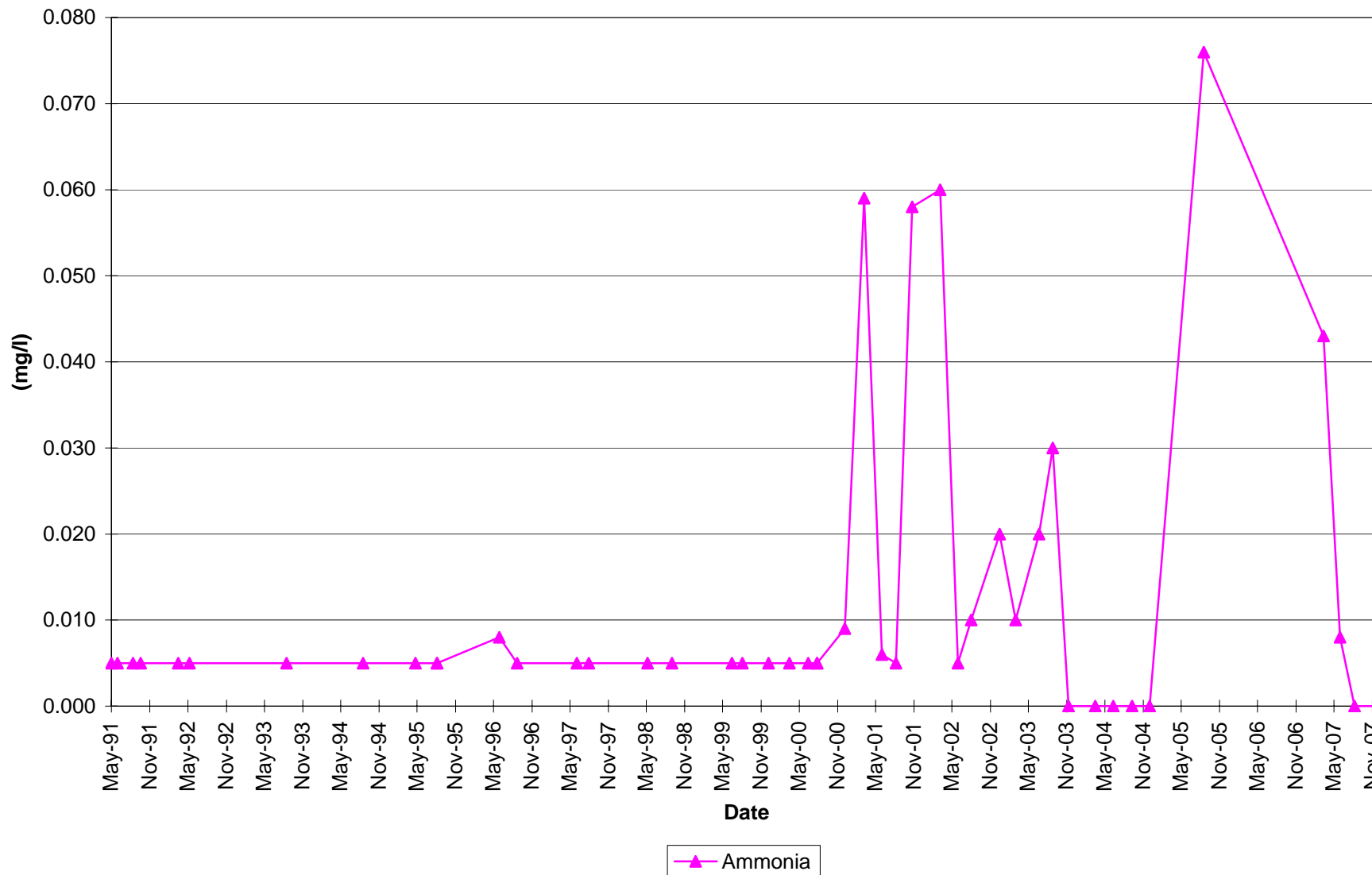
BC-36: Golden Creek above confluence with Lucky Creek



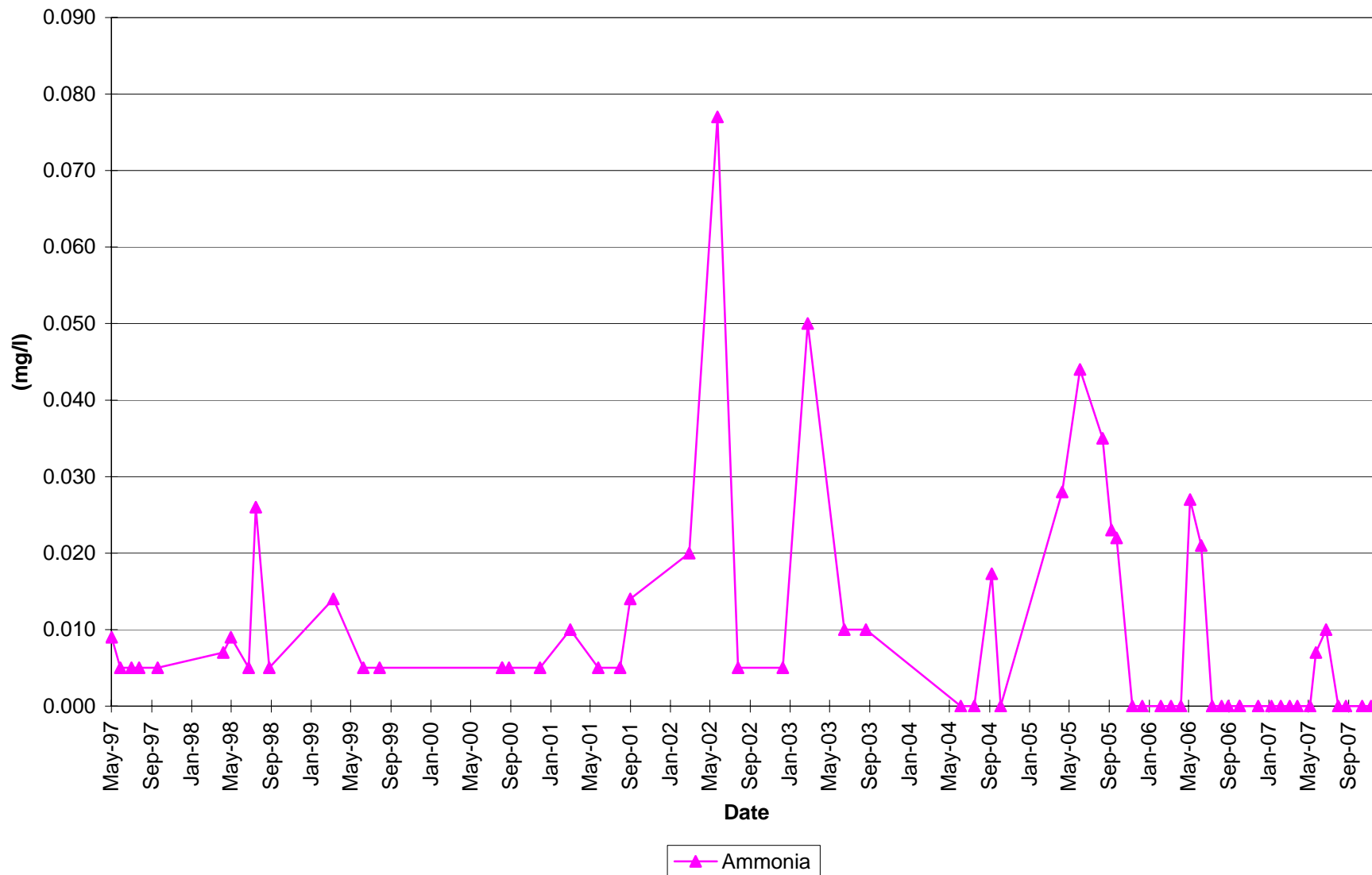
BC-37: Laura Creek at Ditch Road



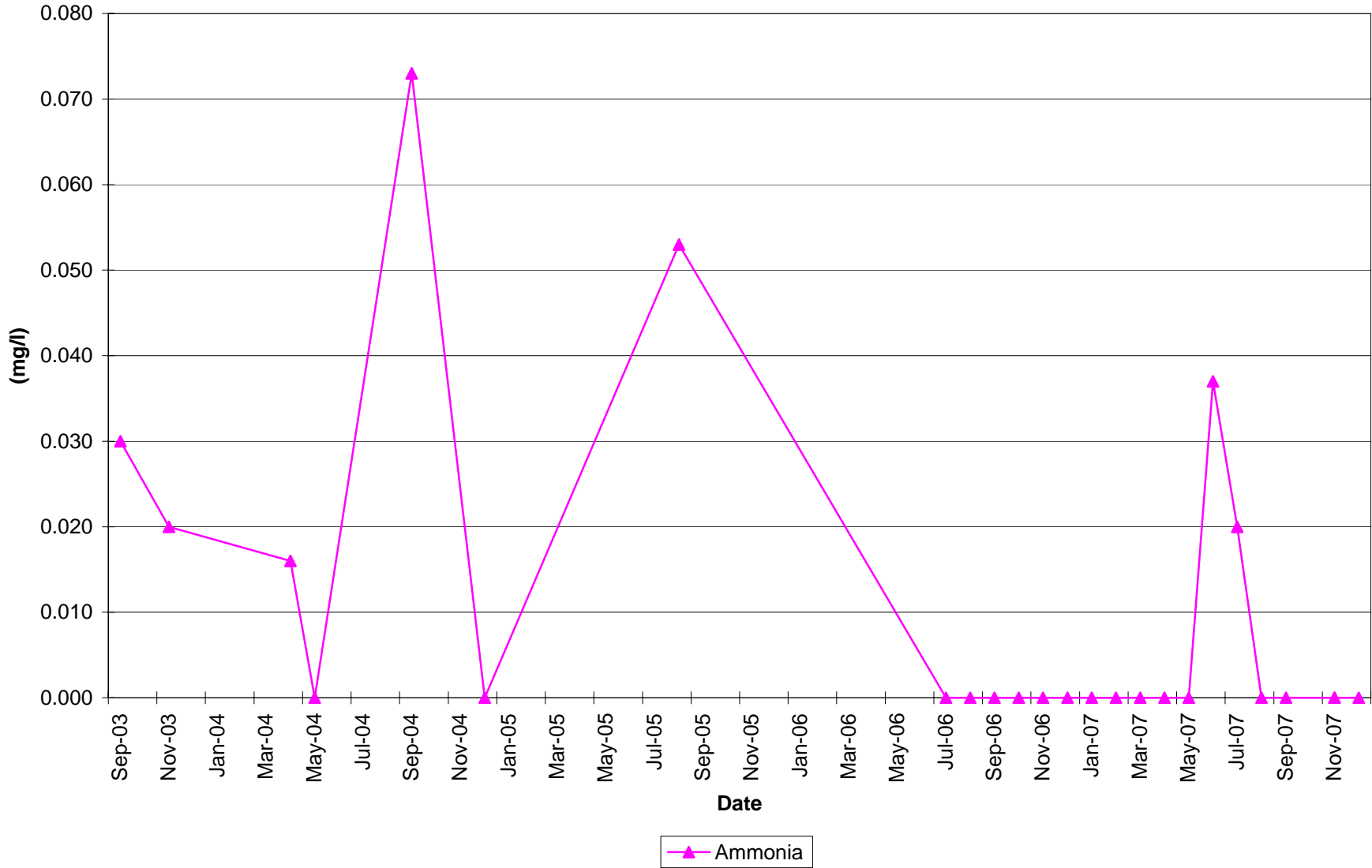
BC-38: South Klondike R. upstream from confluence with Golden Creek

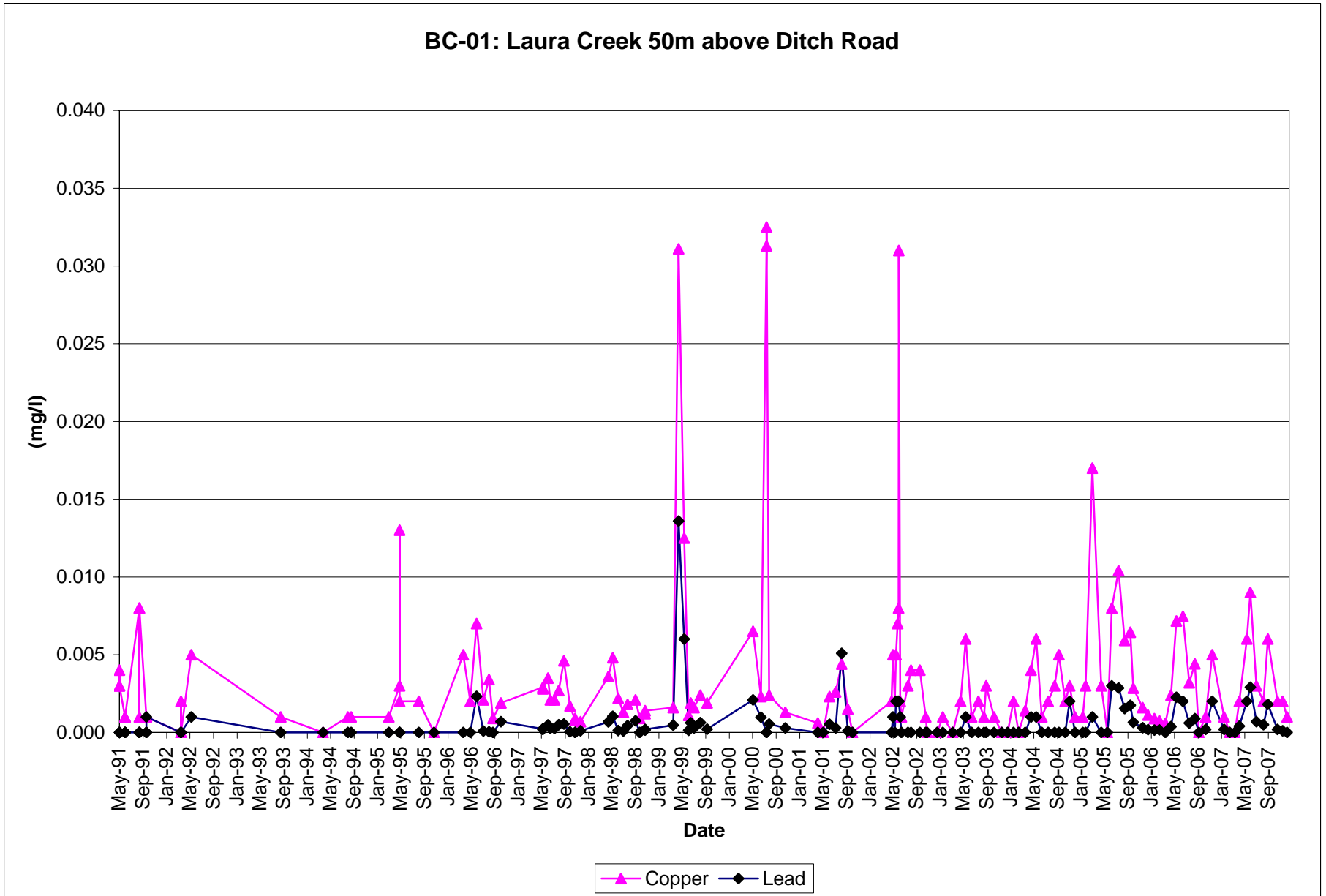


BC-39: Laura Creek at confluence with South Klondike R.

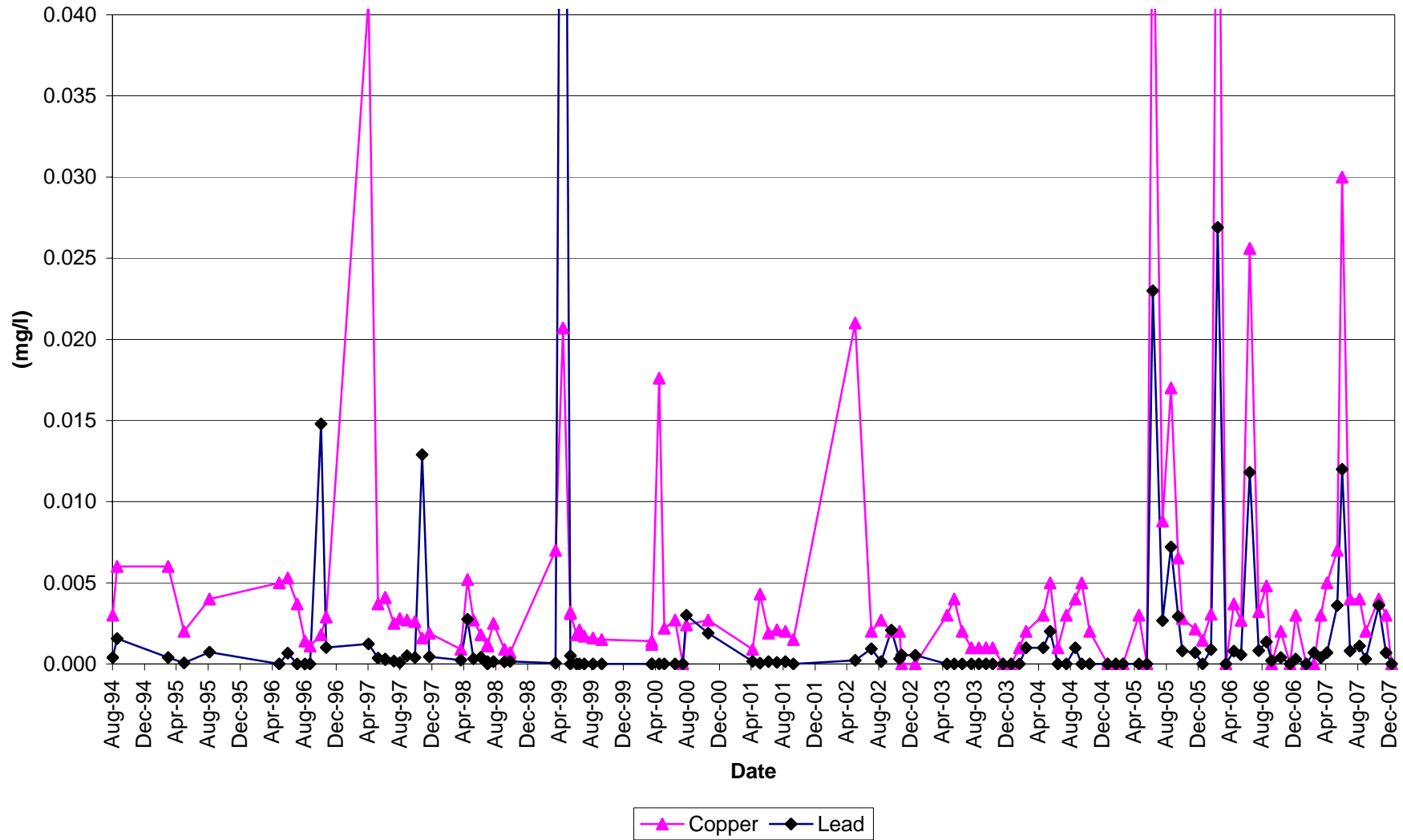


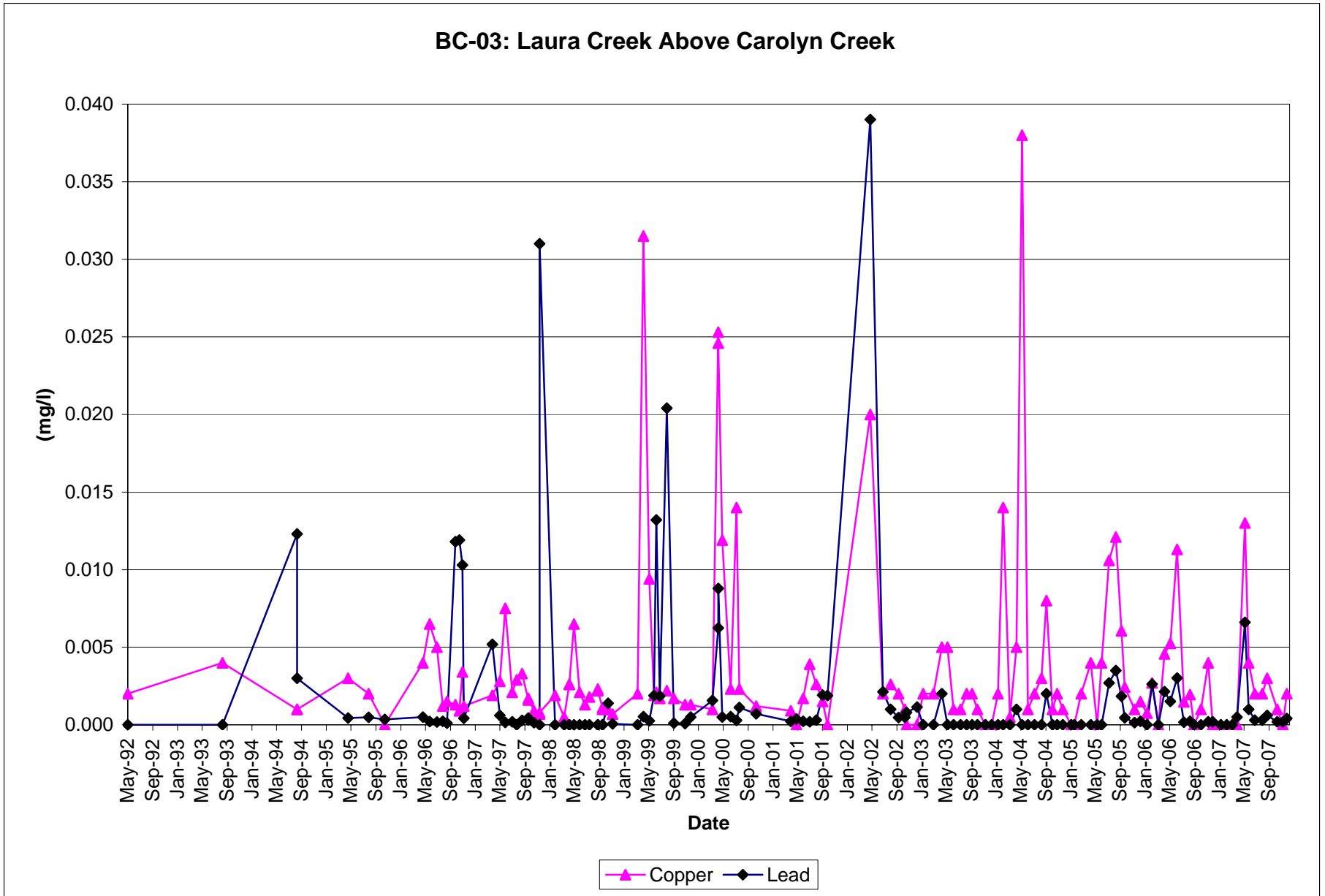
BC-53: Laura Creek 100m downstream of the Ditch Road



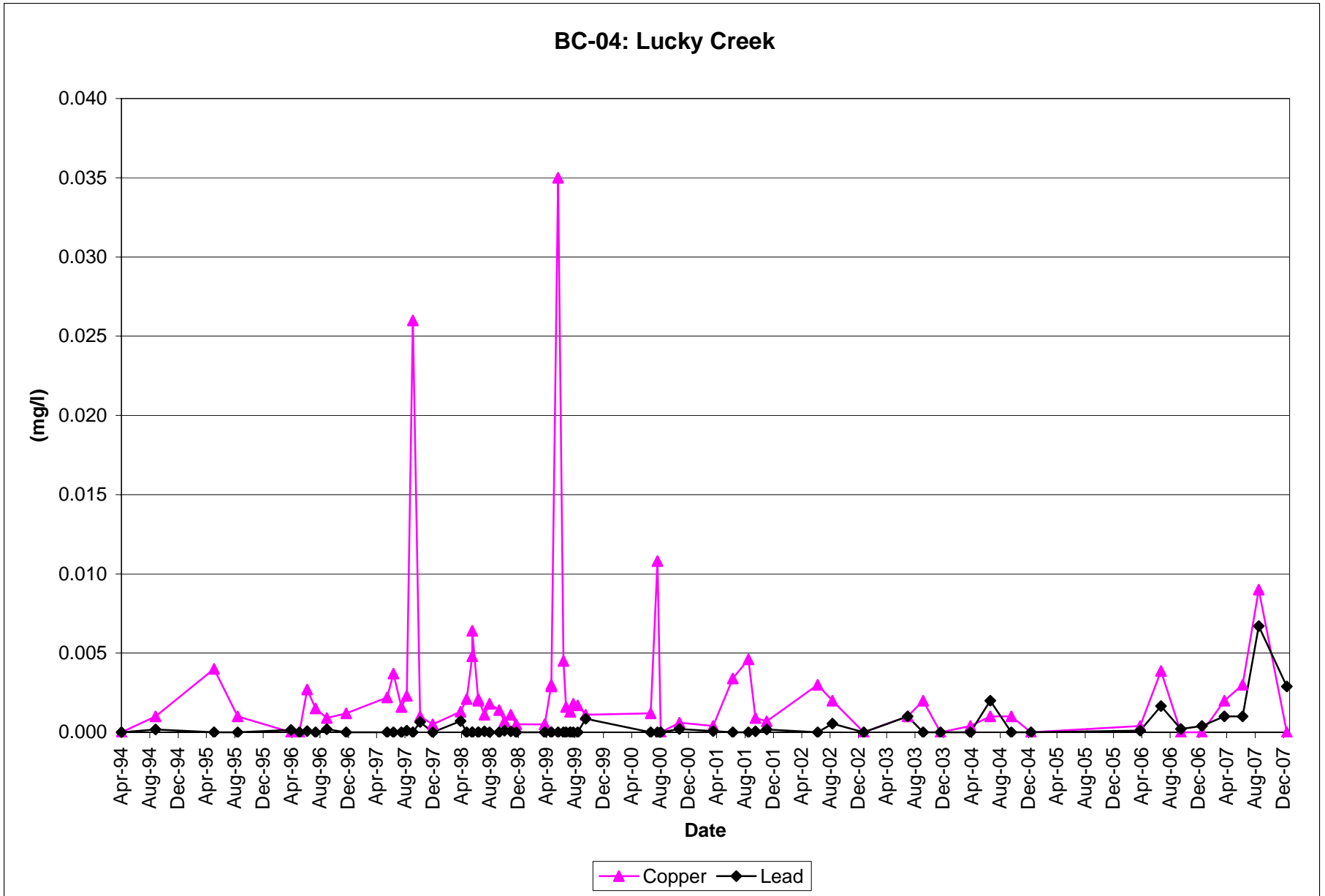


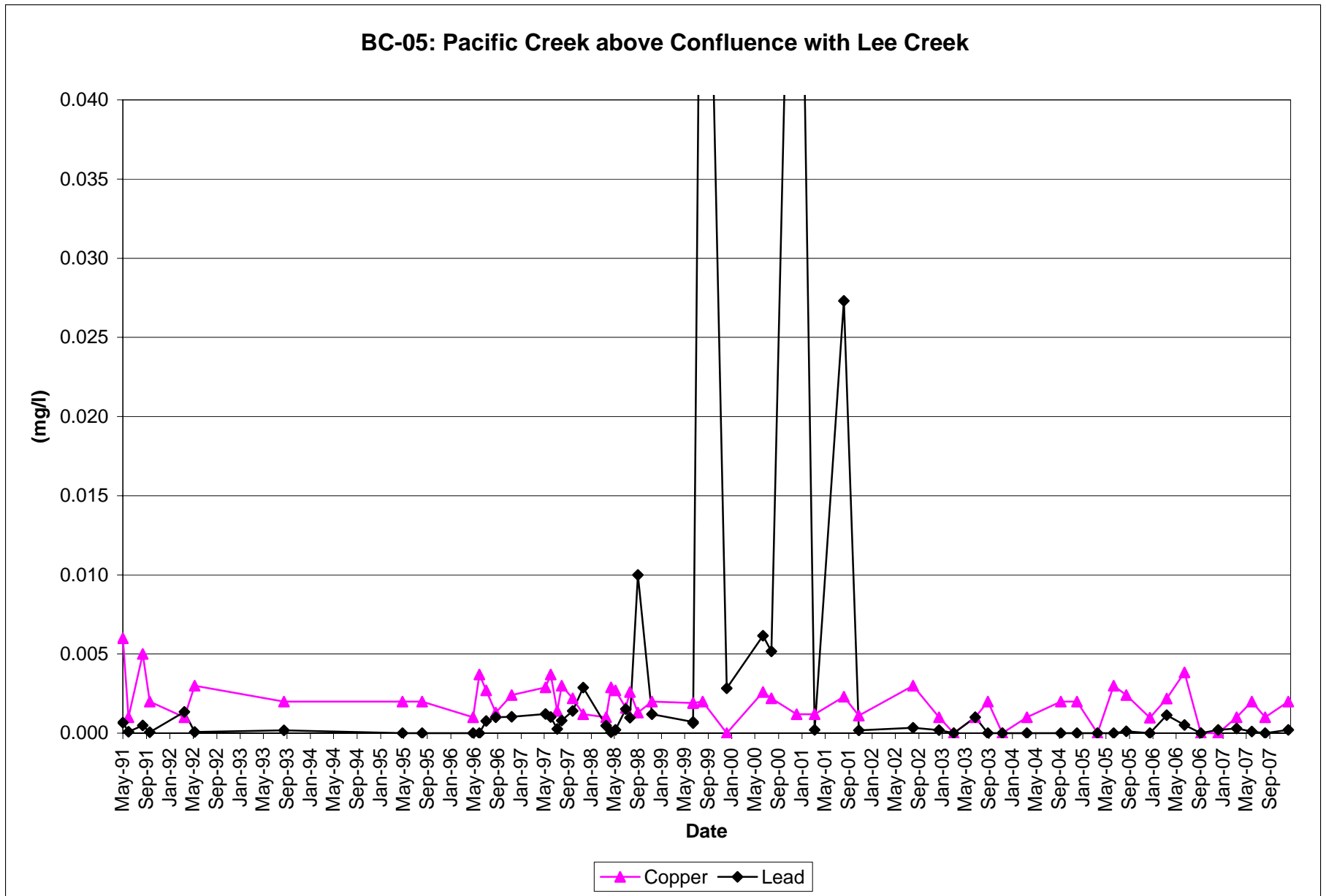
BC-02: Carolyn Creek u/s from Laura Creek

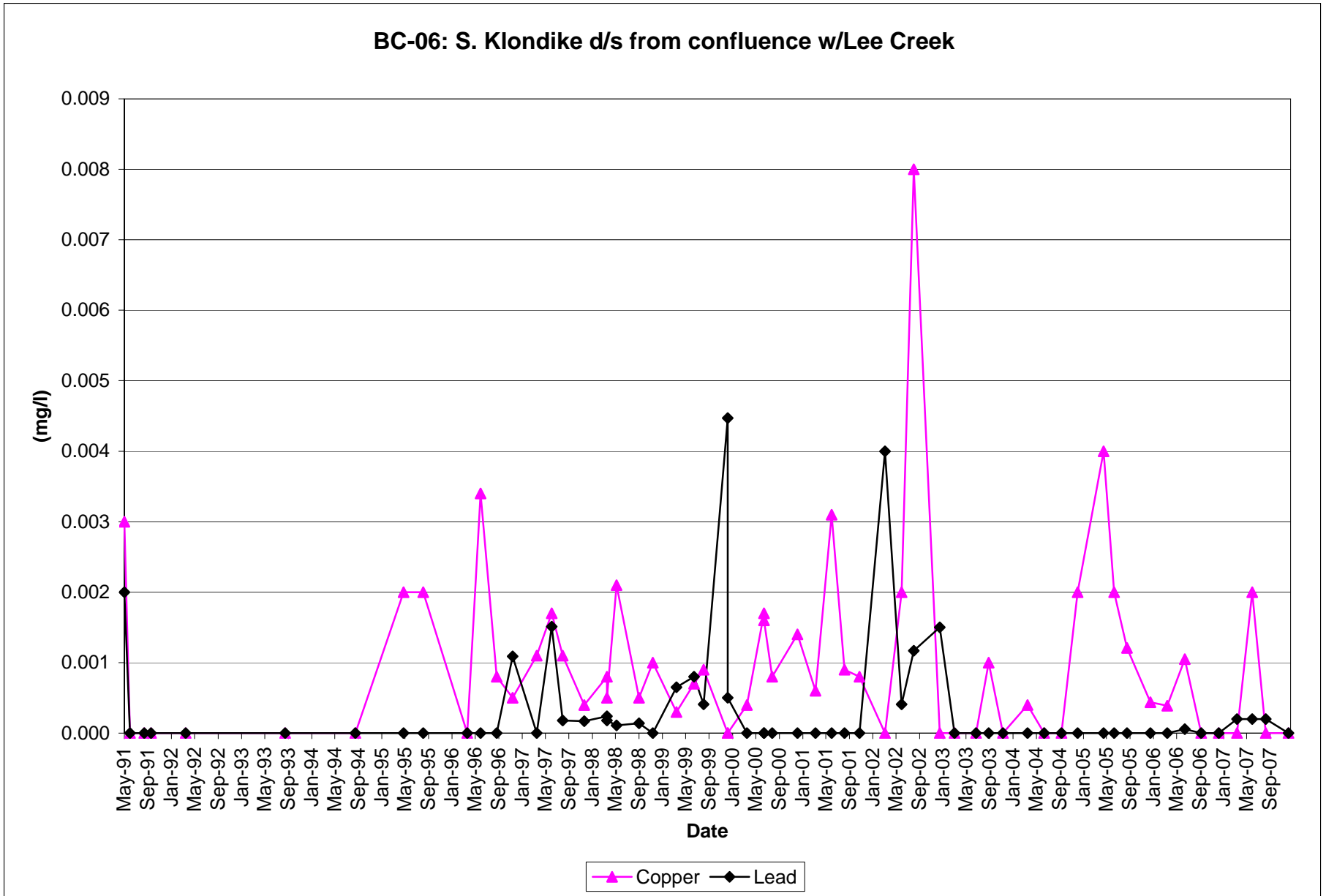


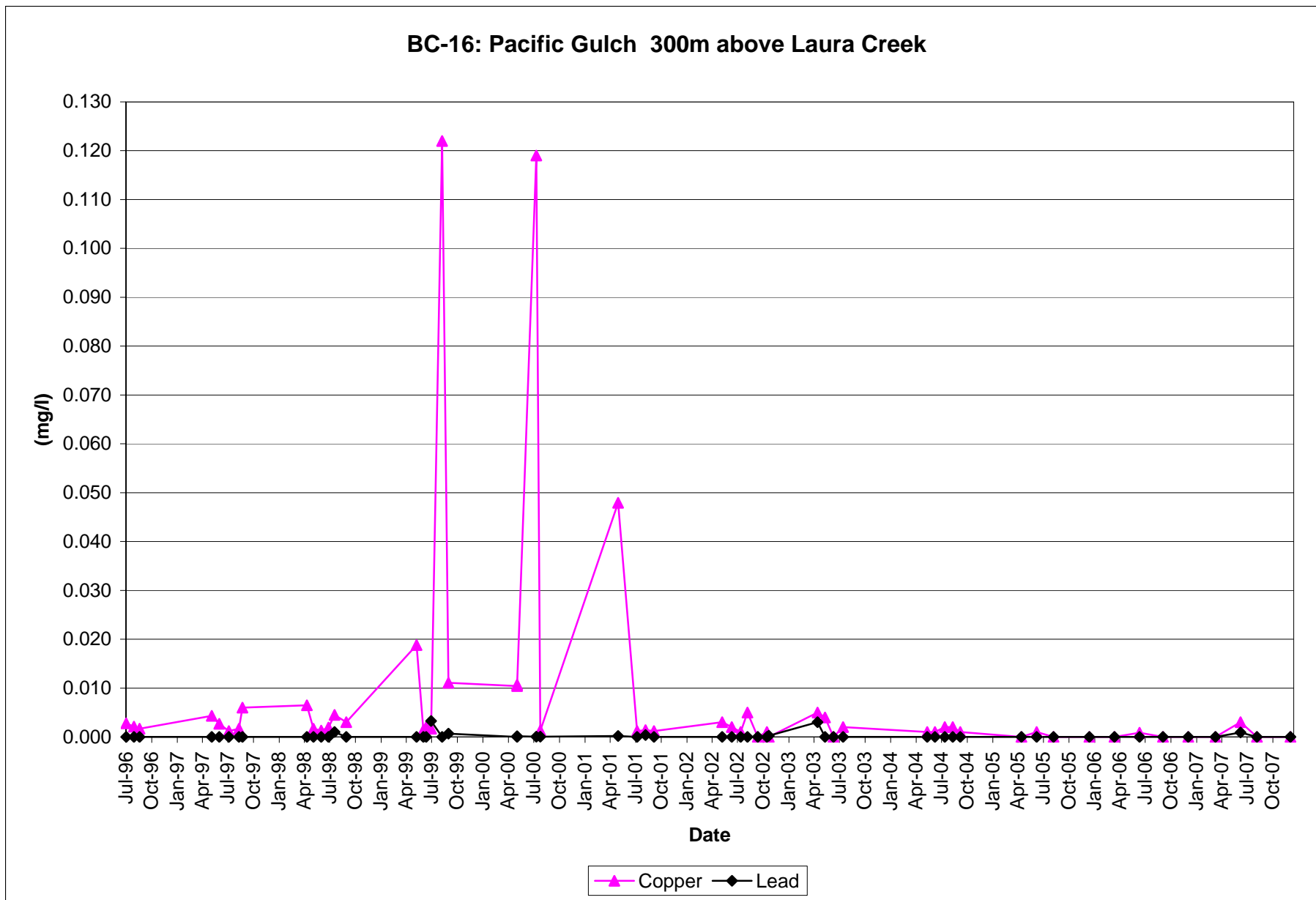




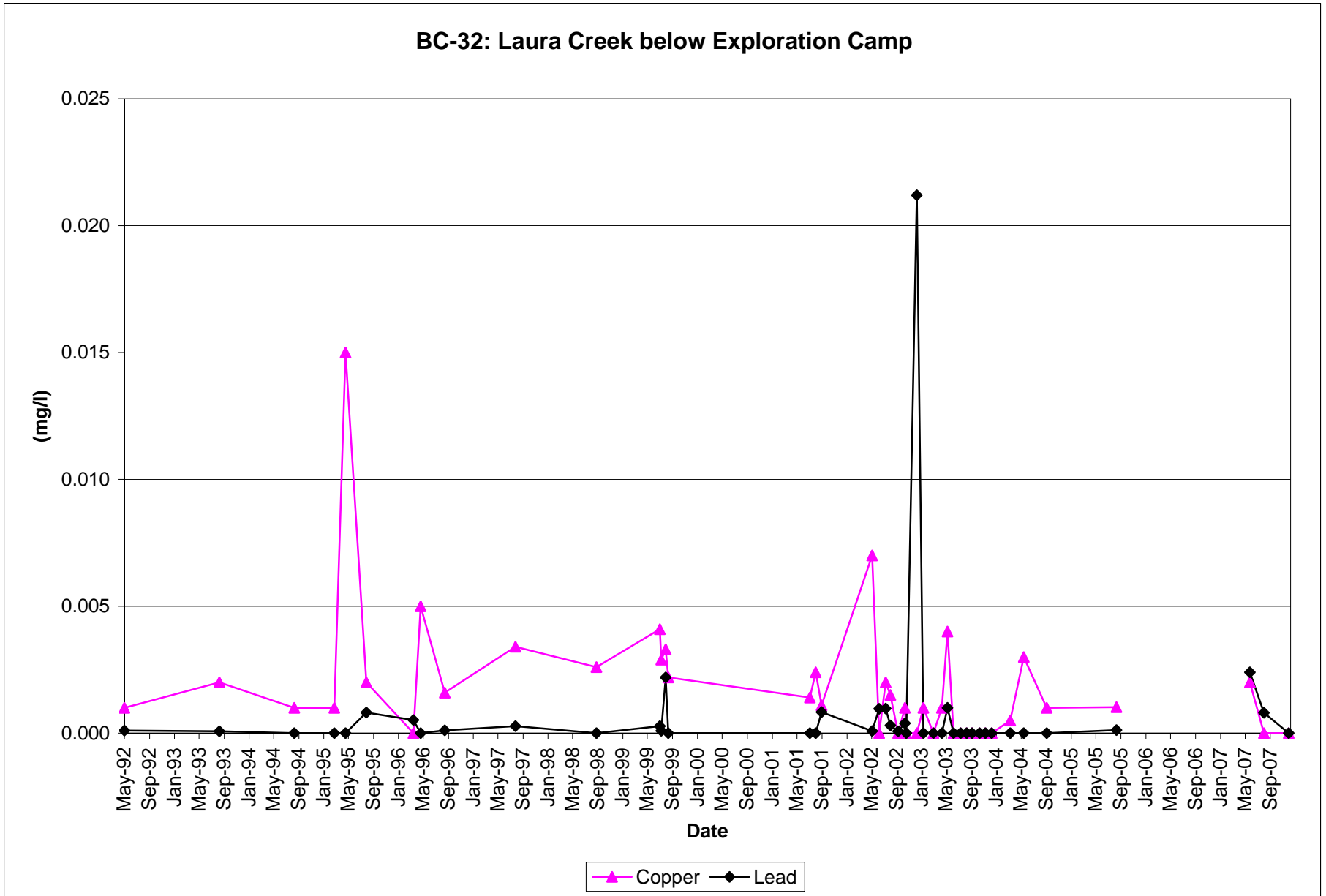


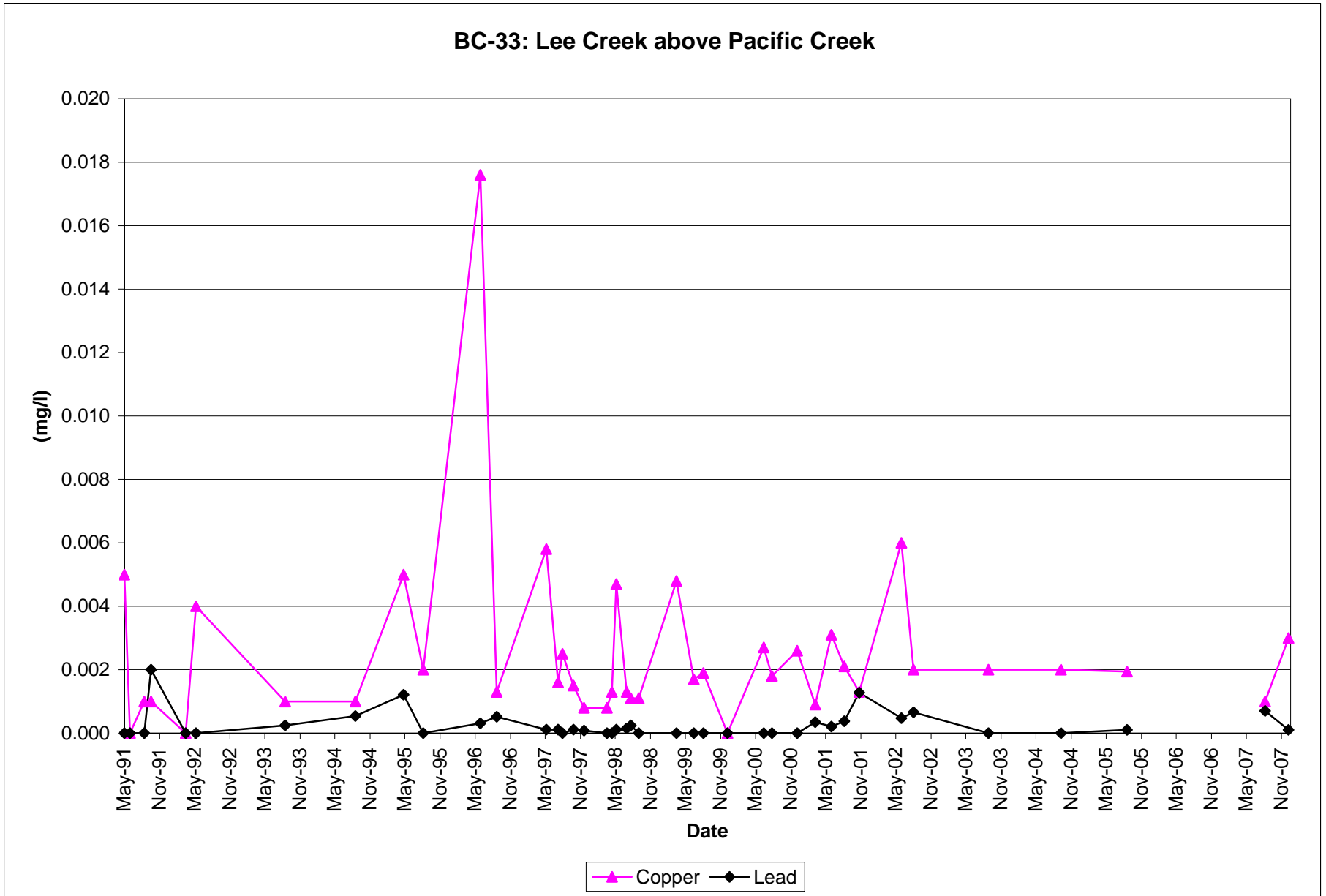


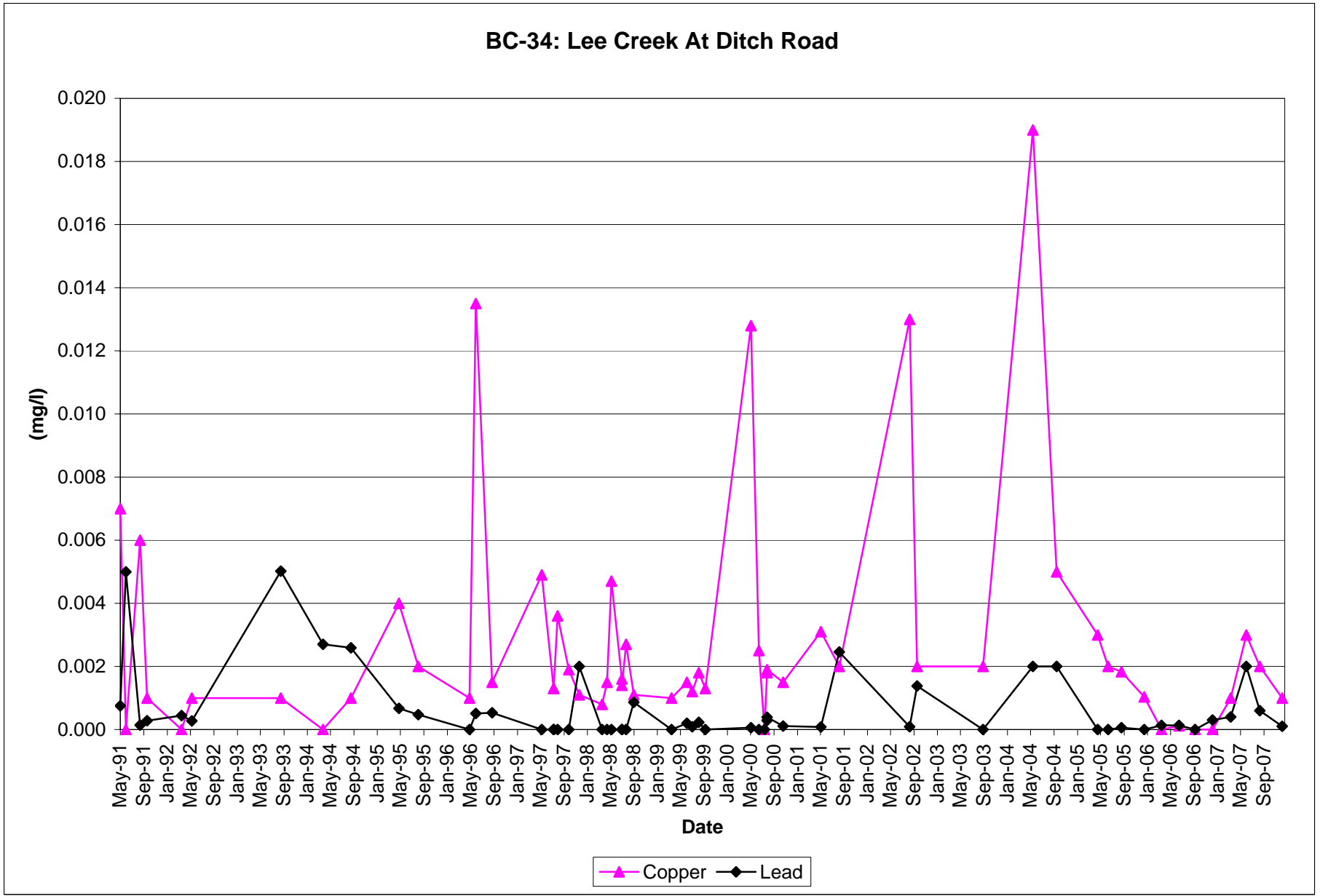




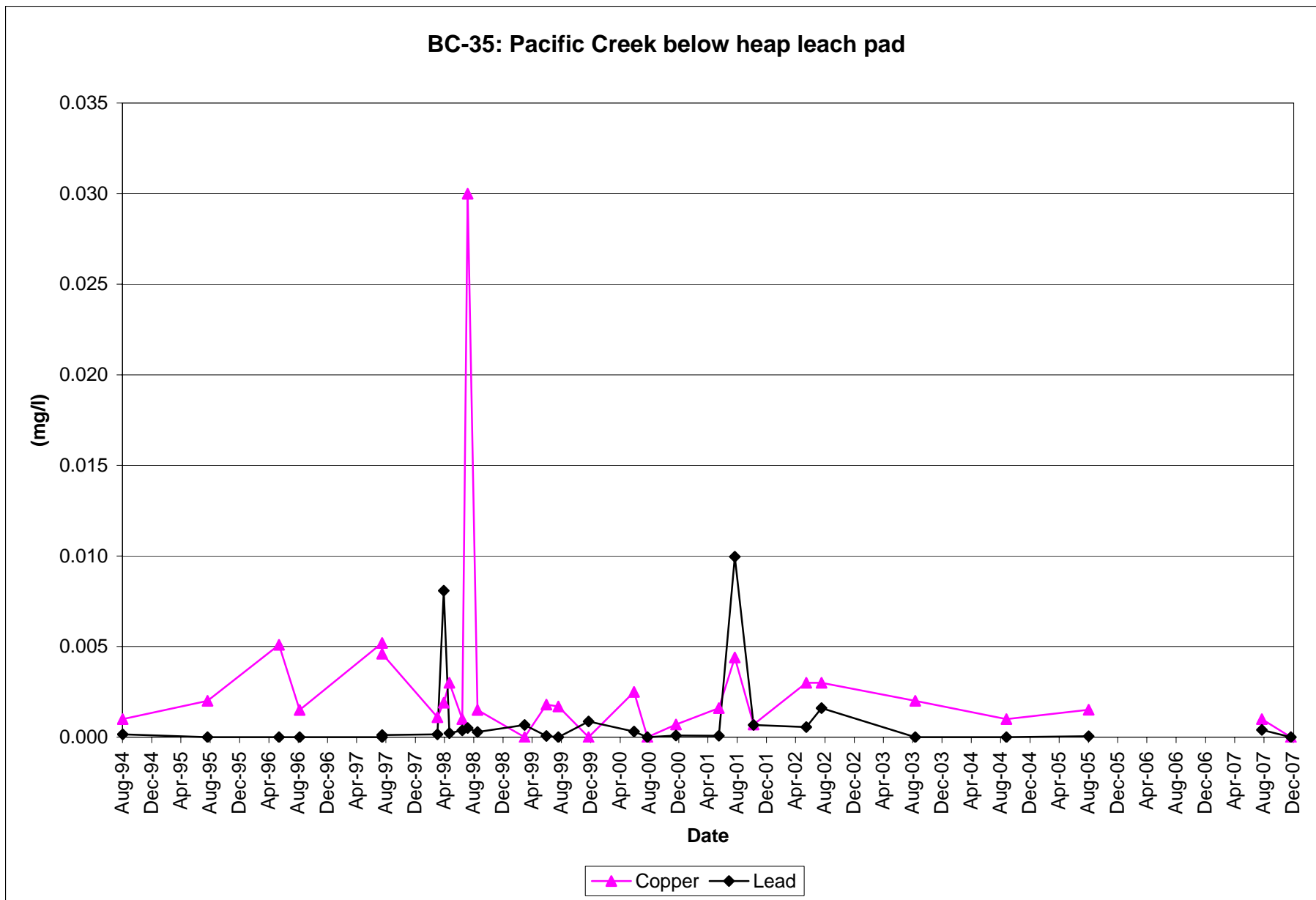


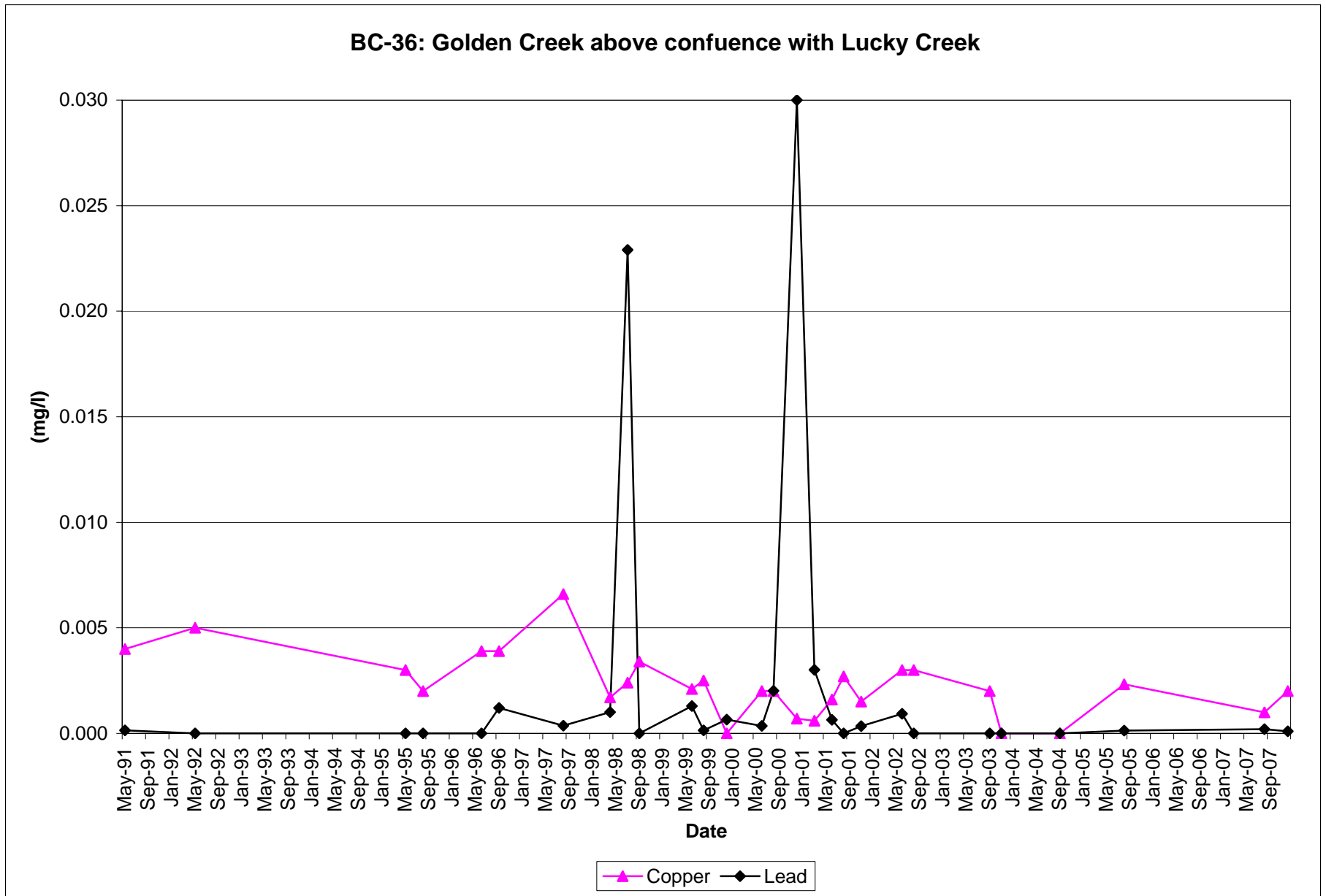


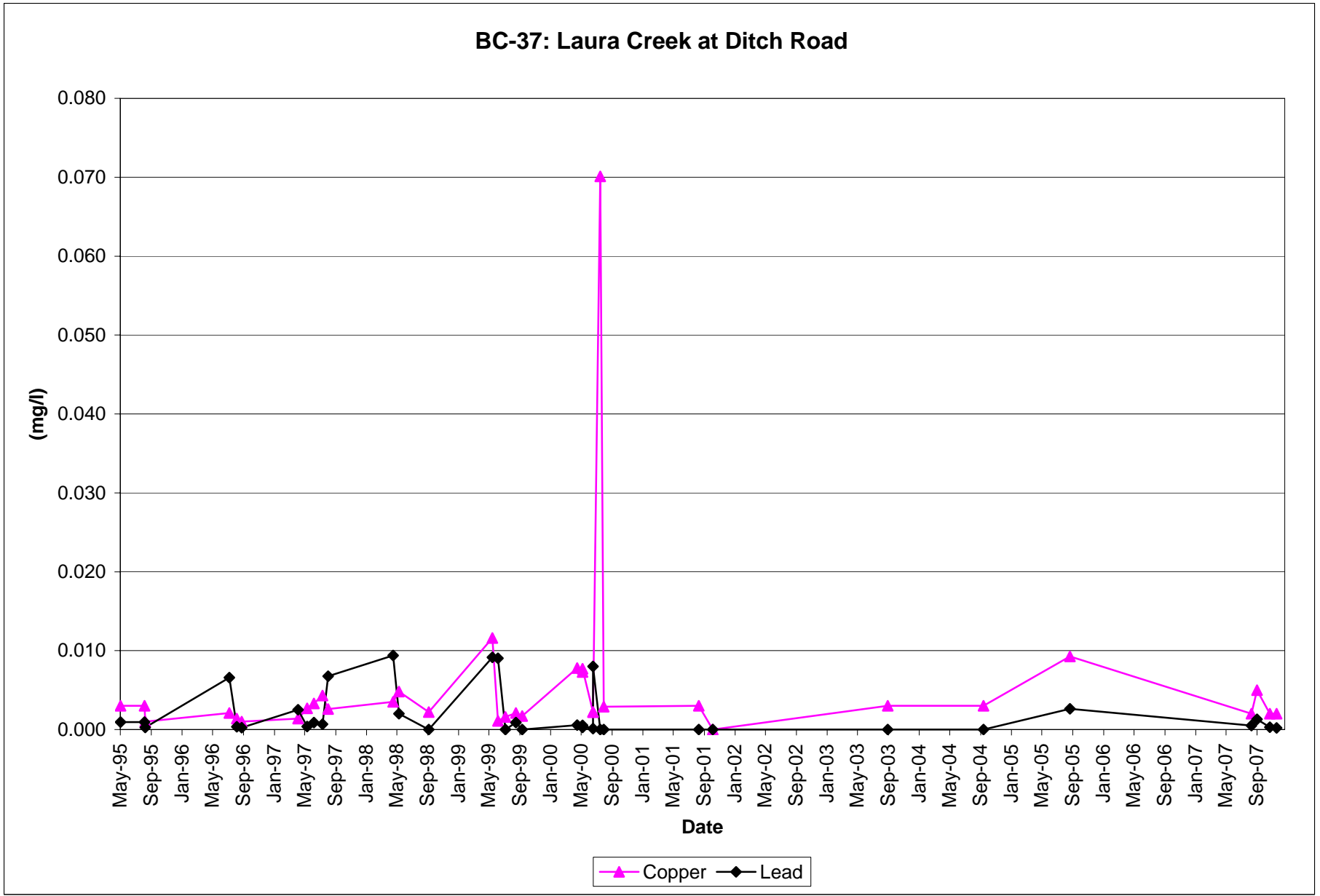


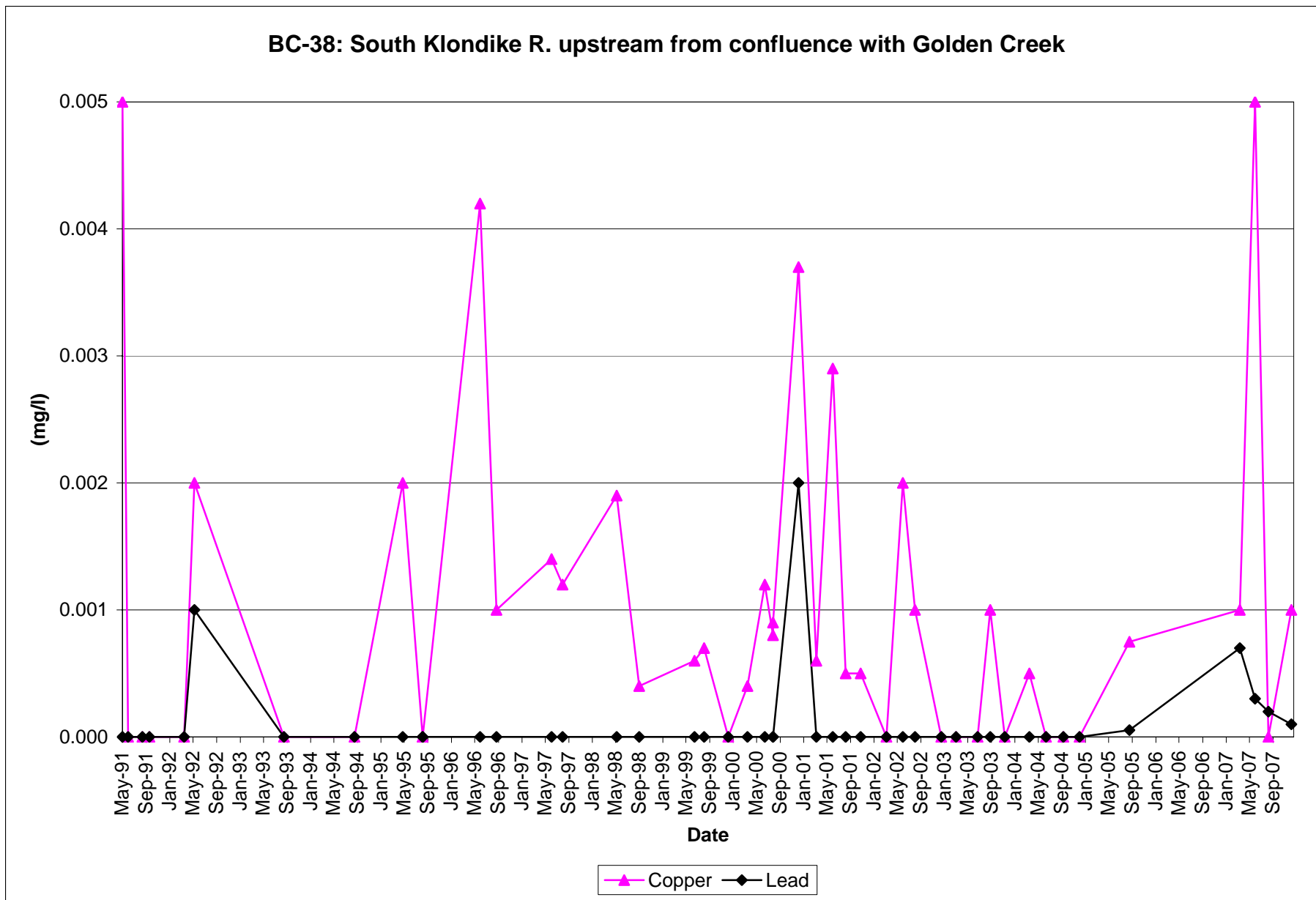


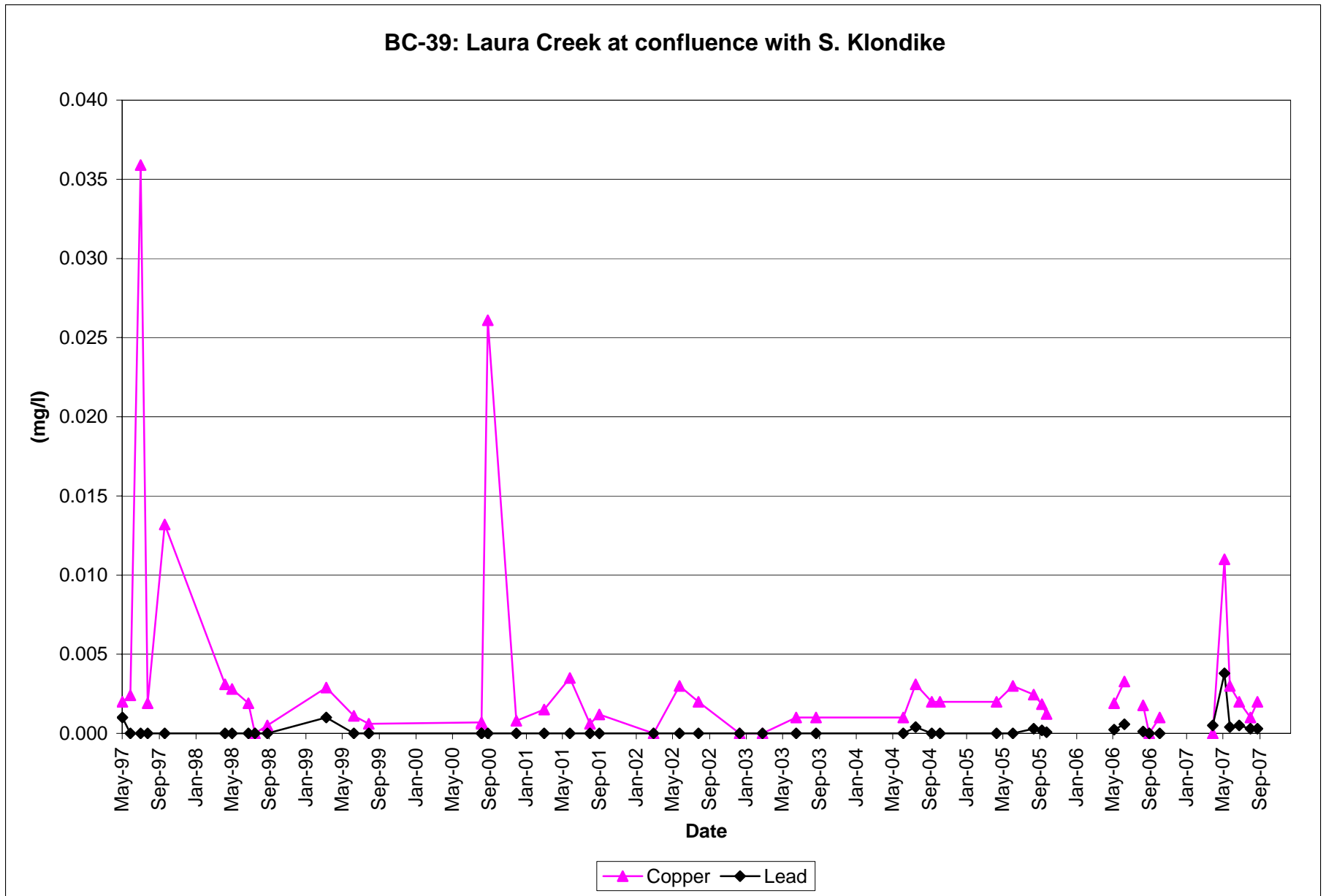


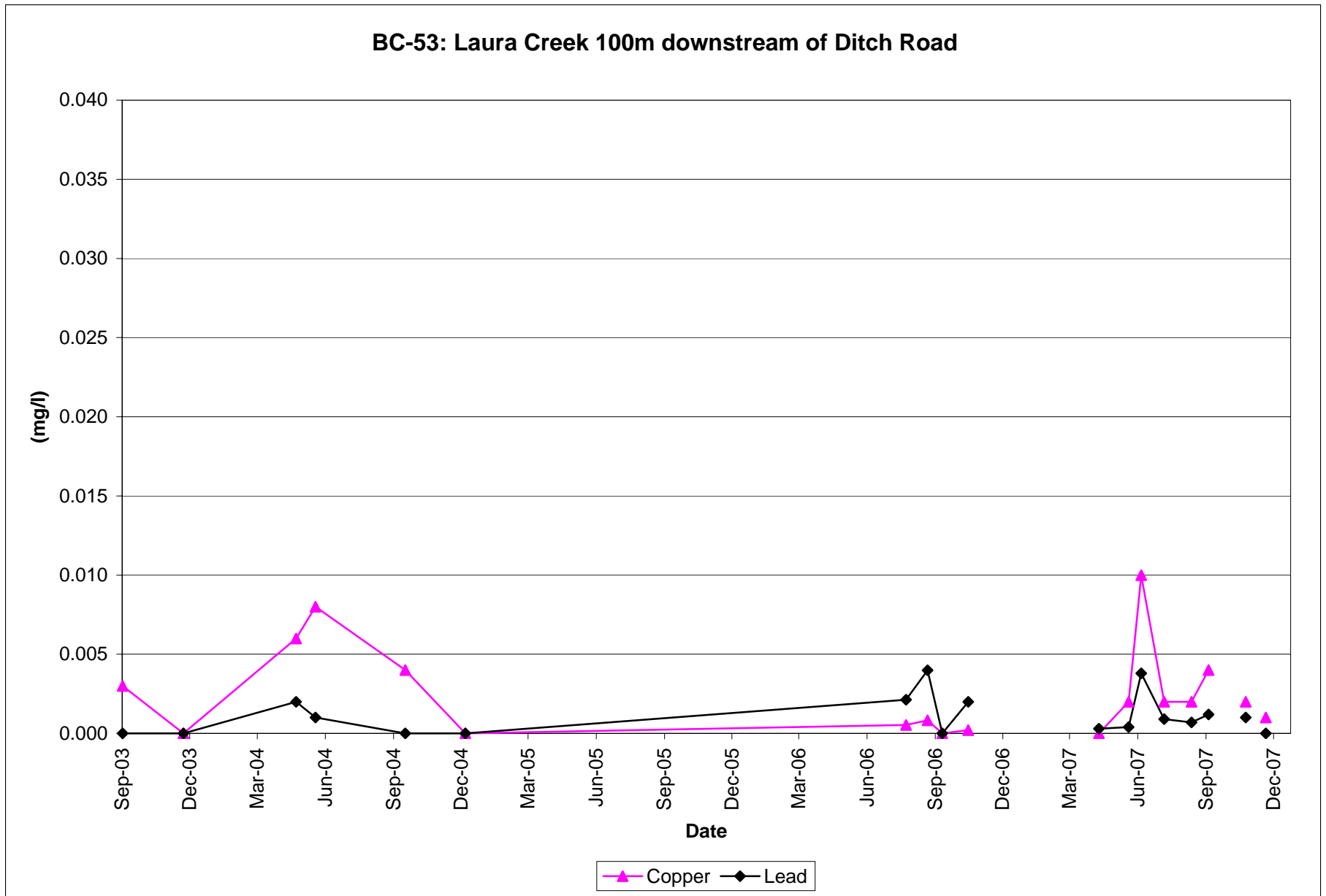






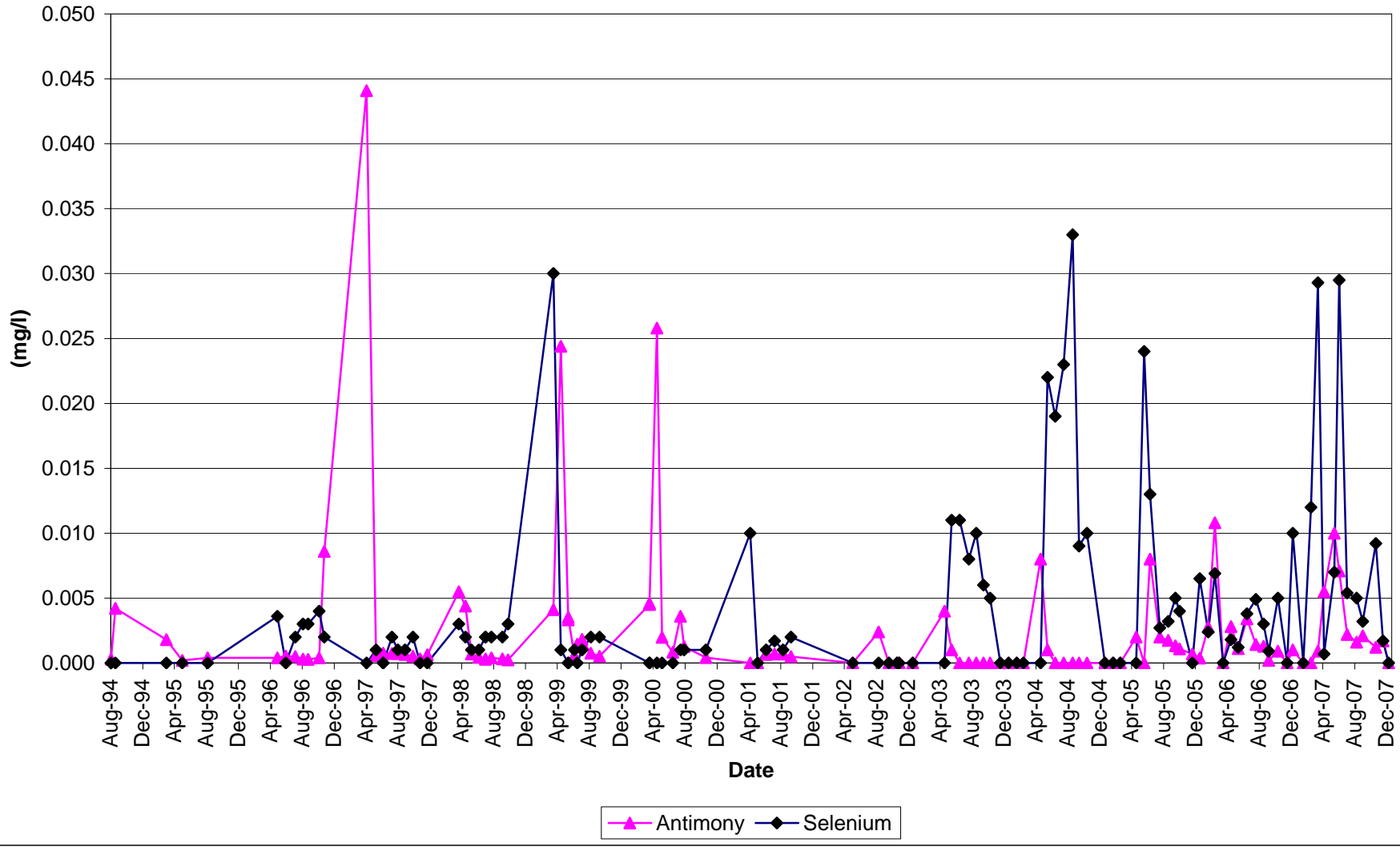




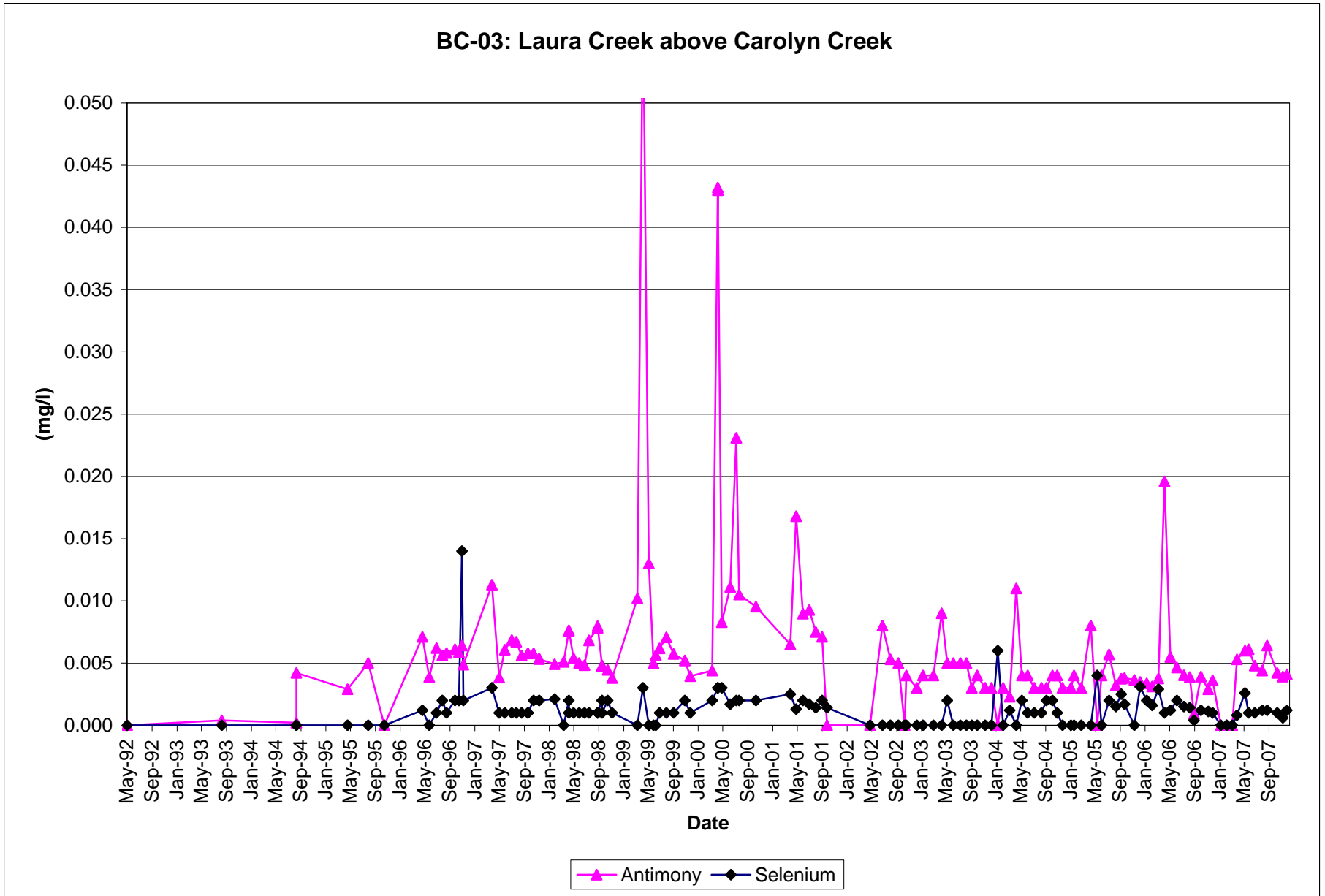


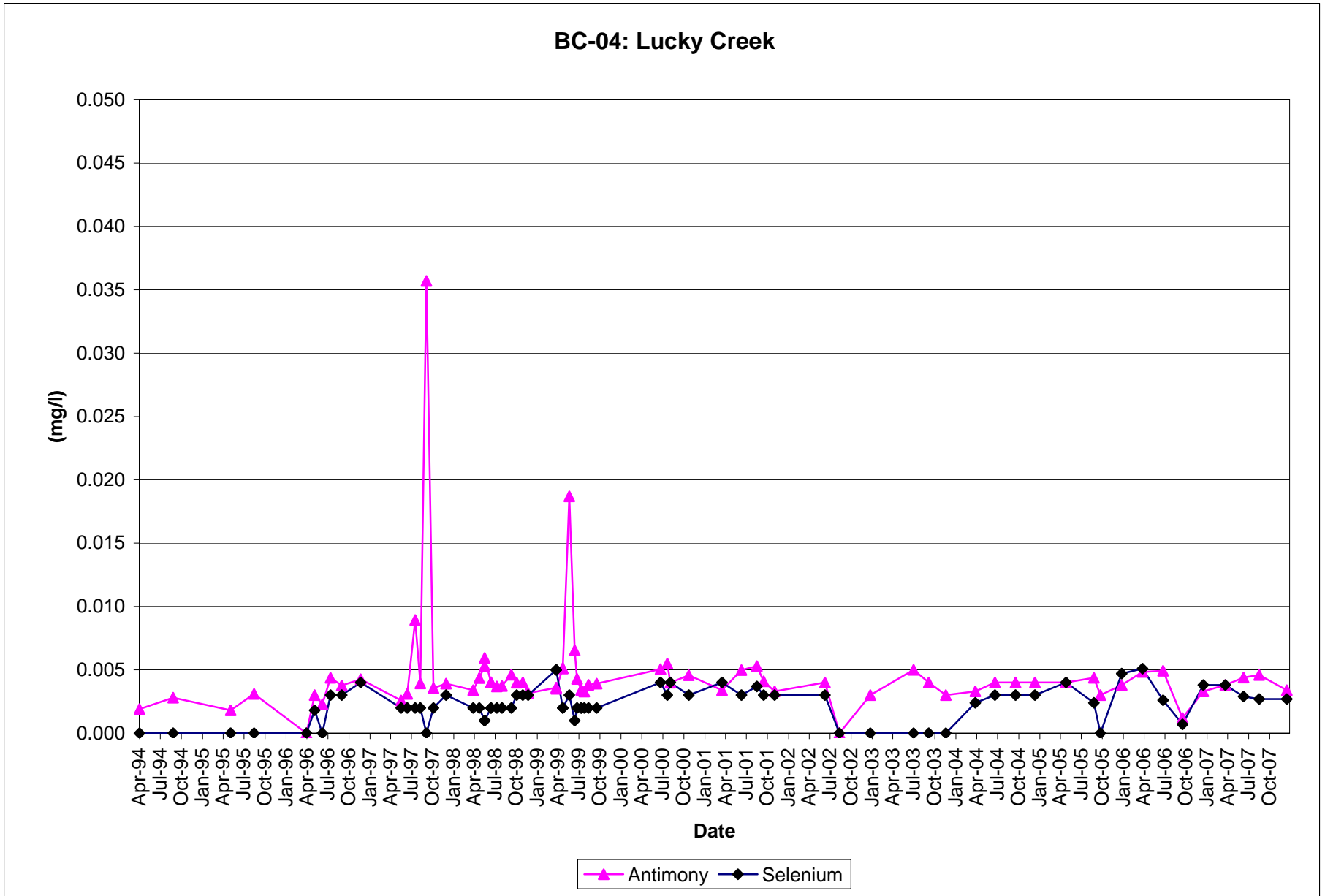


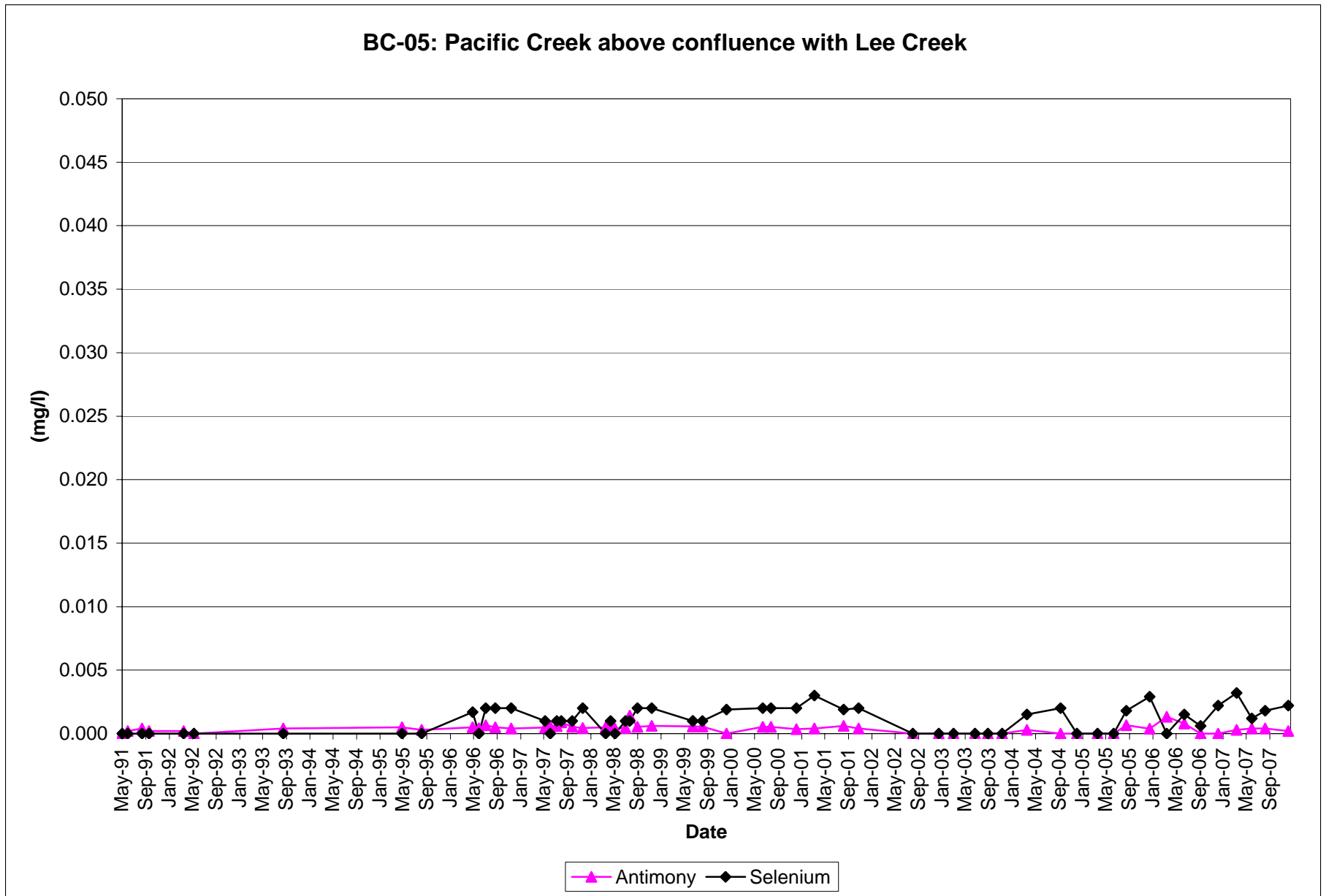
BC-02: Carolyn Creek upstream from Laura Creek



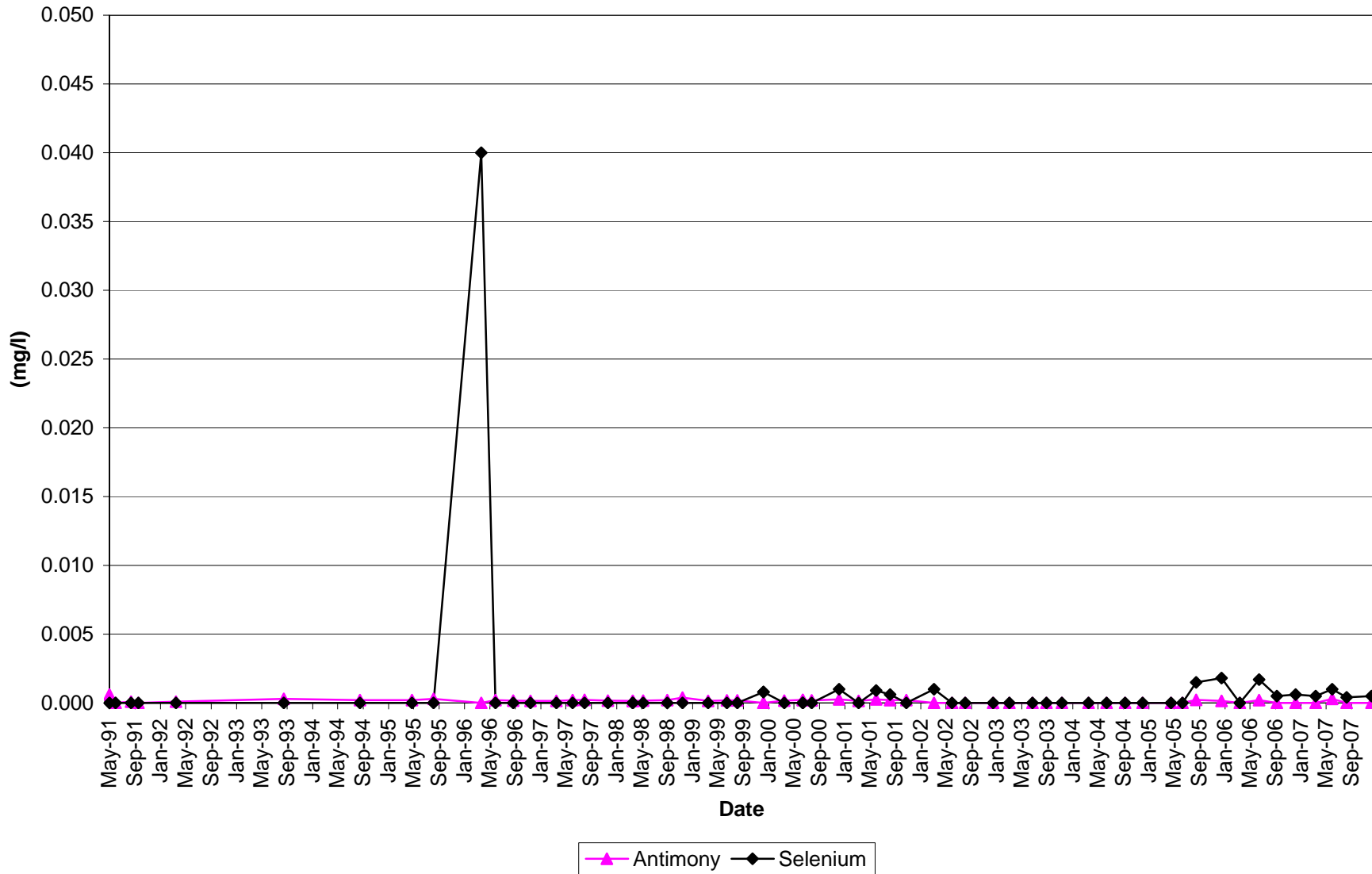


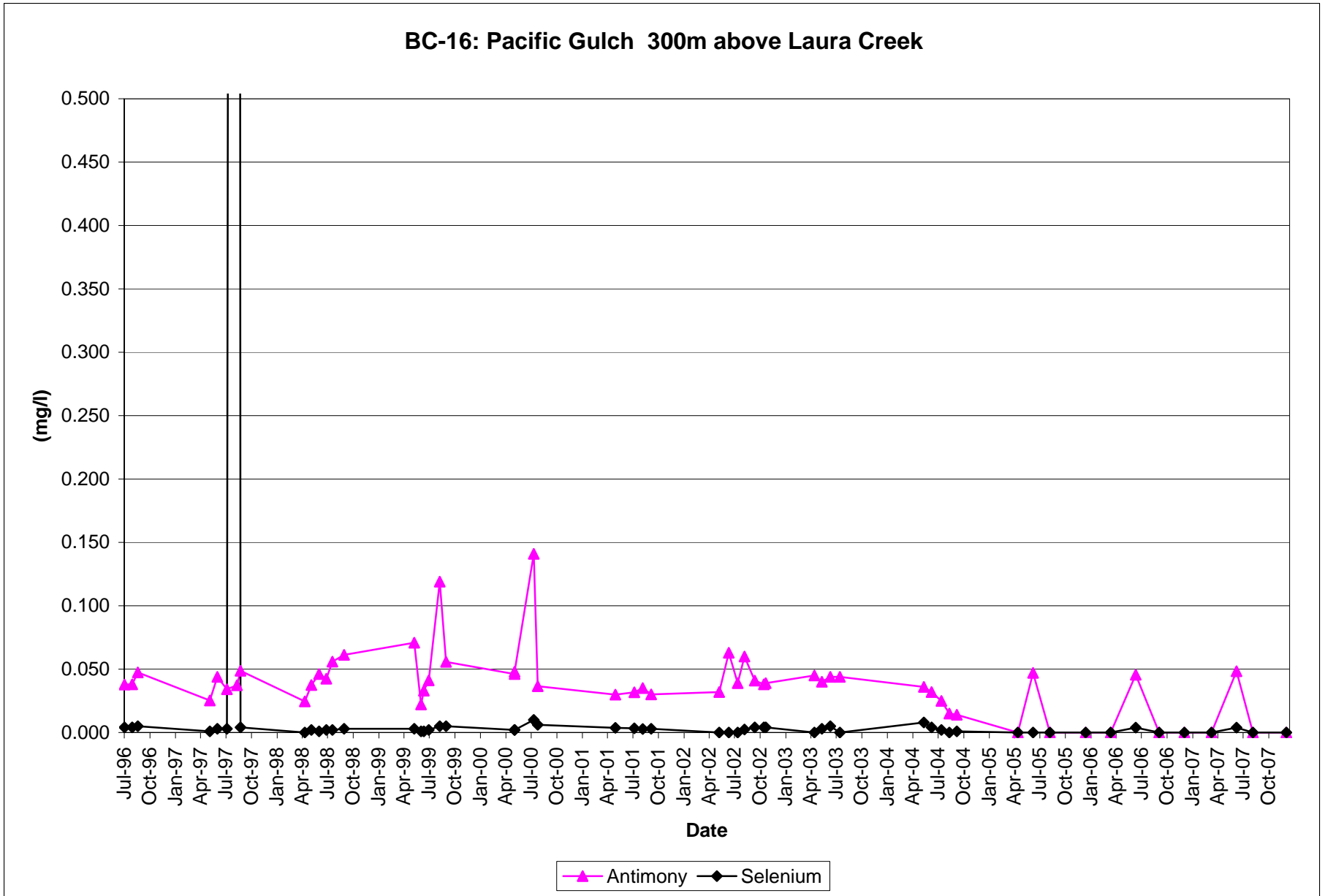




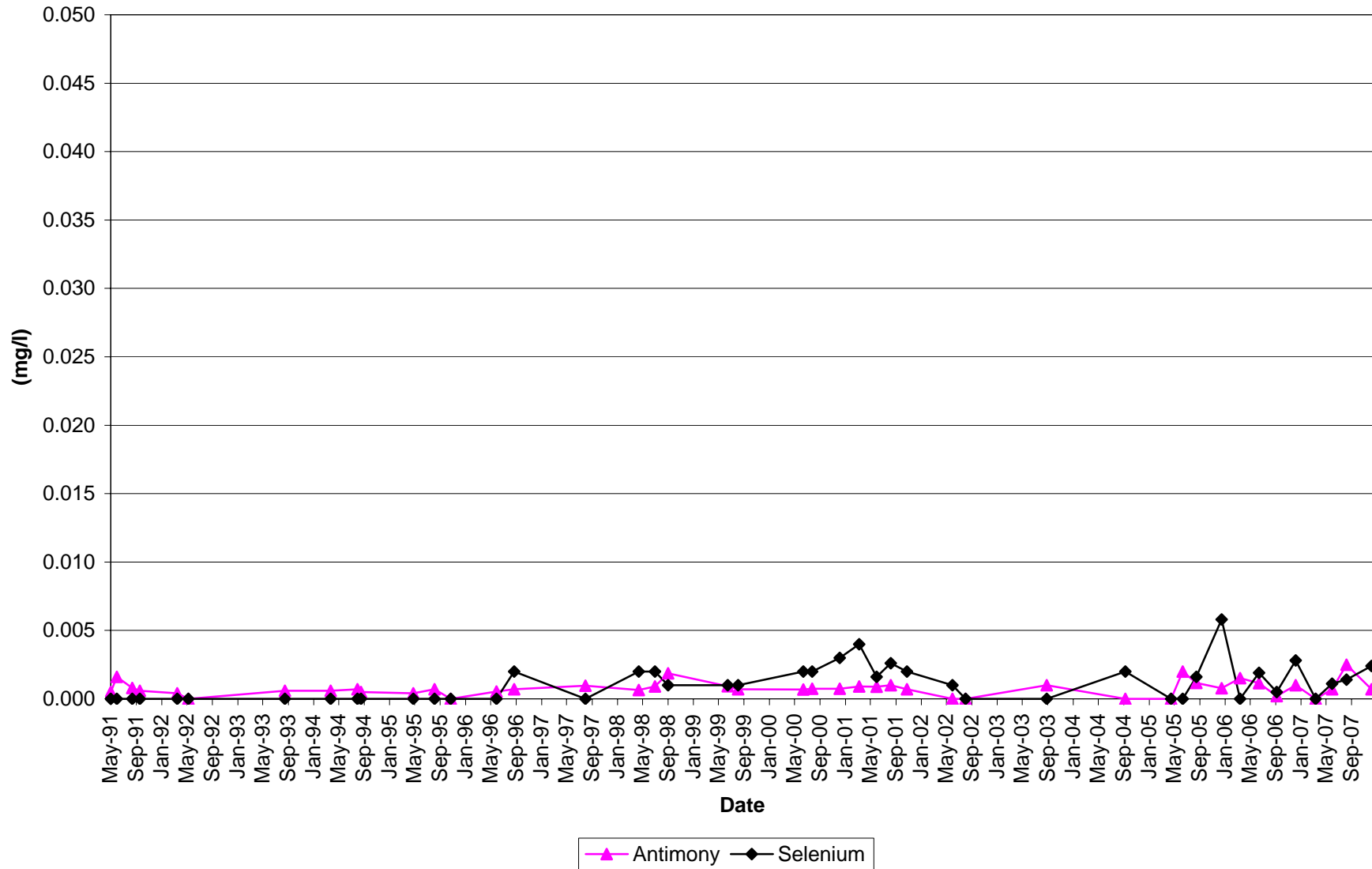


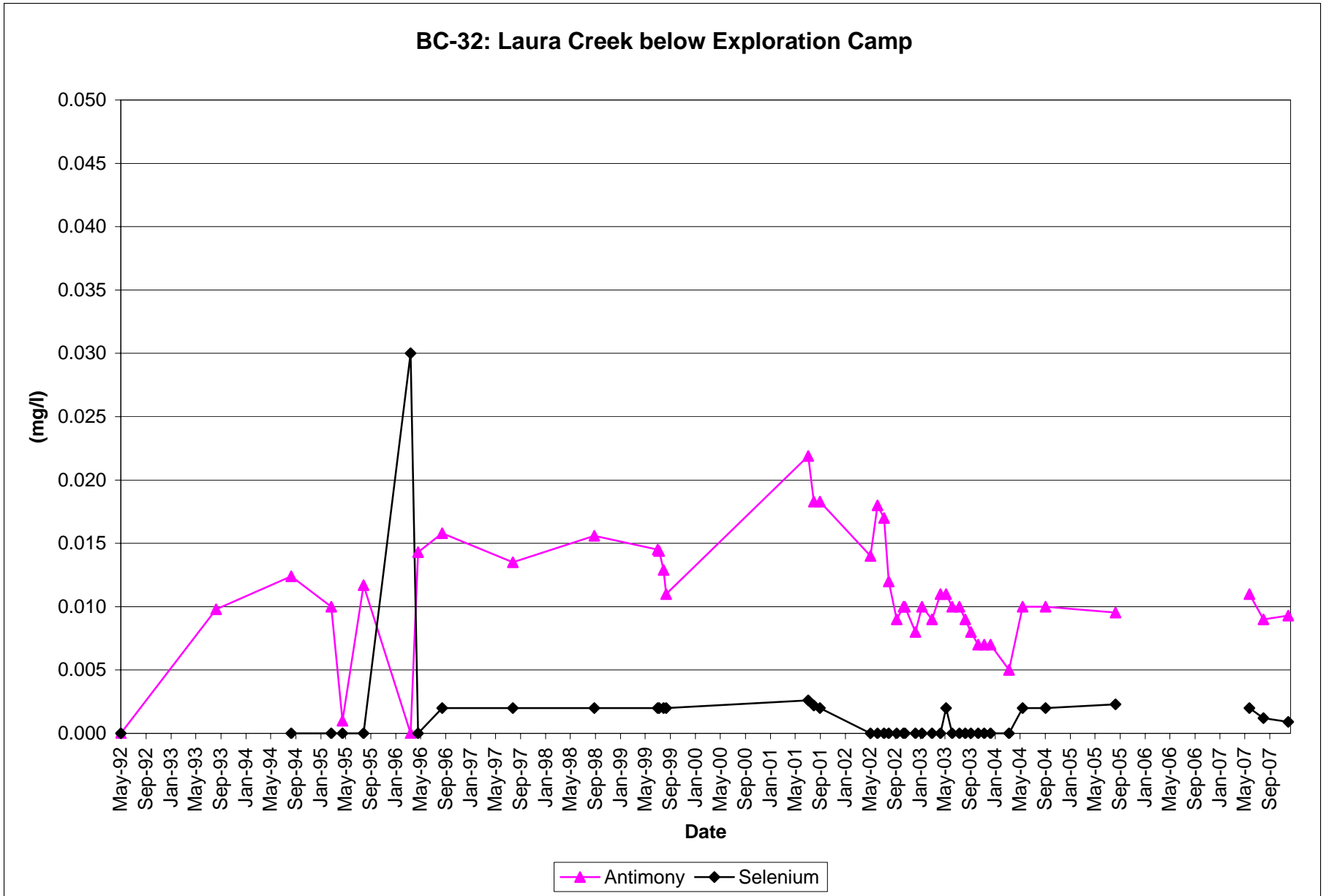
BC-06: South Klondike R. downstream from confluence with Lee Creek

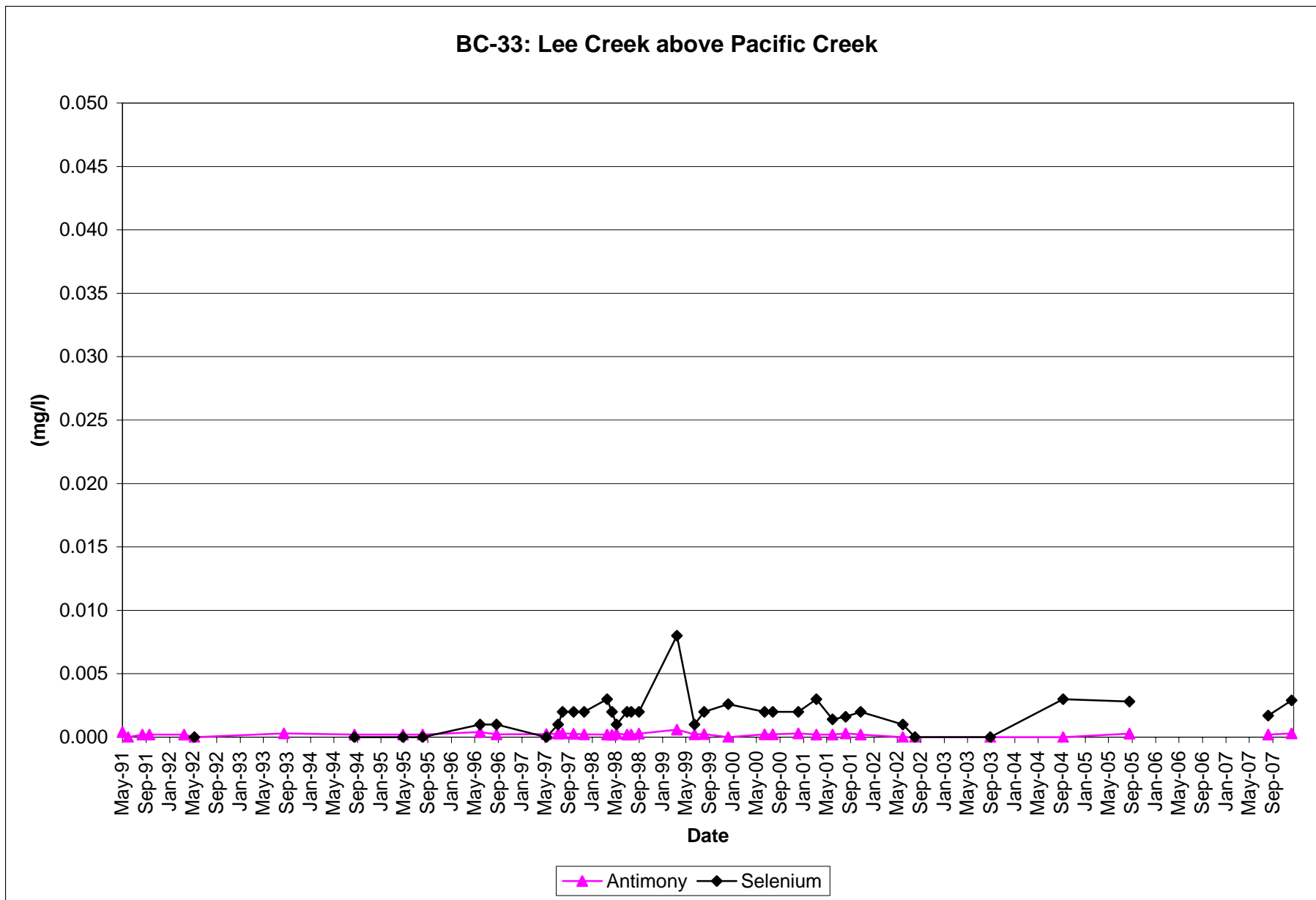




BC-31: Golden Creek upstream of confluence with South Klondike R.

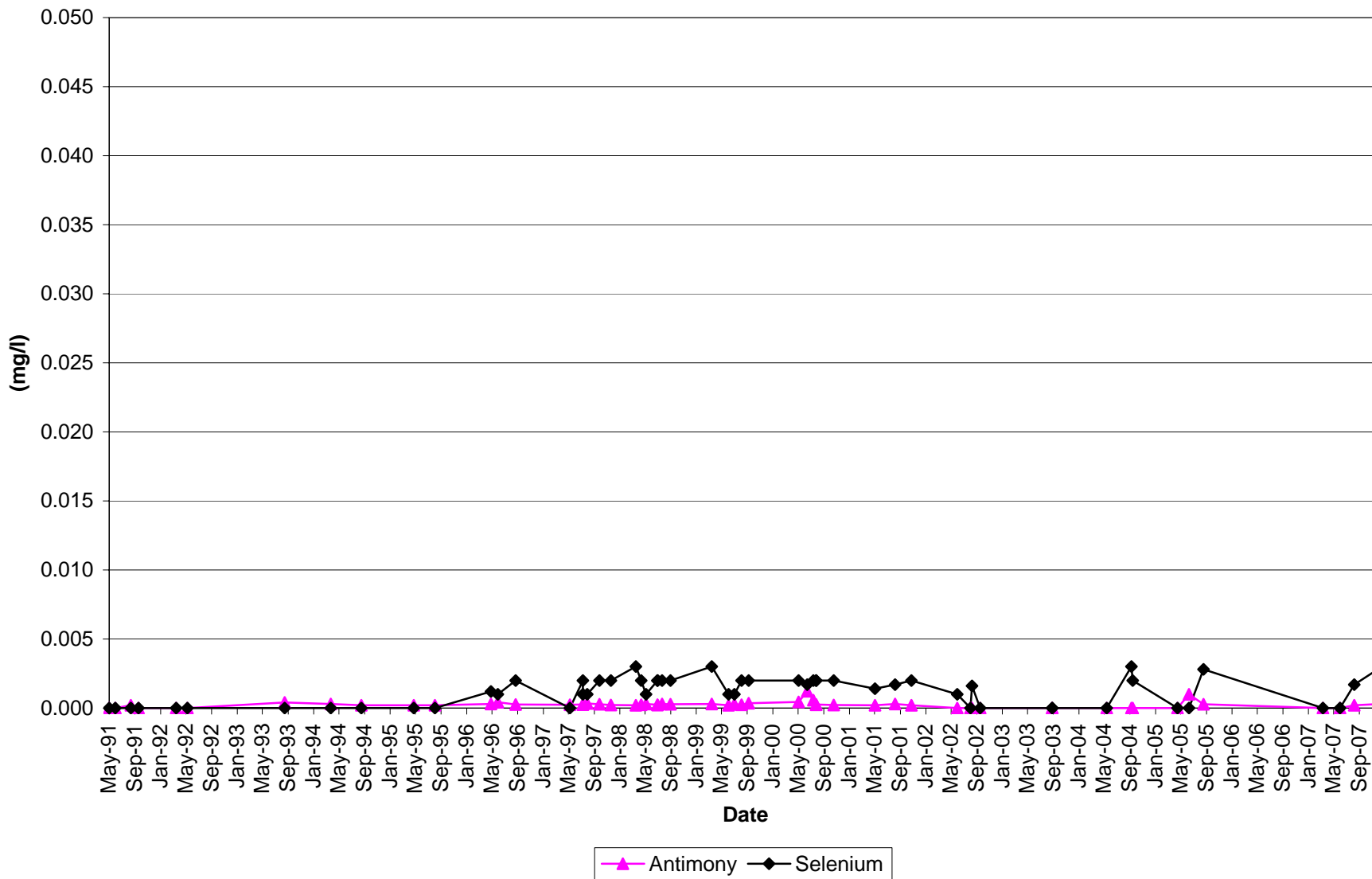


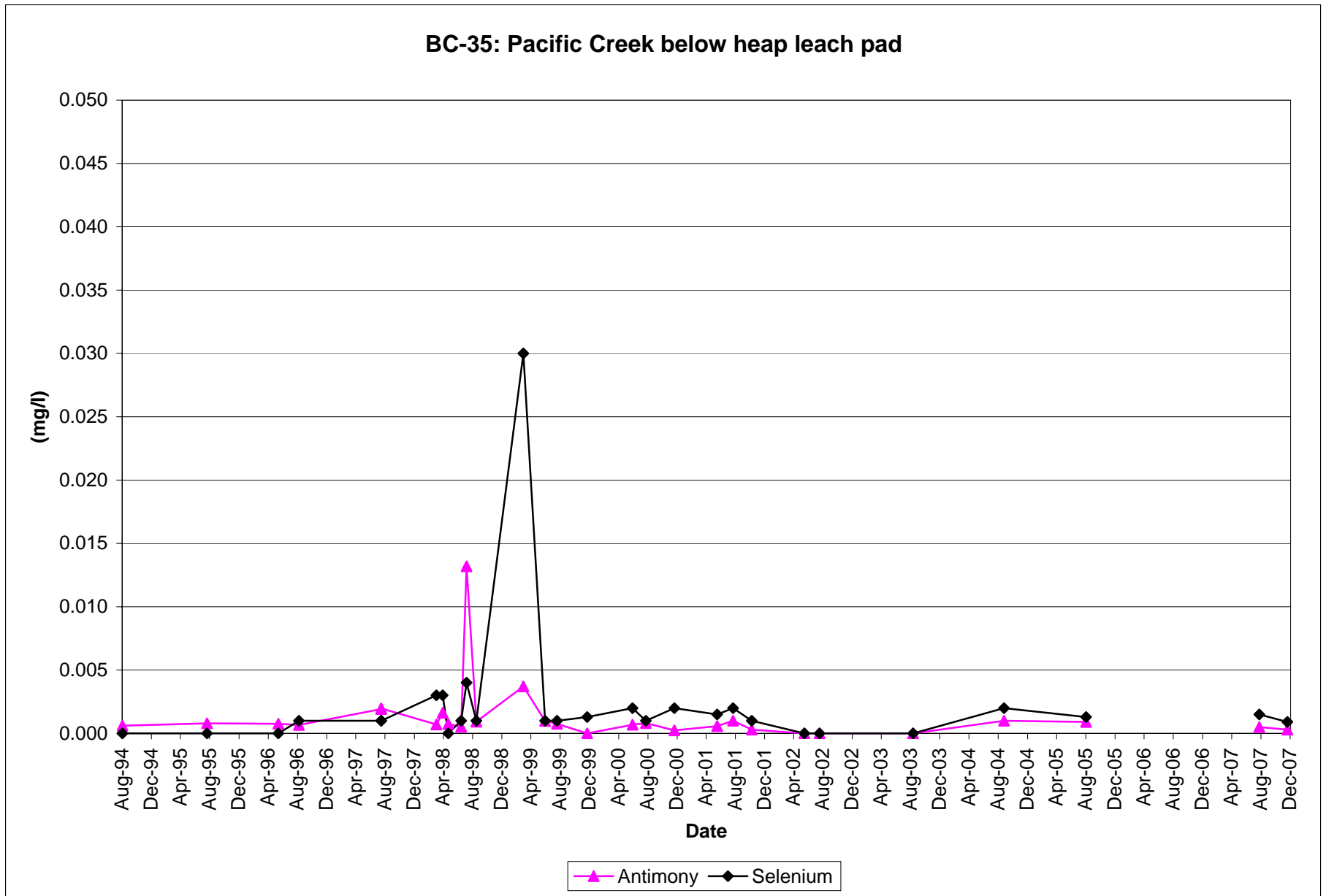




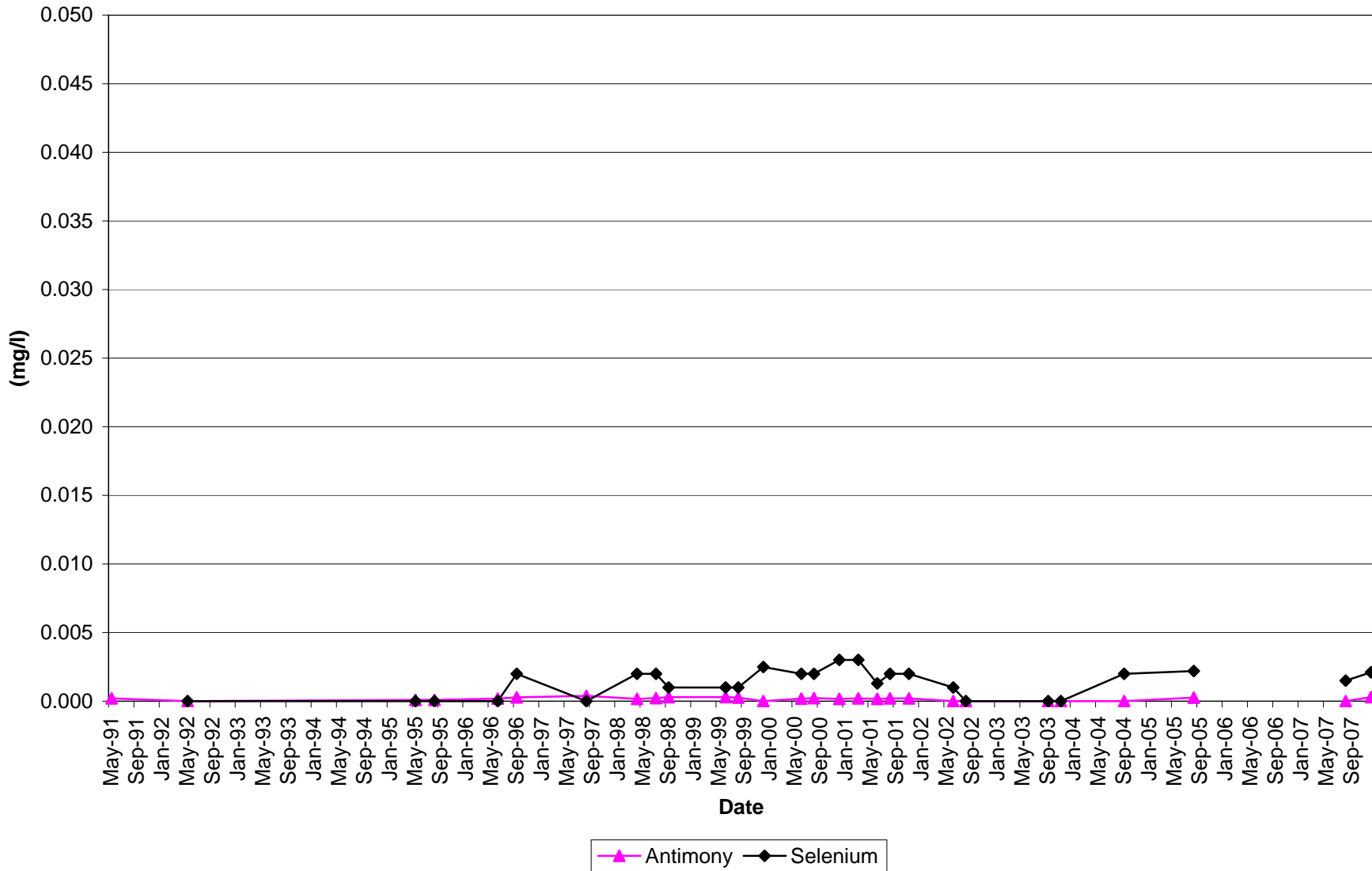


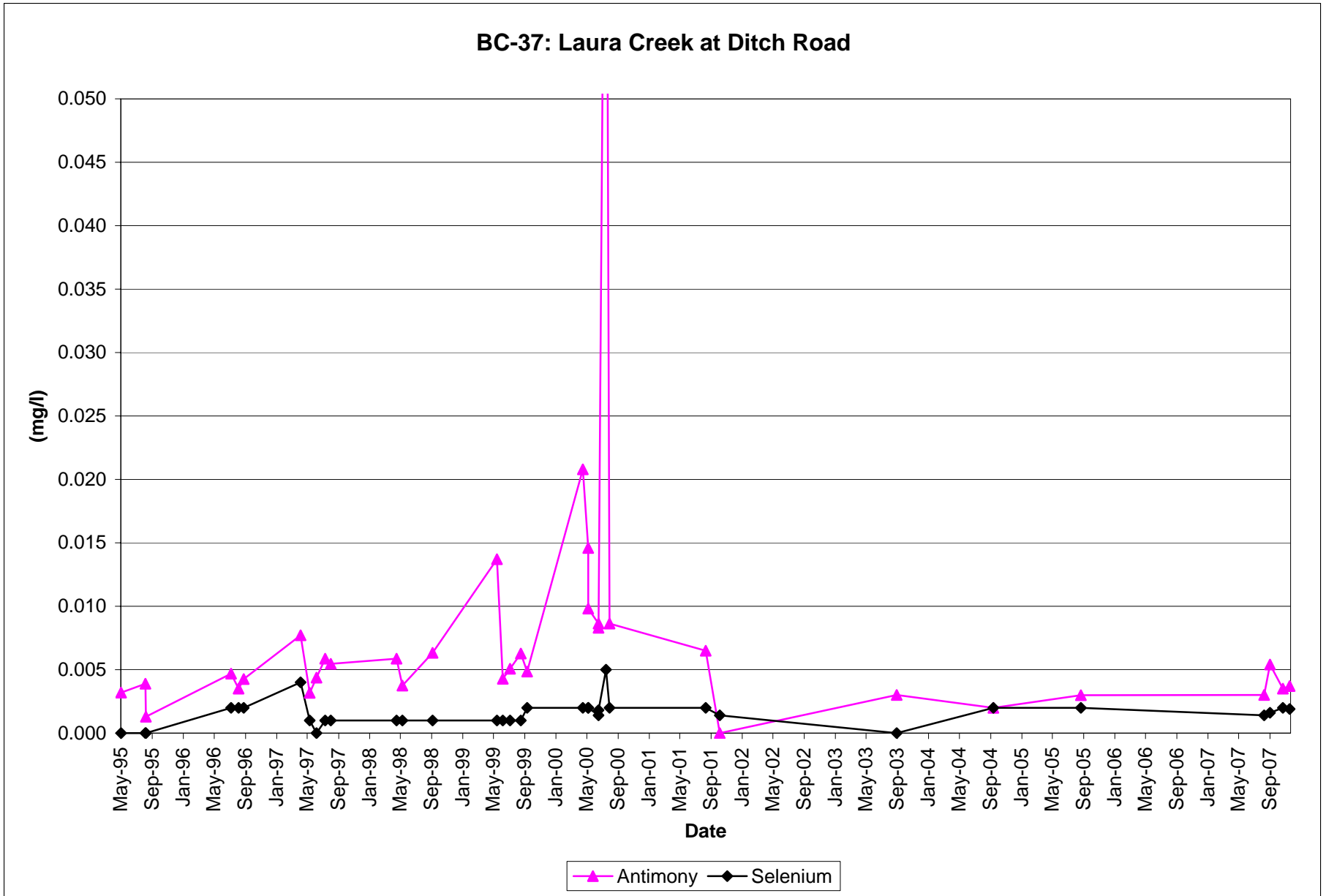
BC-34: Lee Creek at Ditch Road



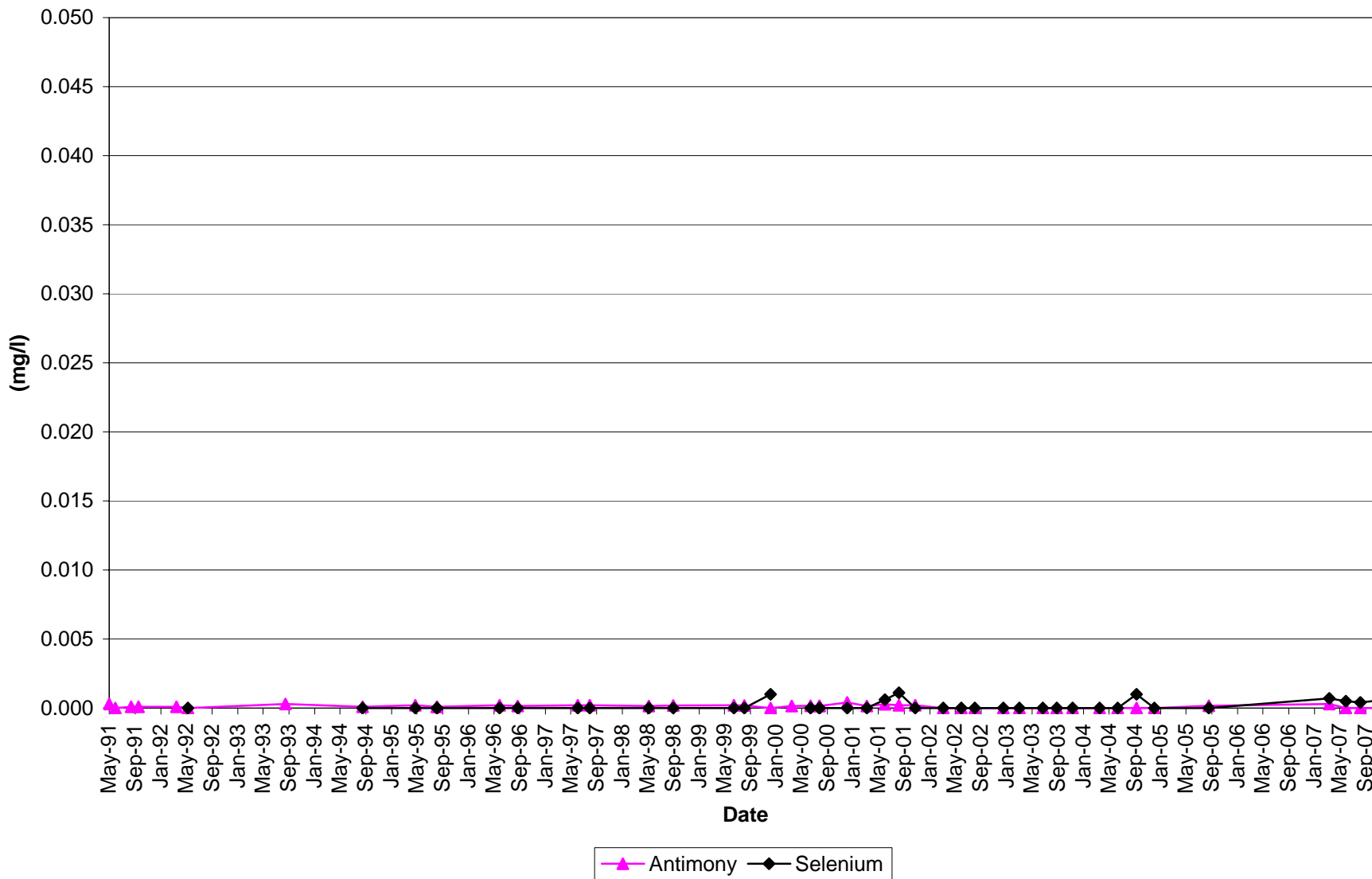


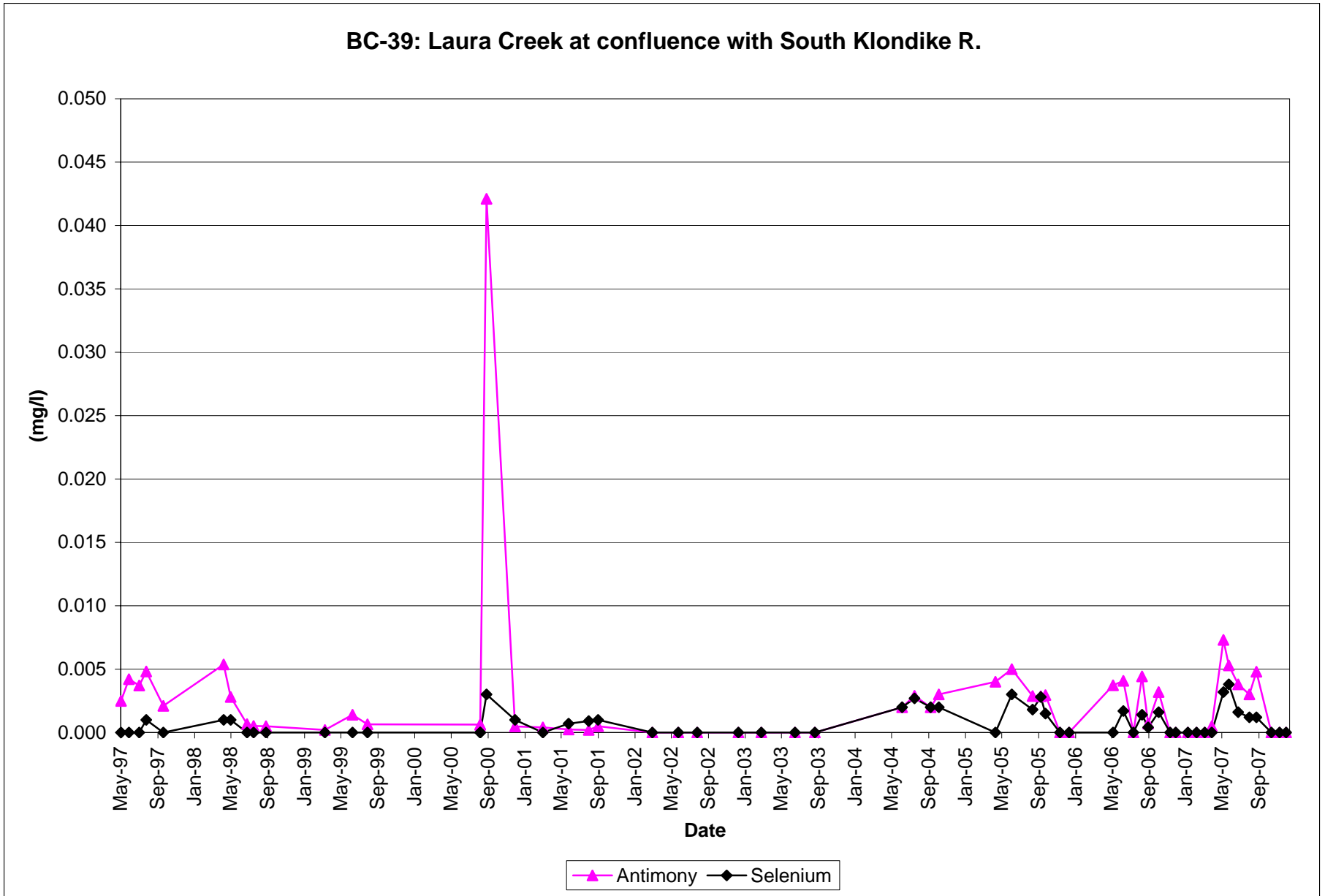
BC-36: Golden Creek above confluence with Lucky Creek

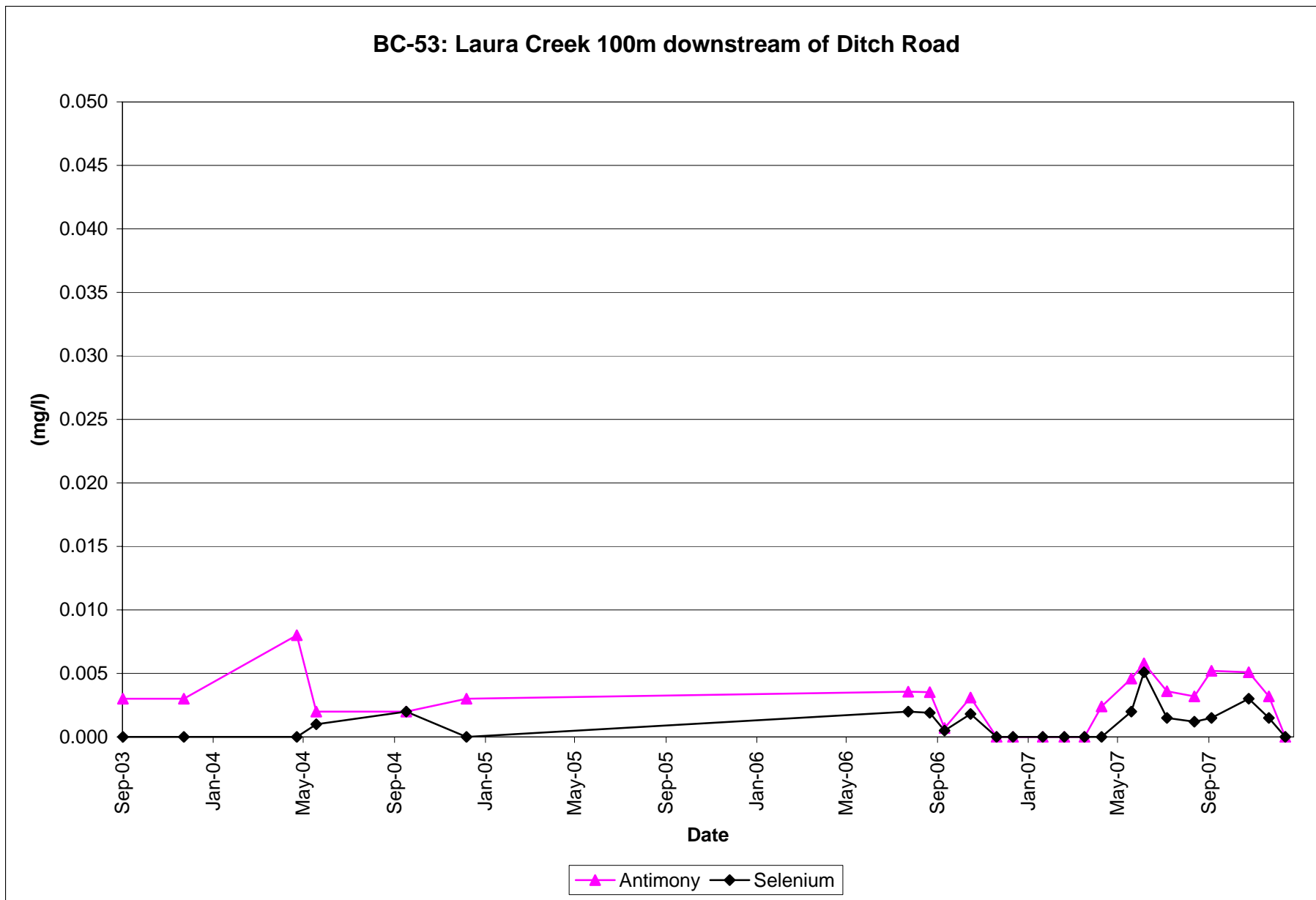




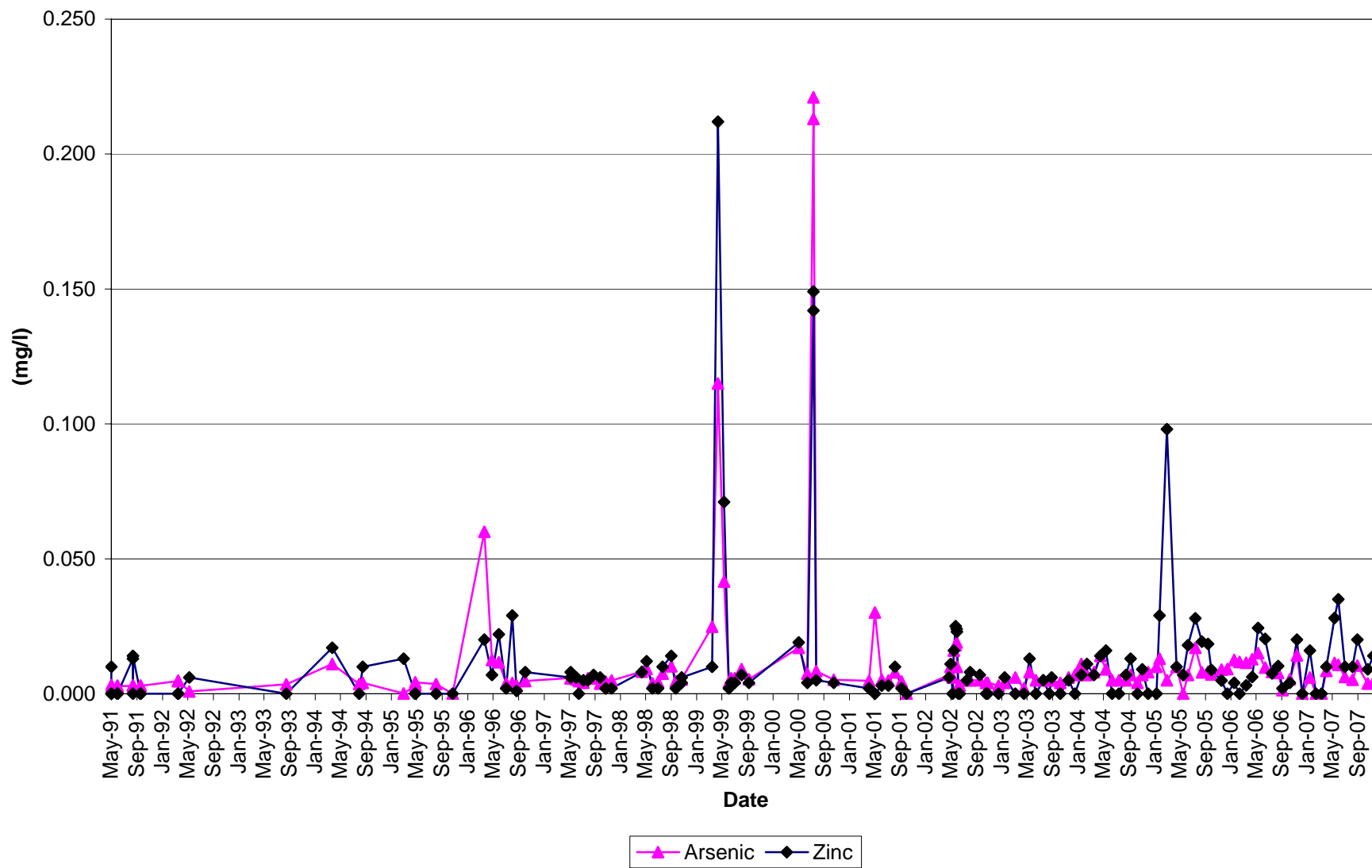
BC-38: South Klondike R. upstream from confluence with Golden Creek



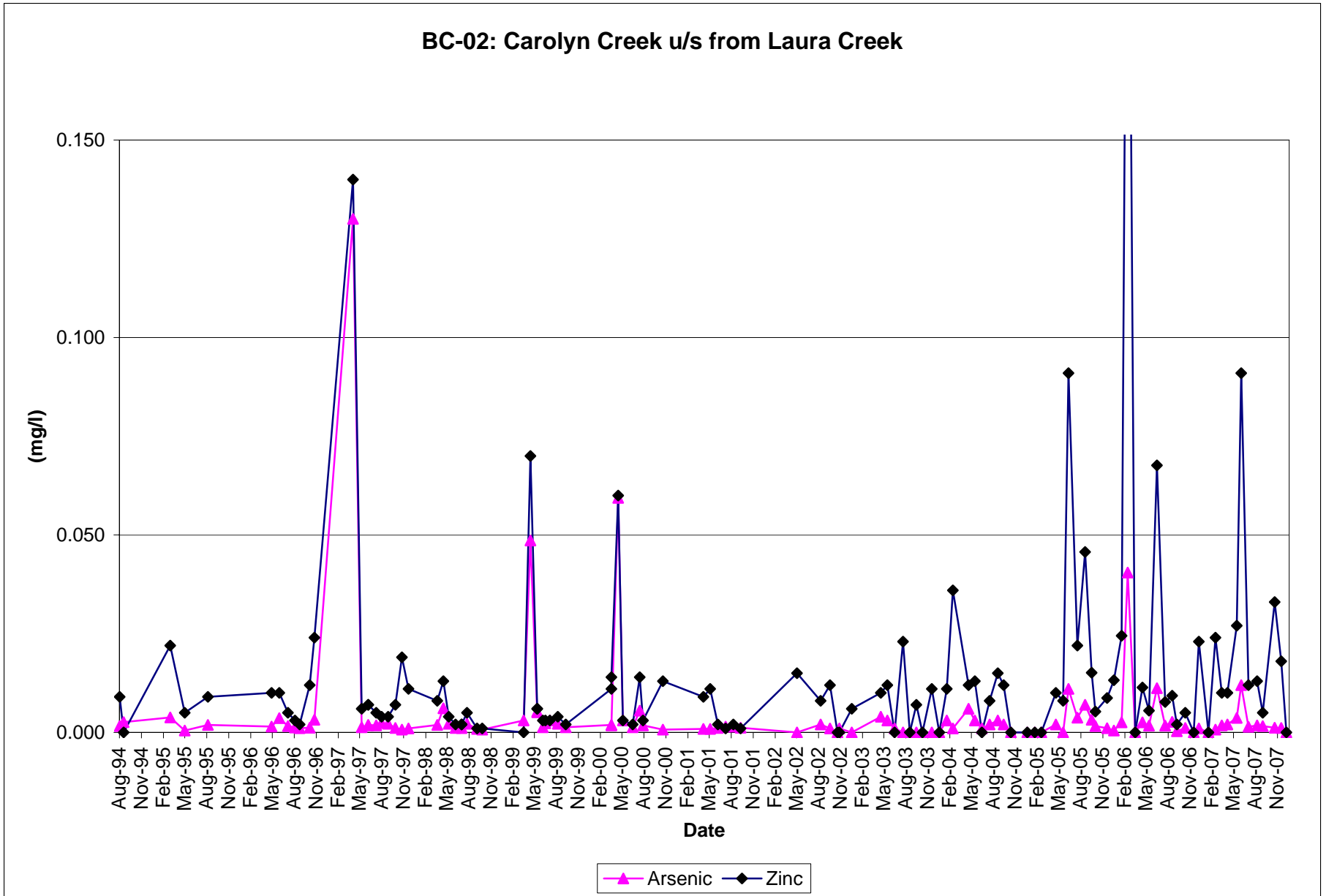




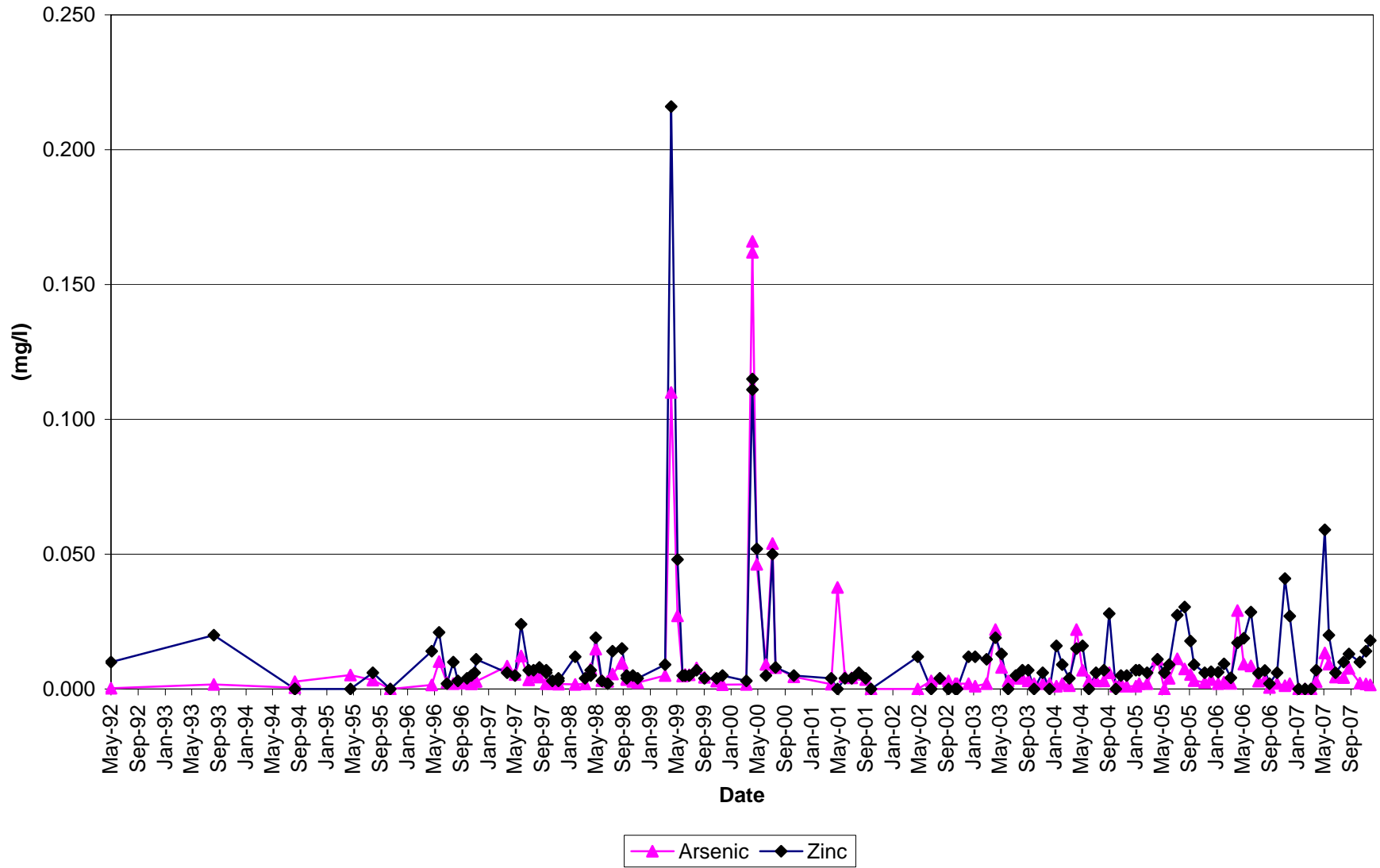
BC-01: Laura Creek 50m above Ditch Road

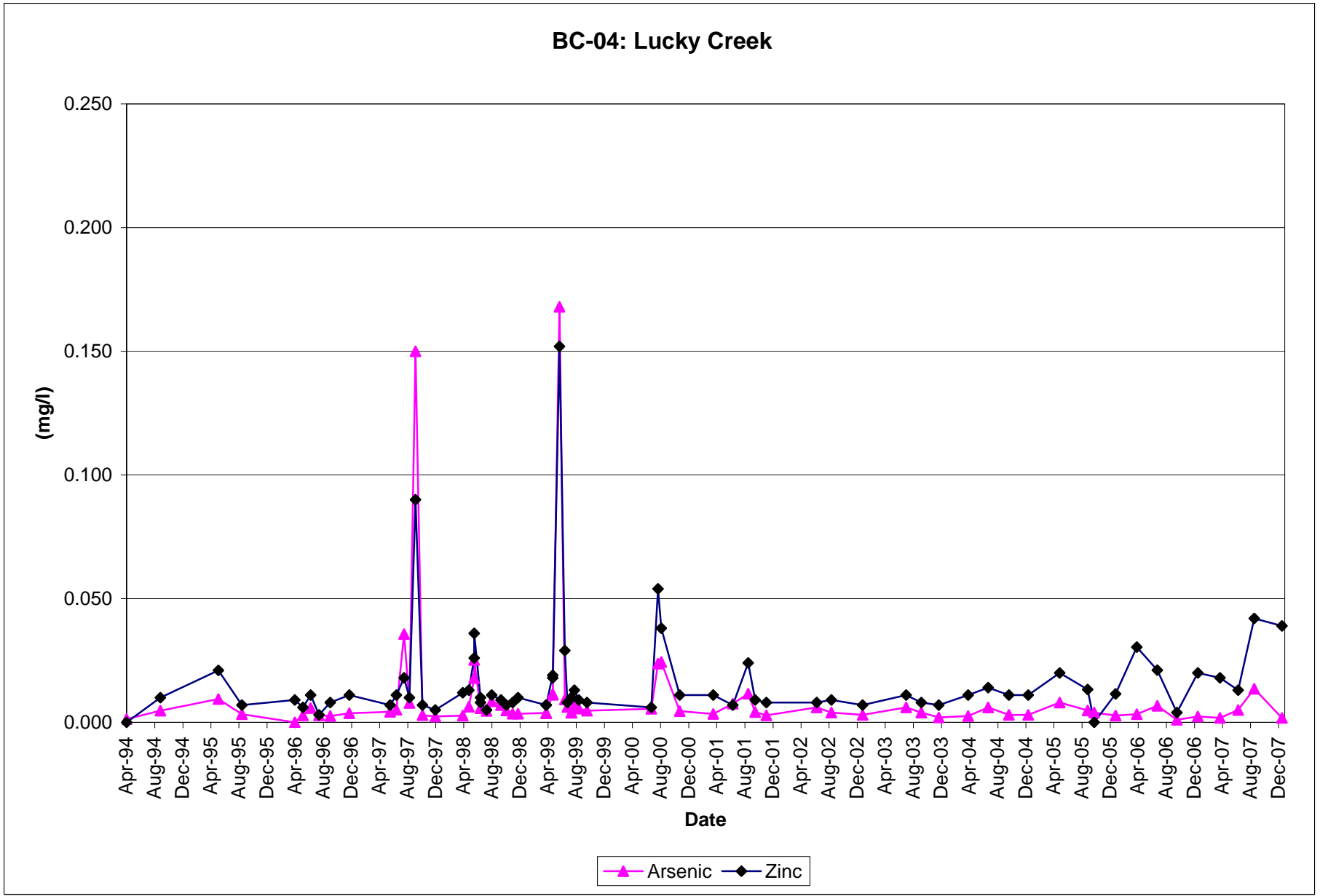


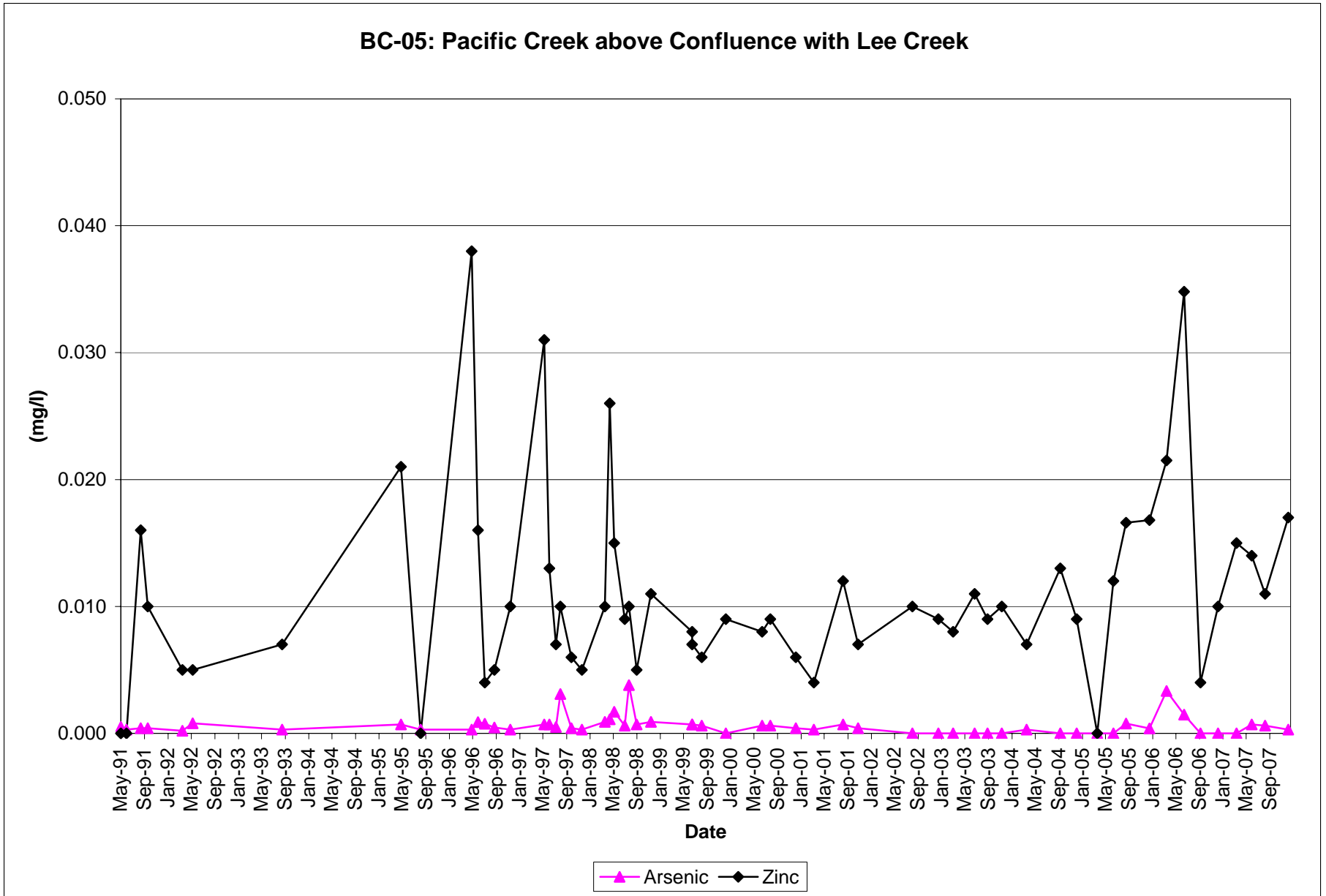


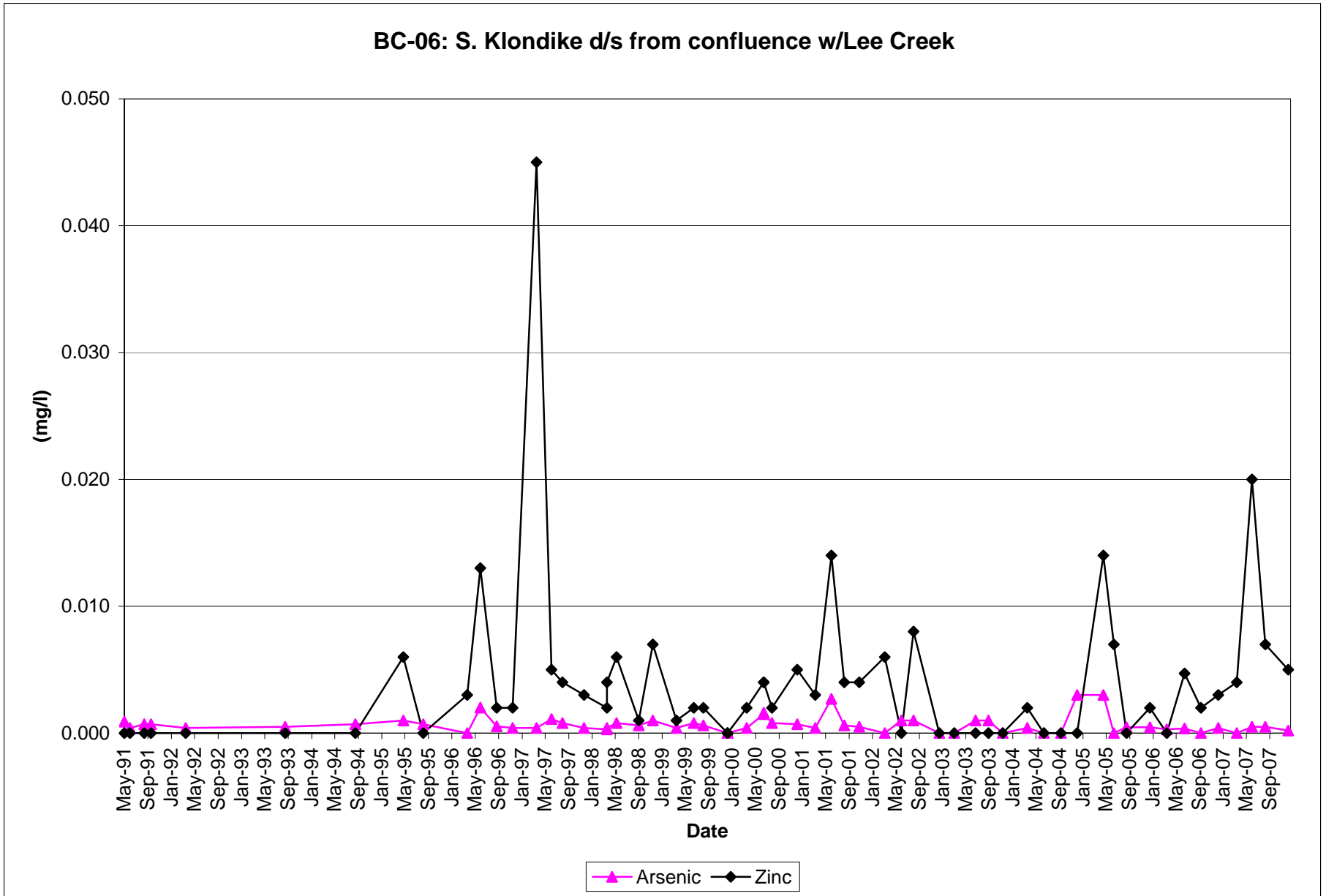


BC-03: Laura Creek Above Carolyn Creek

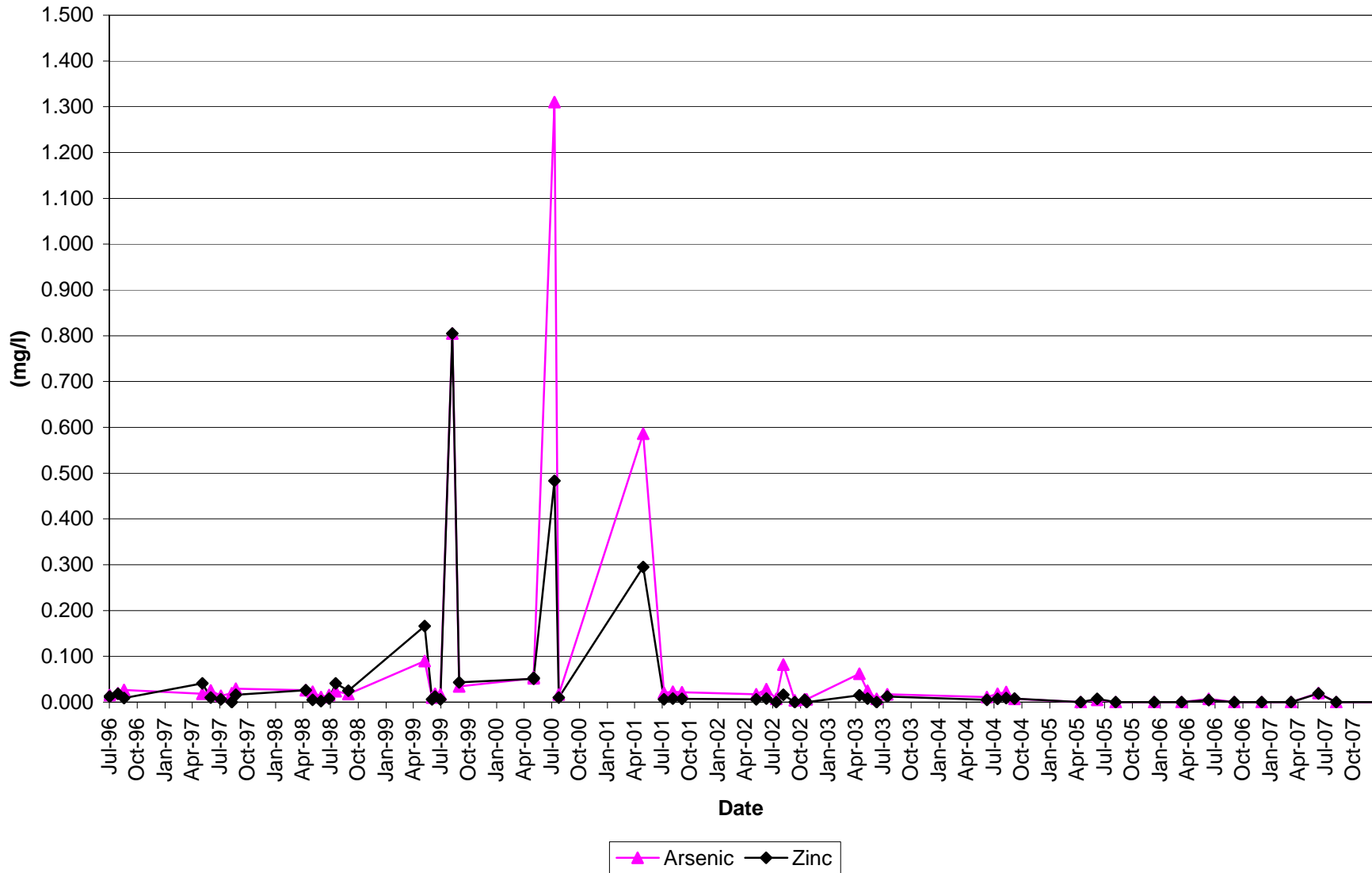


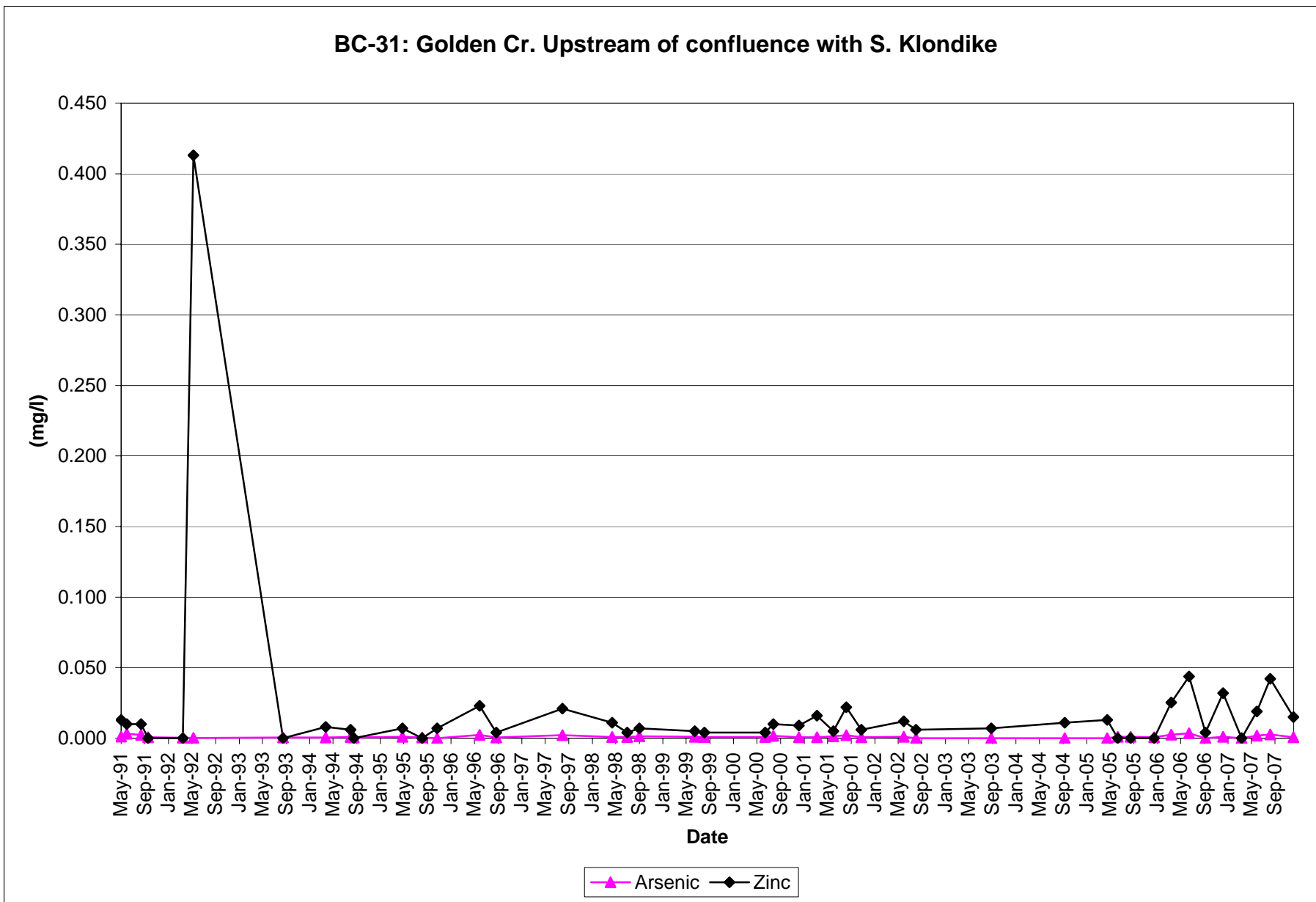


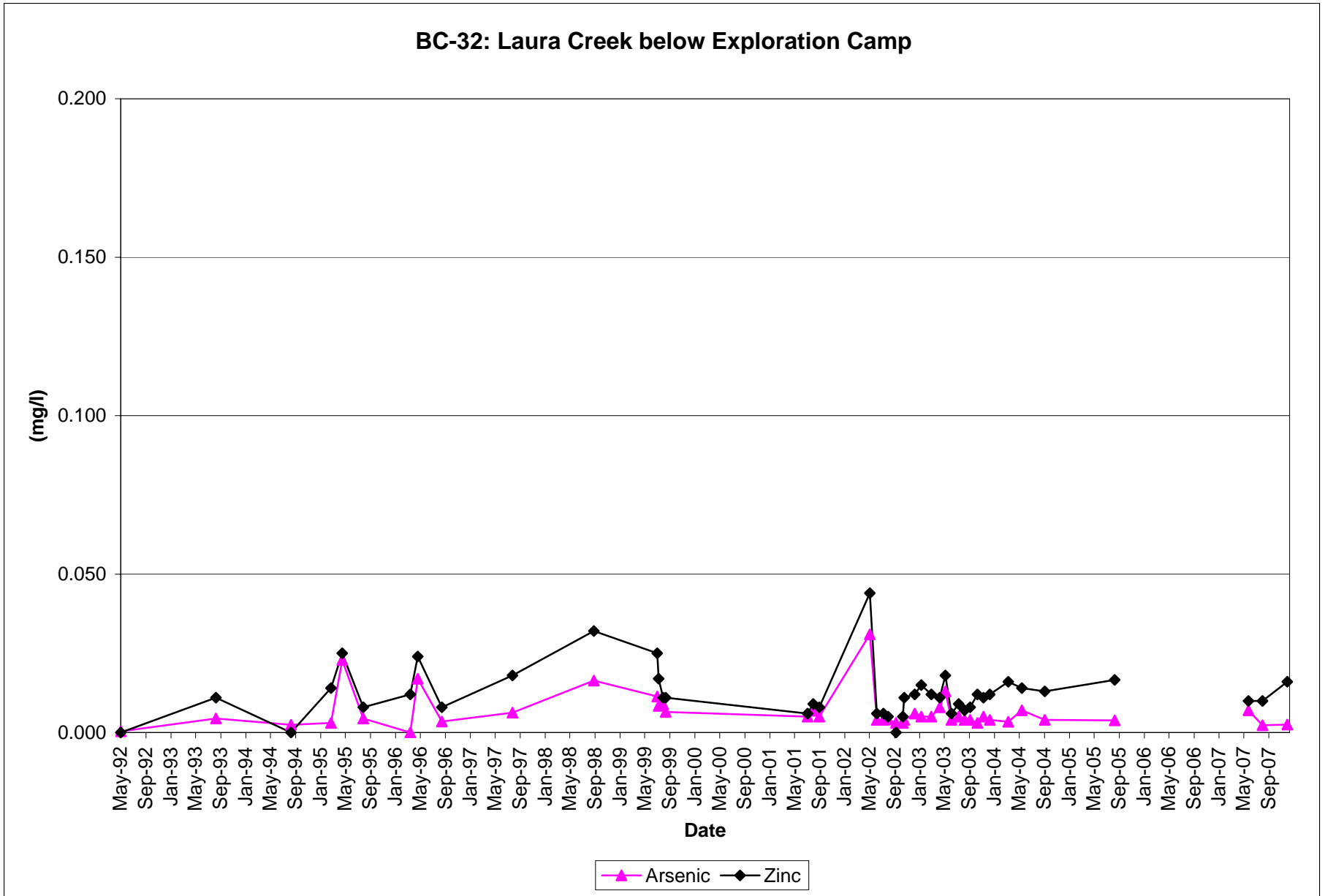




BC-16: Pacific Gulch 300m above Laura Creek

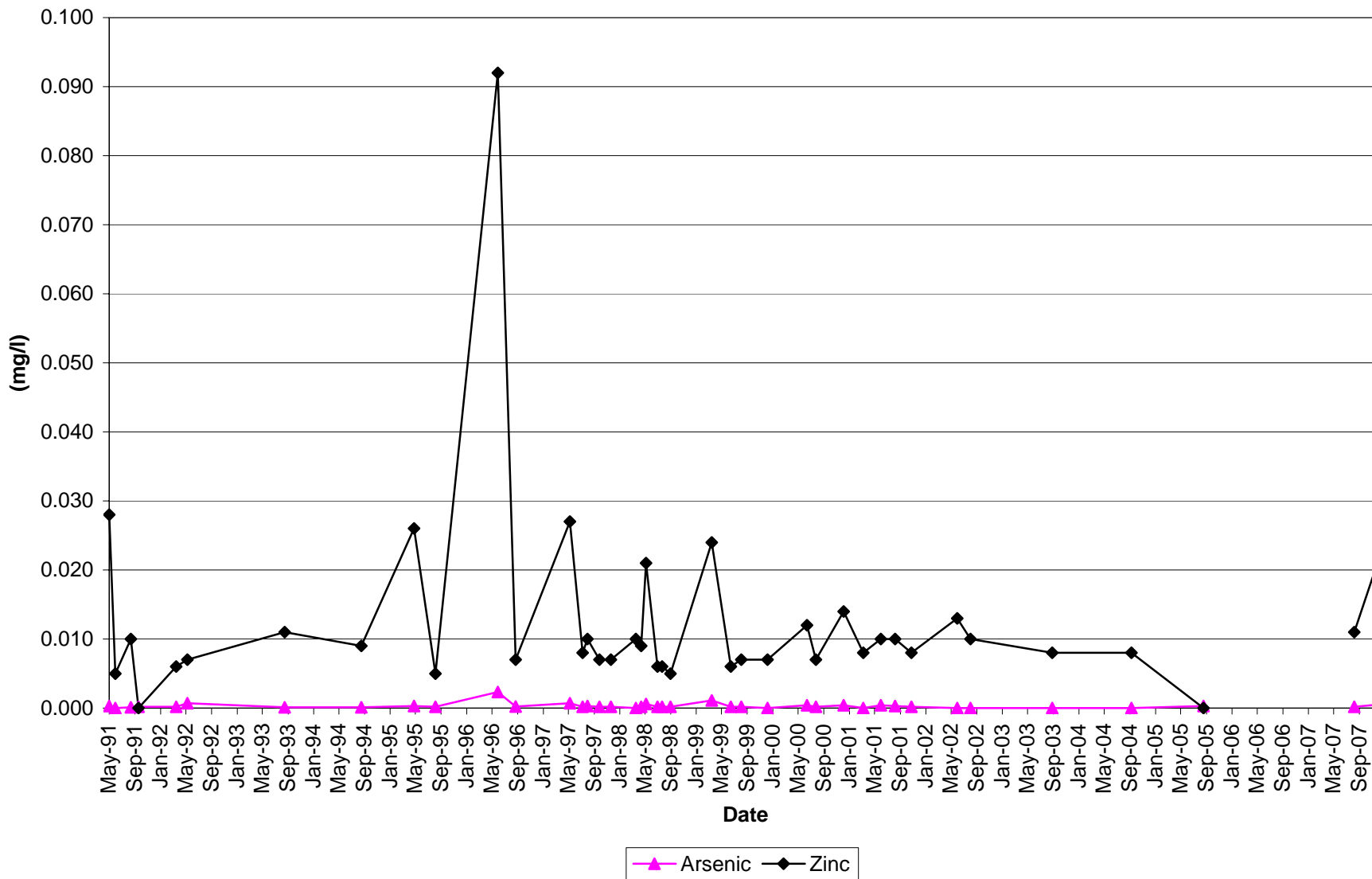


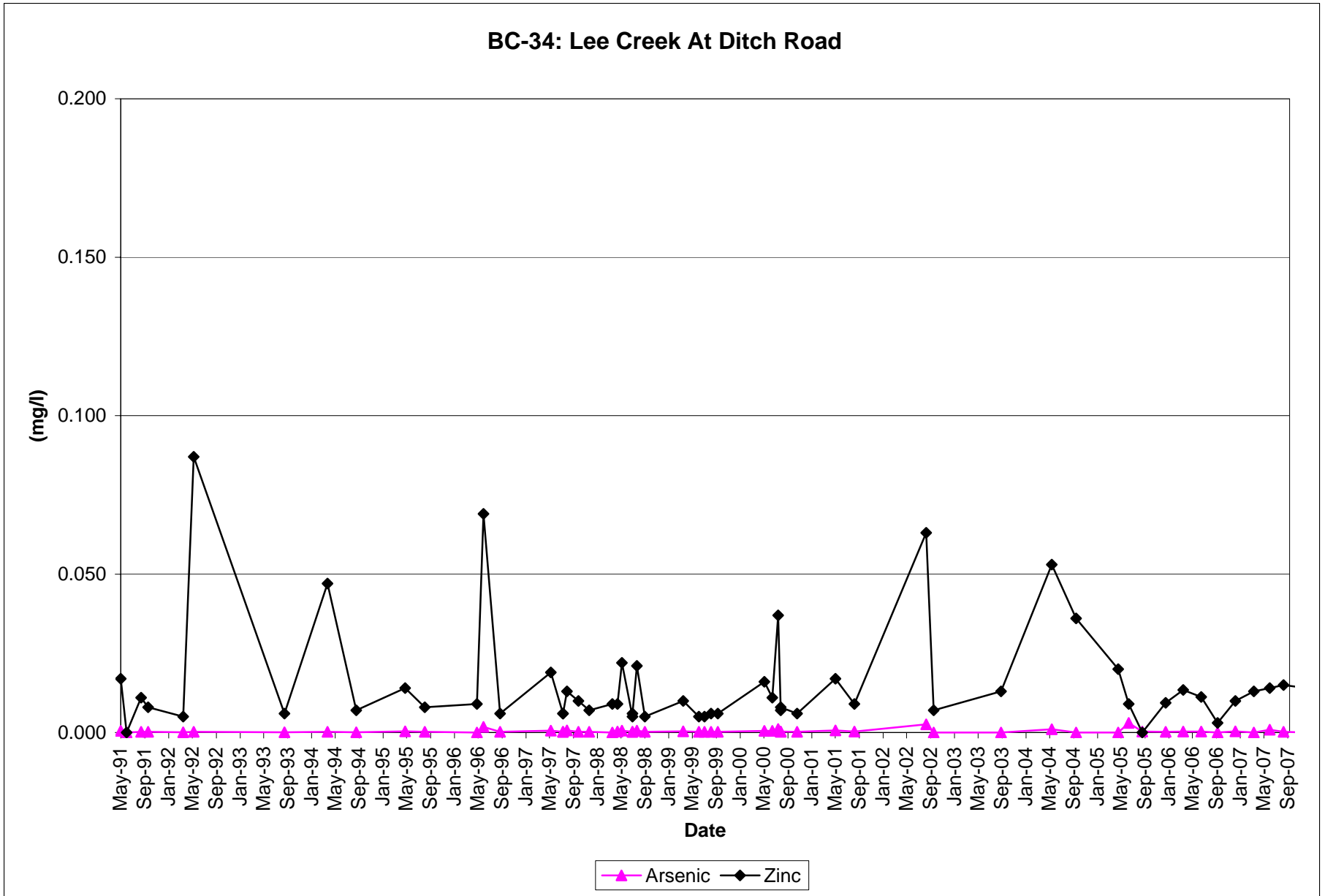


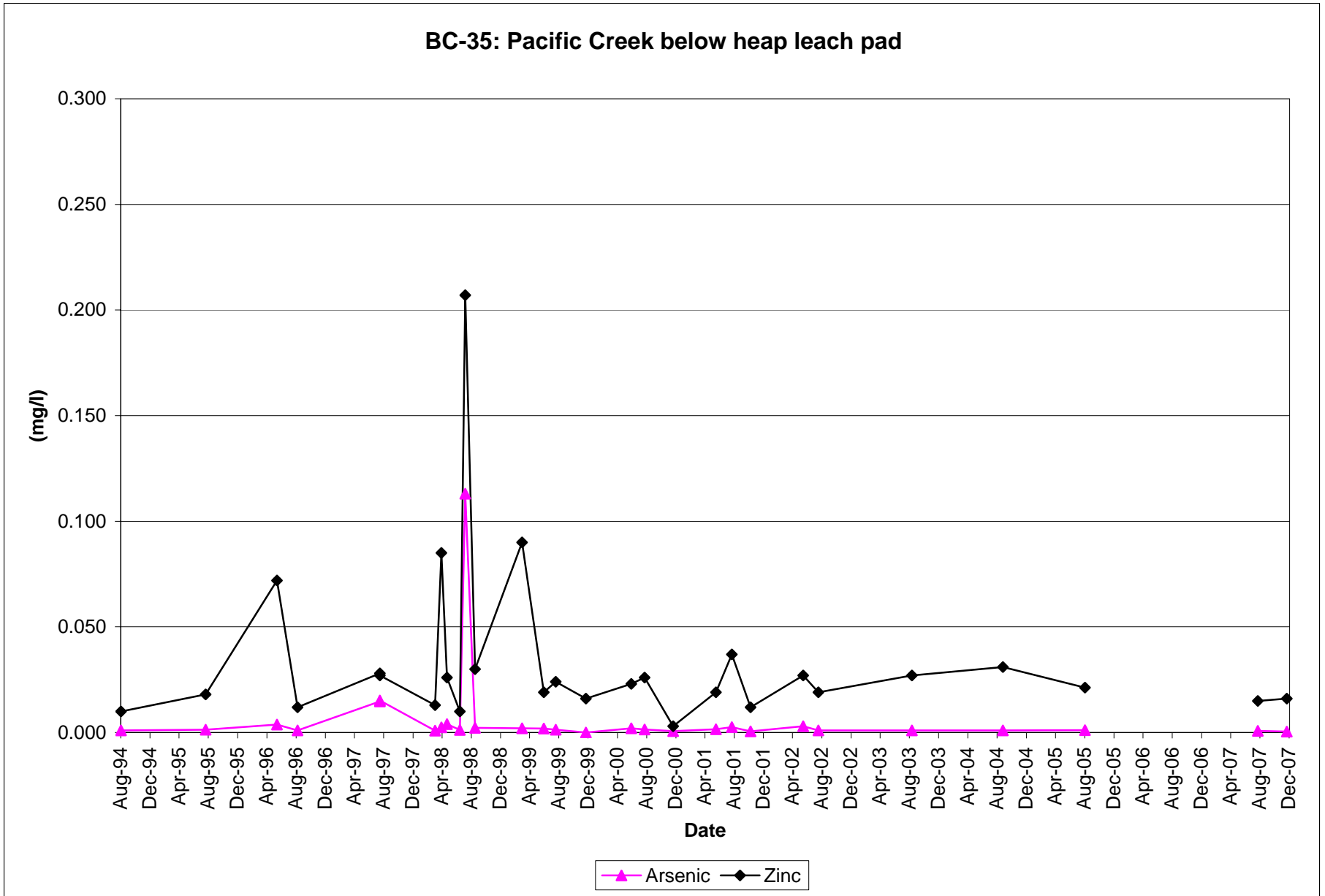


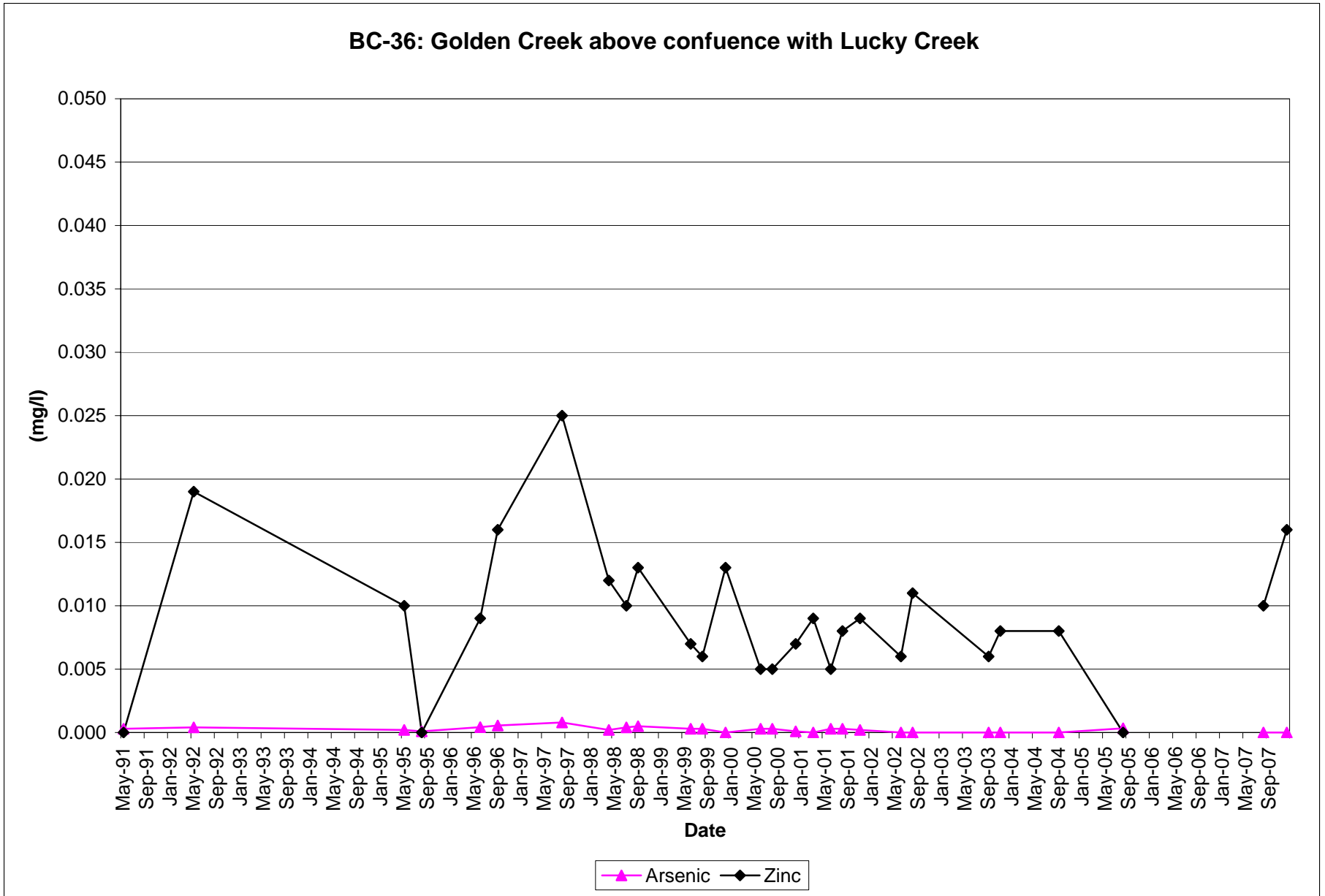


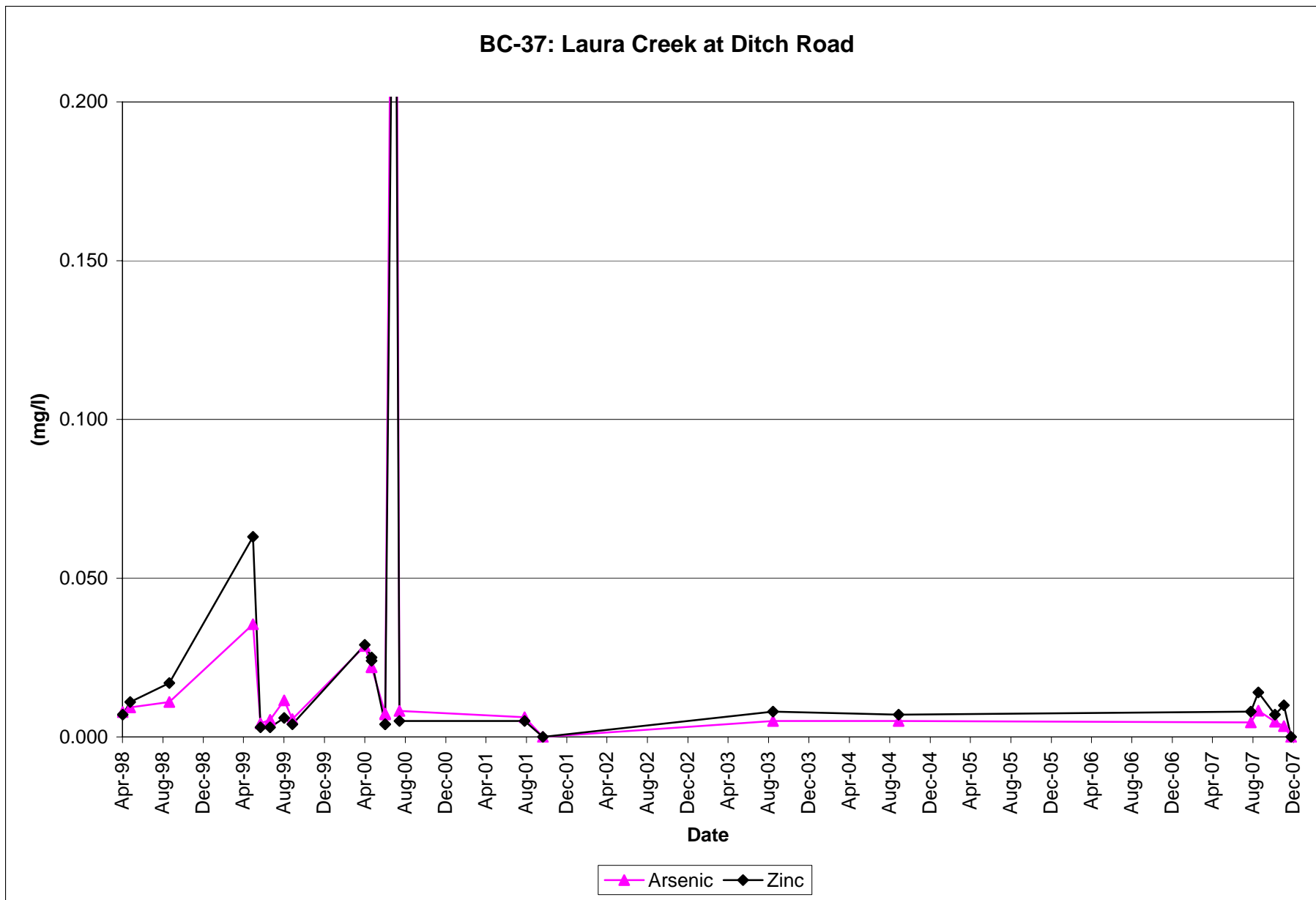
BC-33: Lee Creek above Pacific Creek



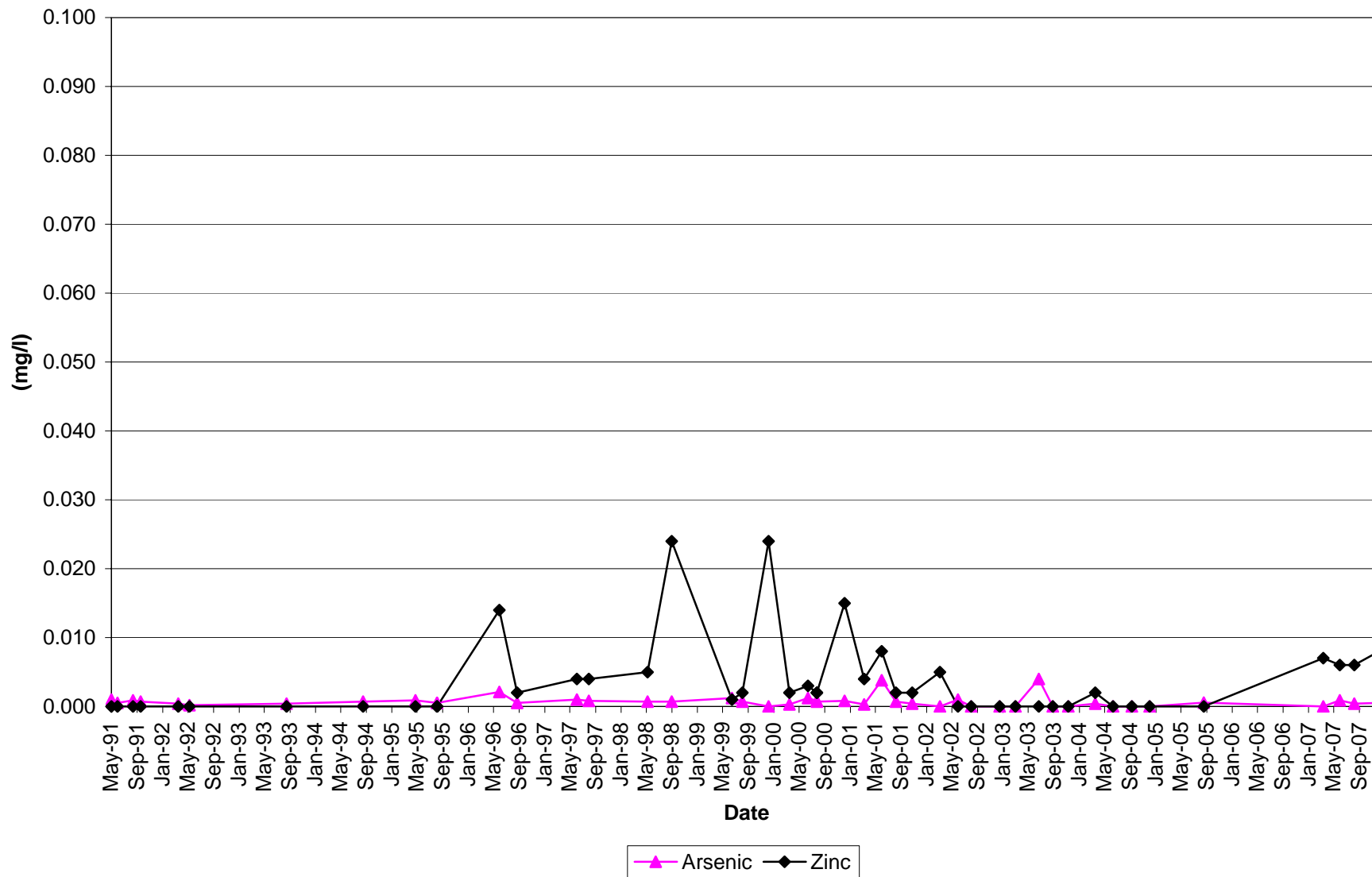


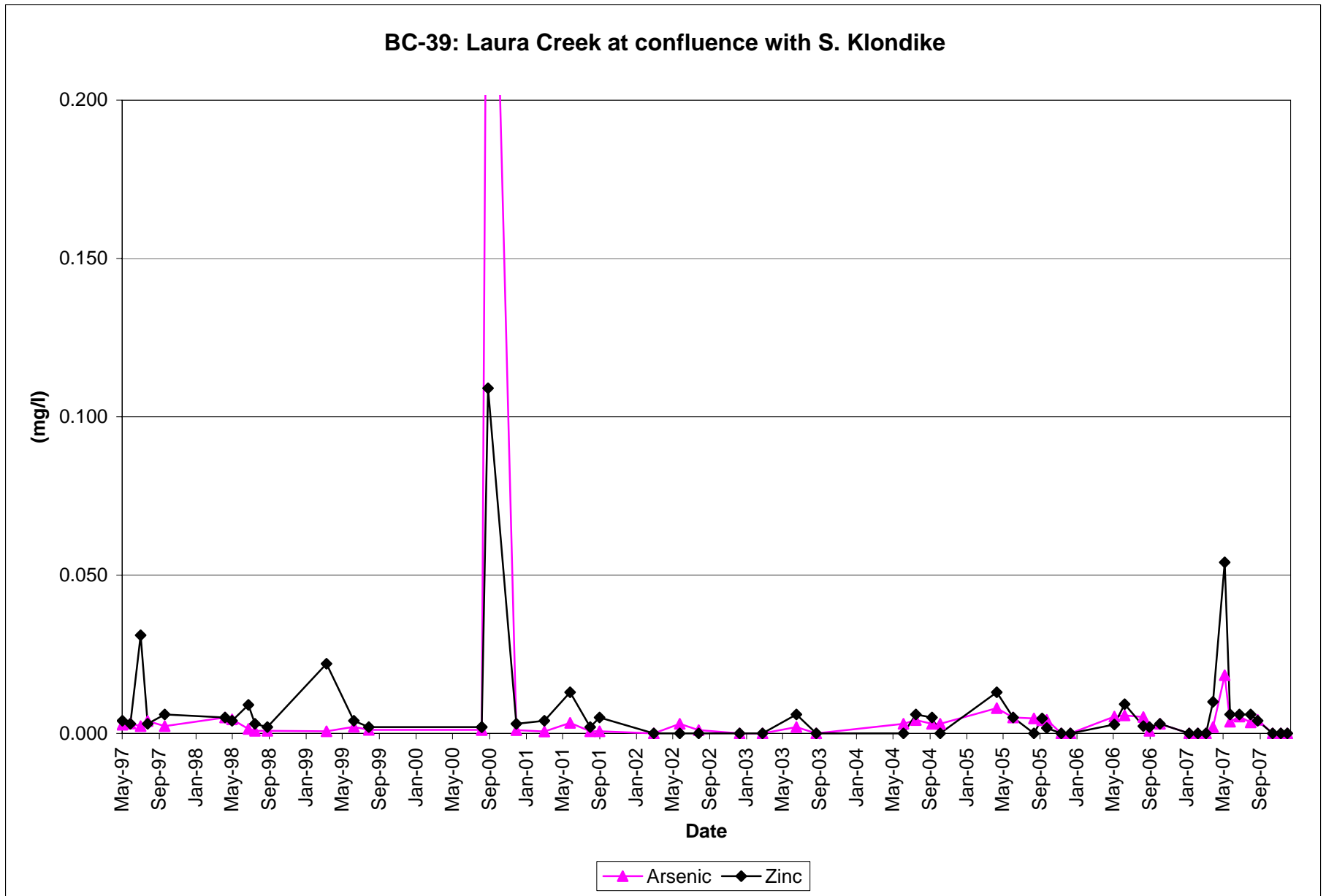


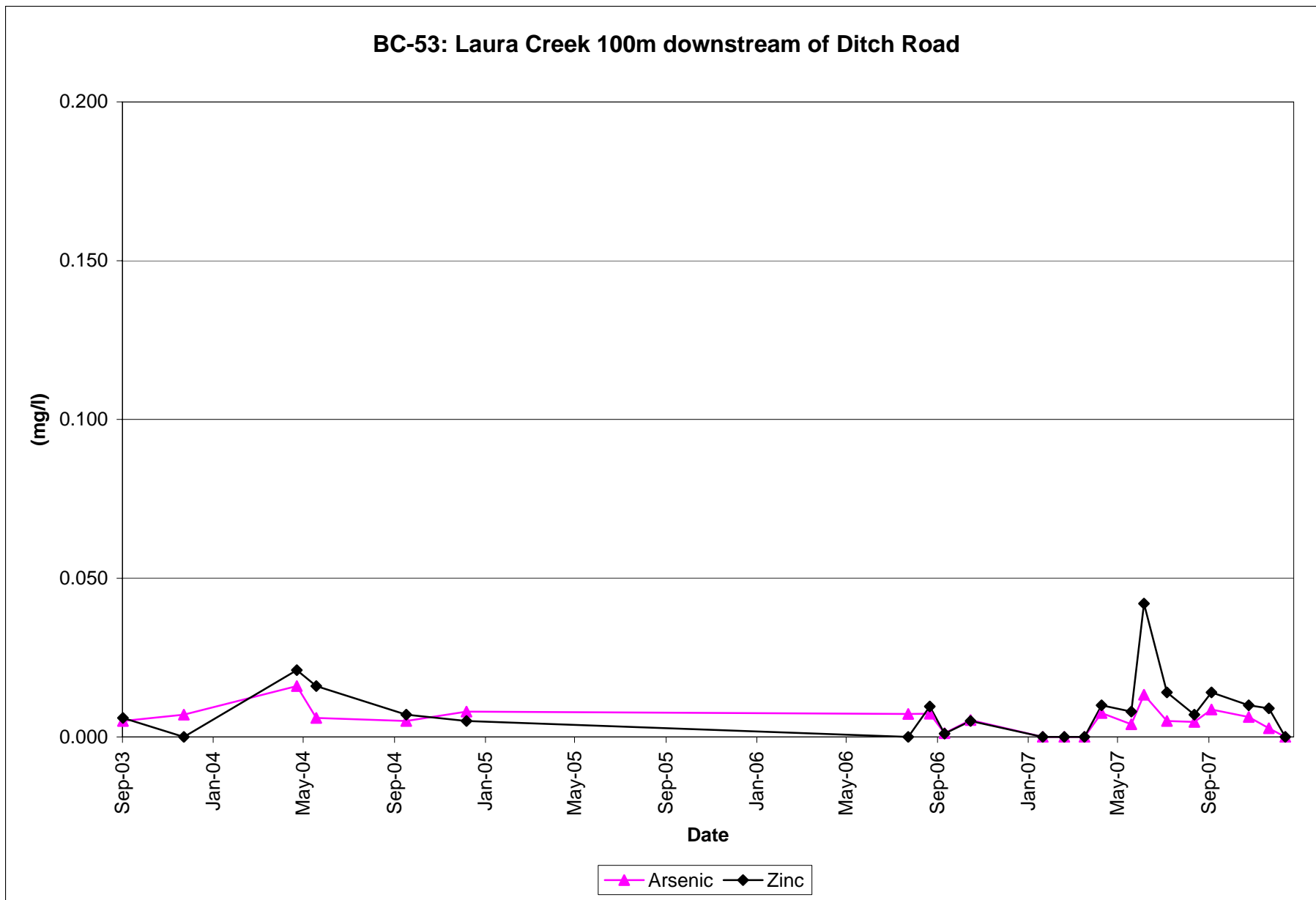




BC-38: South Klondike R. upstream from confluence with Golden Creek

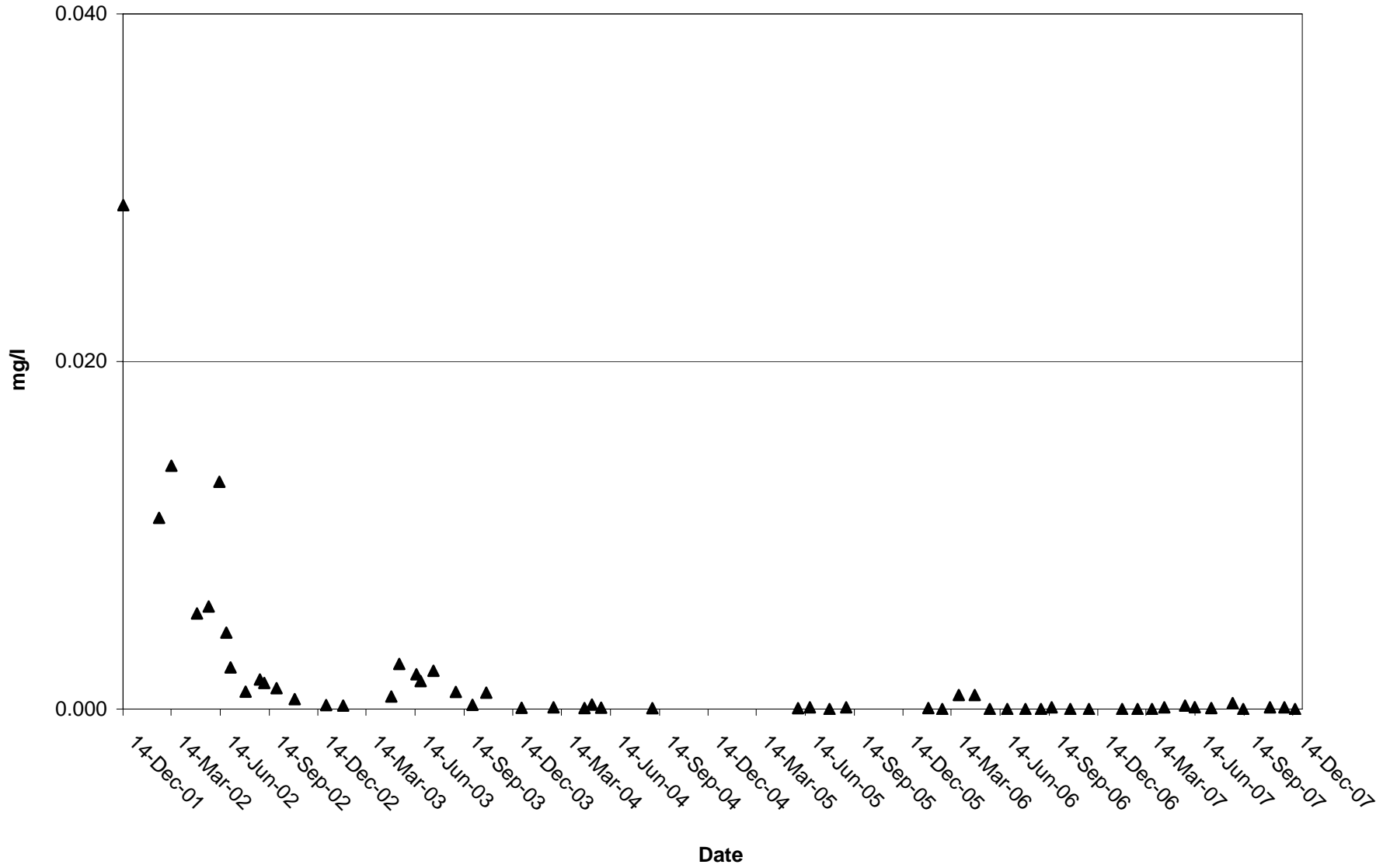






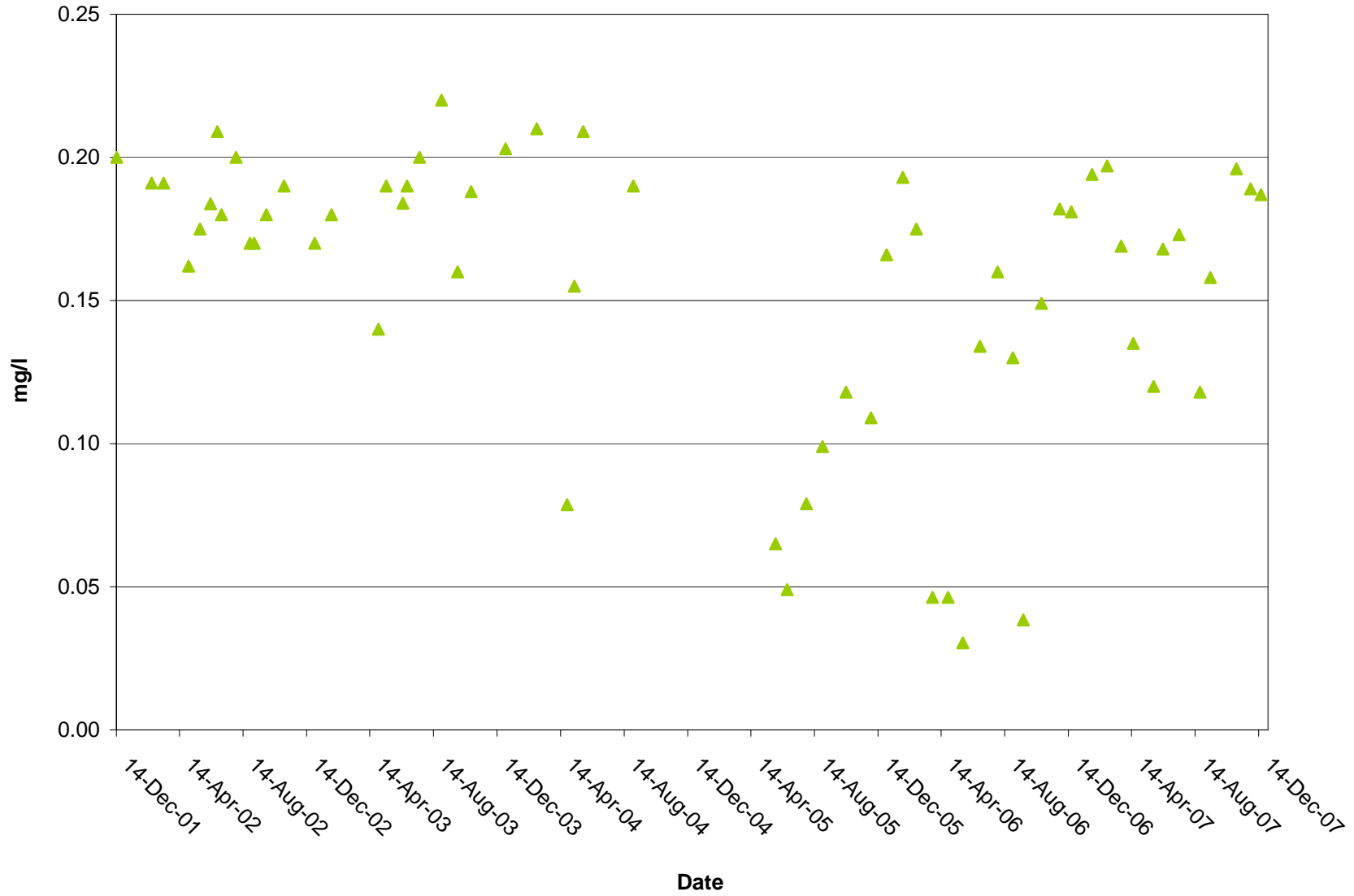


**BC 28a (Heap Effluent)  
Mercury**



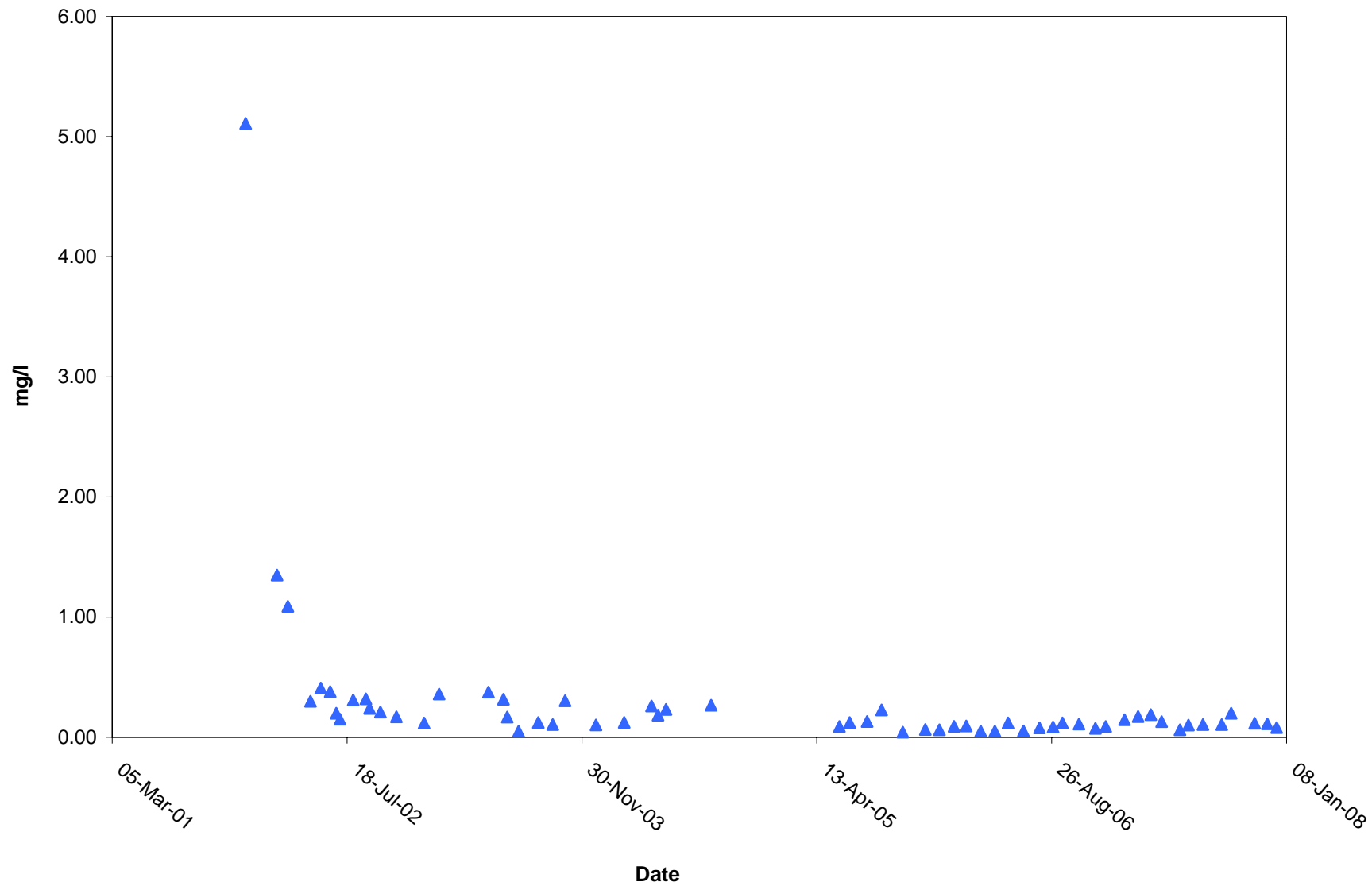
Brewery Creek Mine

BC-28a (Heap Effluent)  
Selenium



Brewery Creek Mine

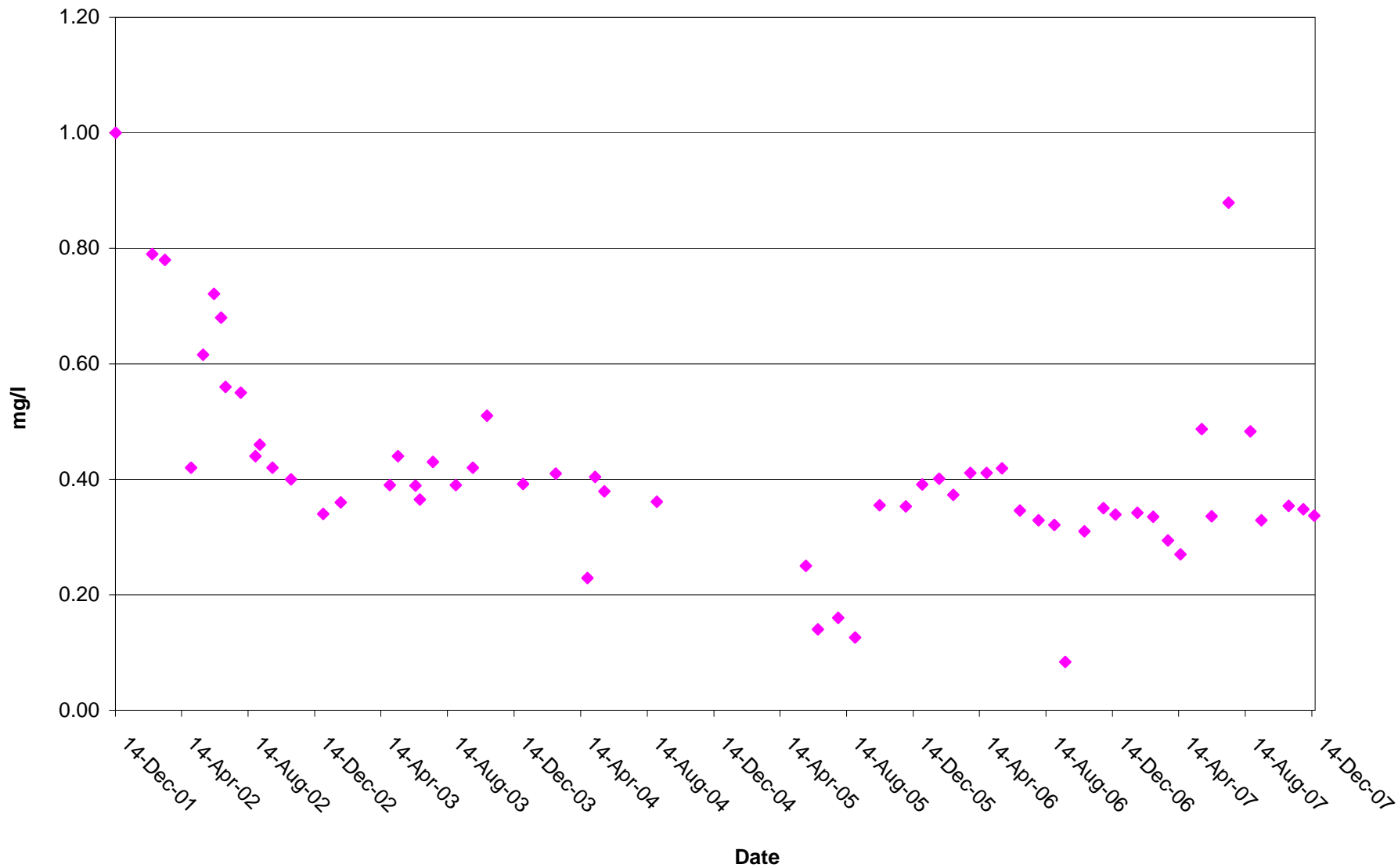
BC-28a (Heap Effluent)  
WAD Cyanide





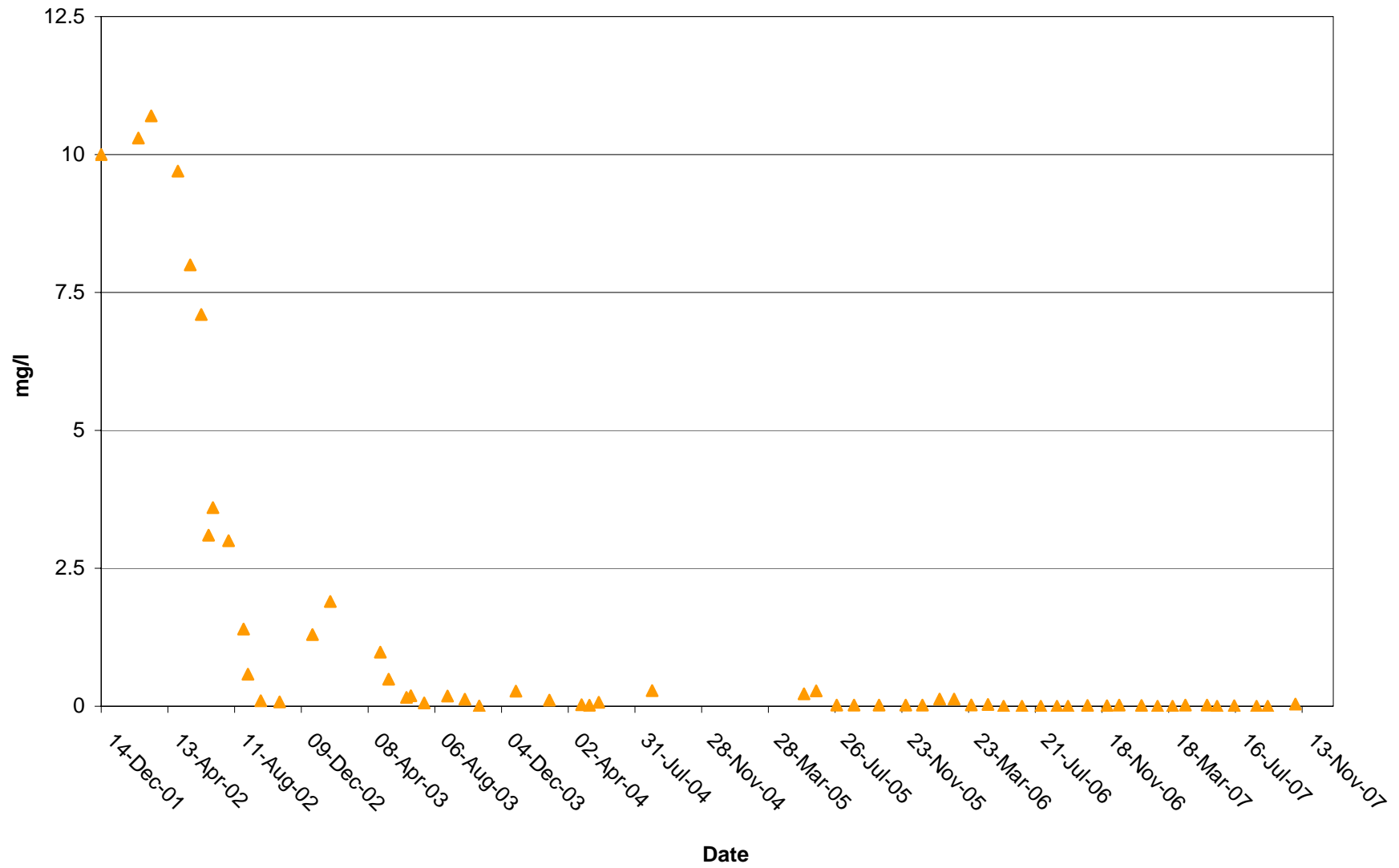
Brewery Creek Mine

BC-28a (Heap Effluent)  
Arsenic

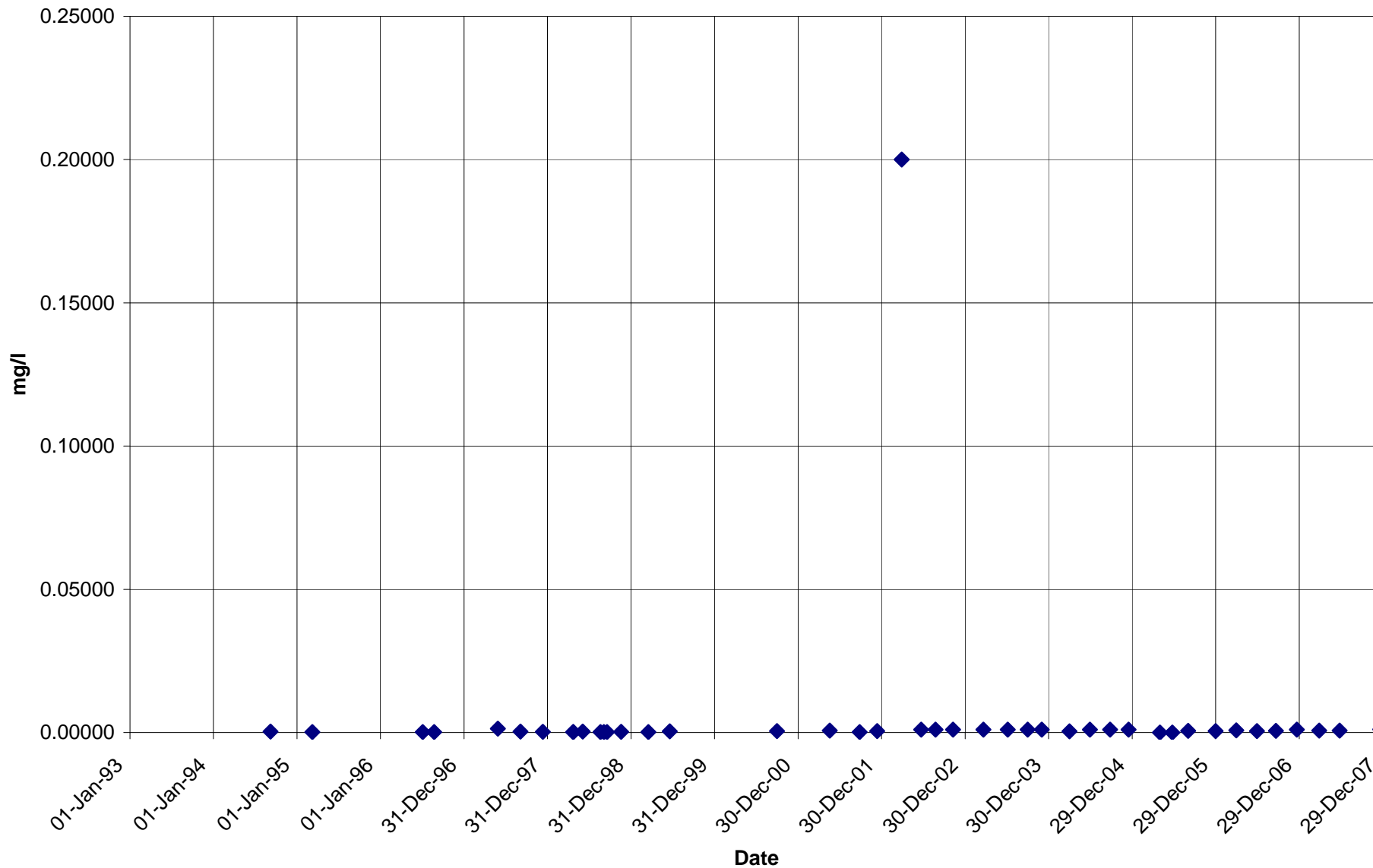


Brewery Creek Mine

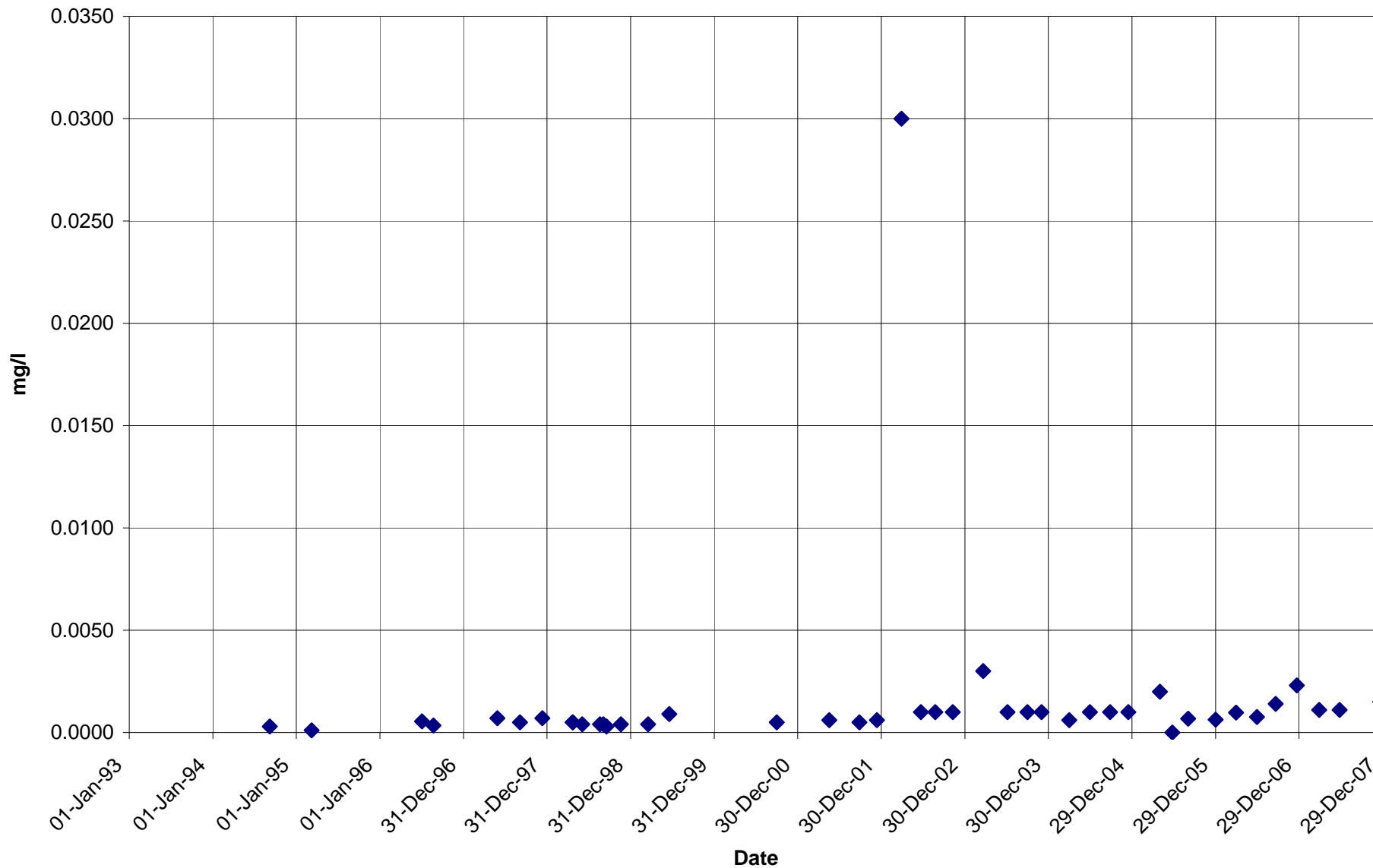
BC-28a (Heap Effluent)  
Ammonia



### BC-19 Antimony



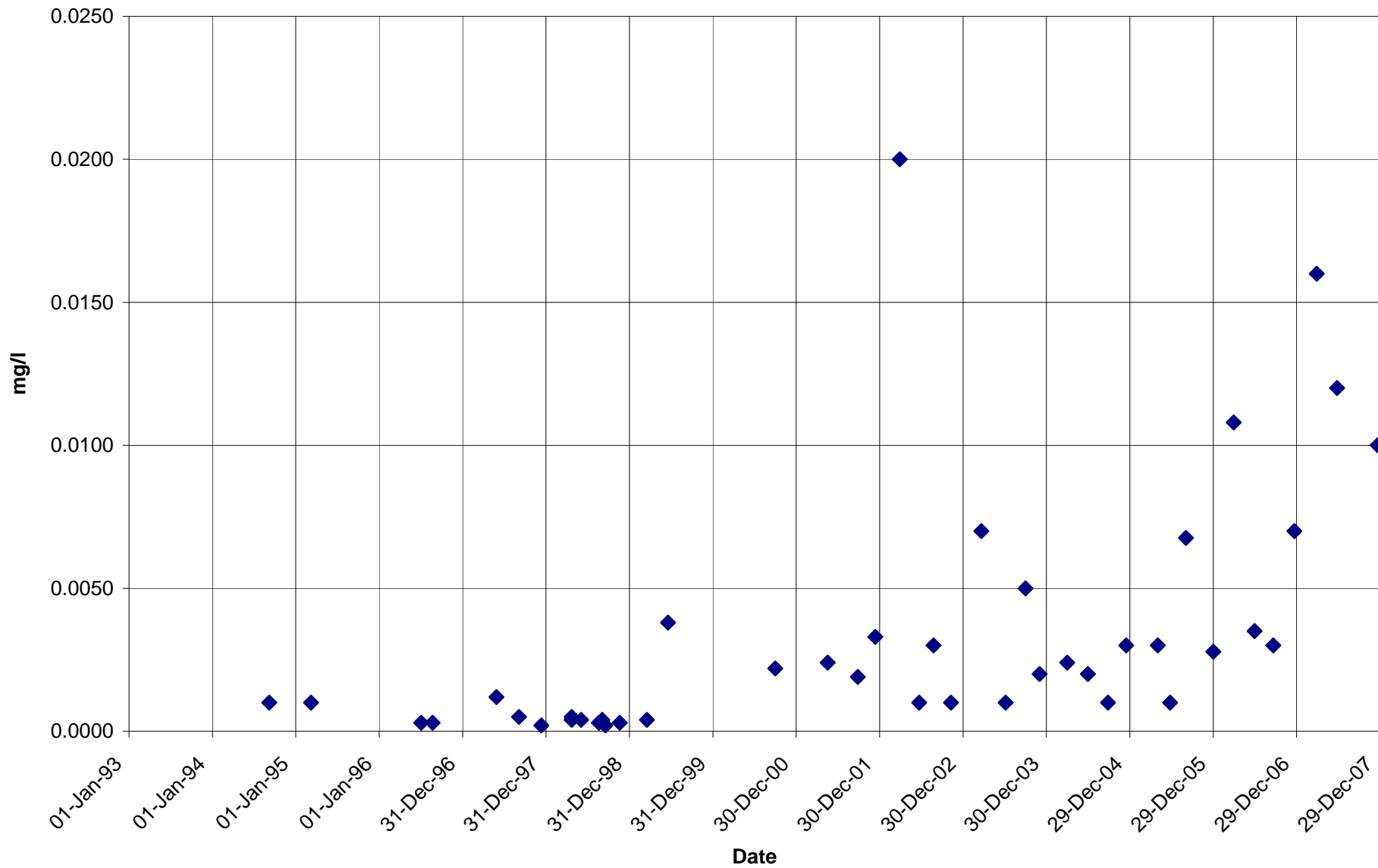
### BC-19 Arsenic



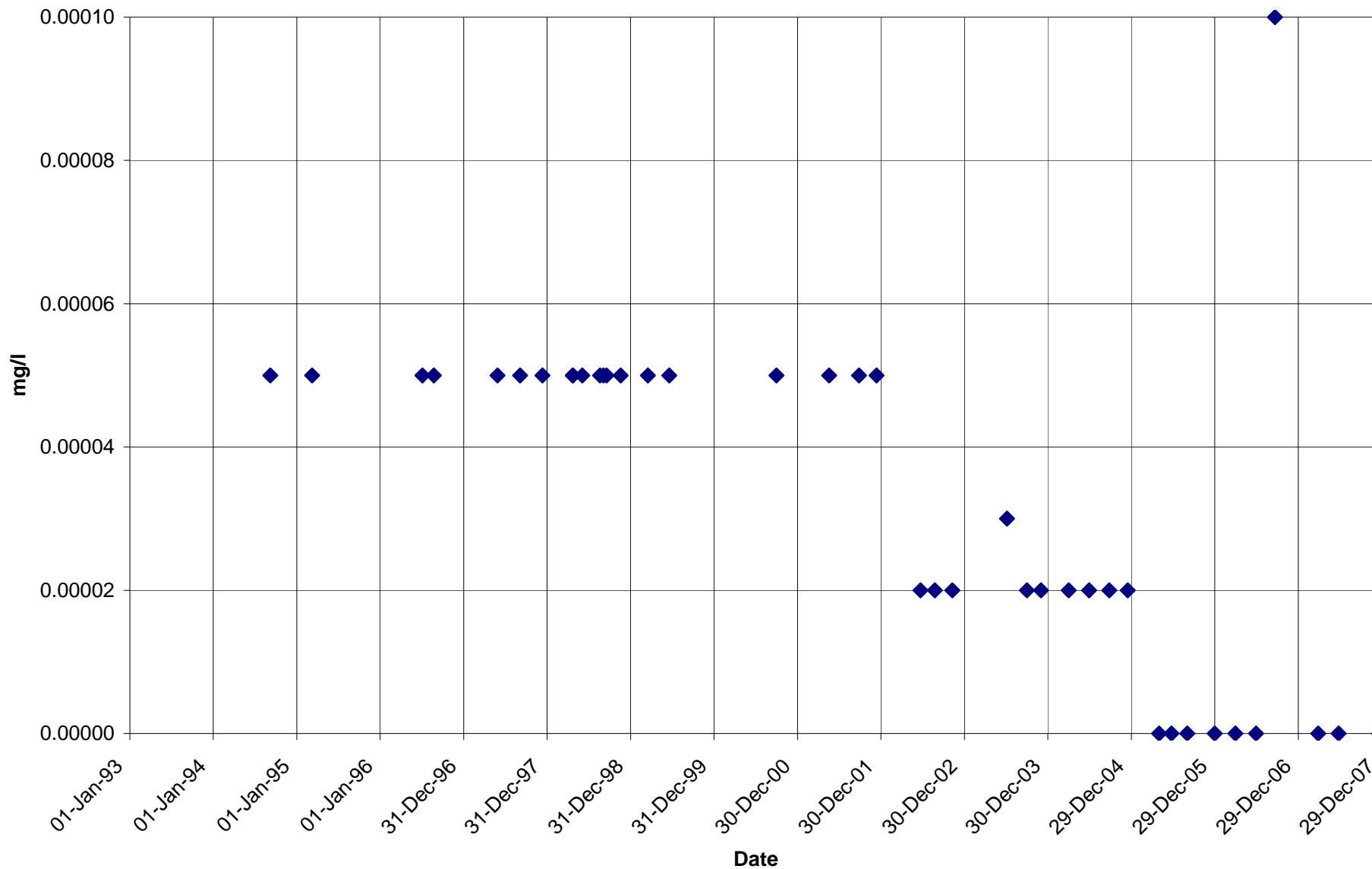




**BC-19  
Copper**

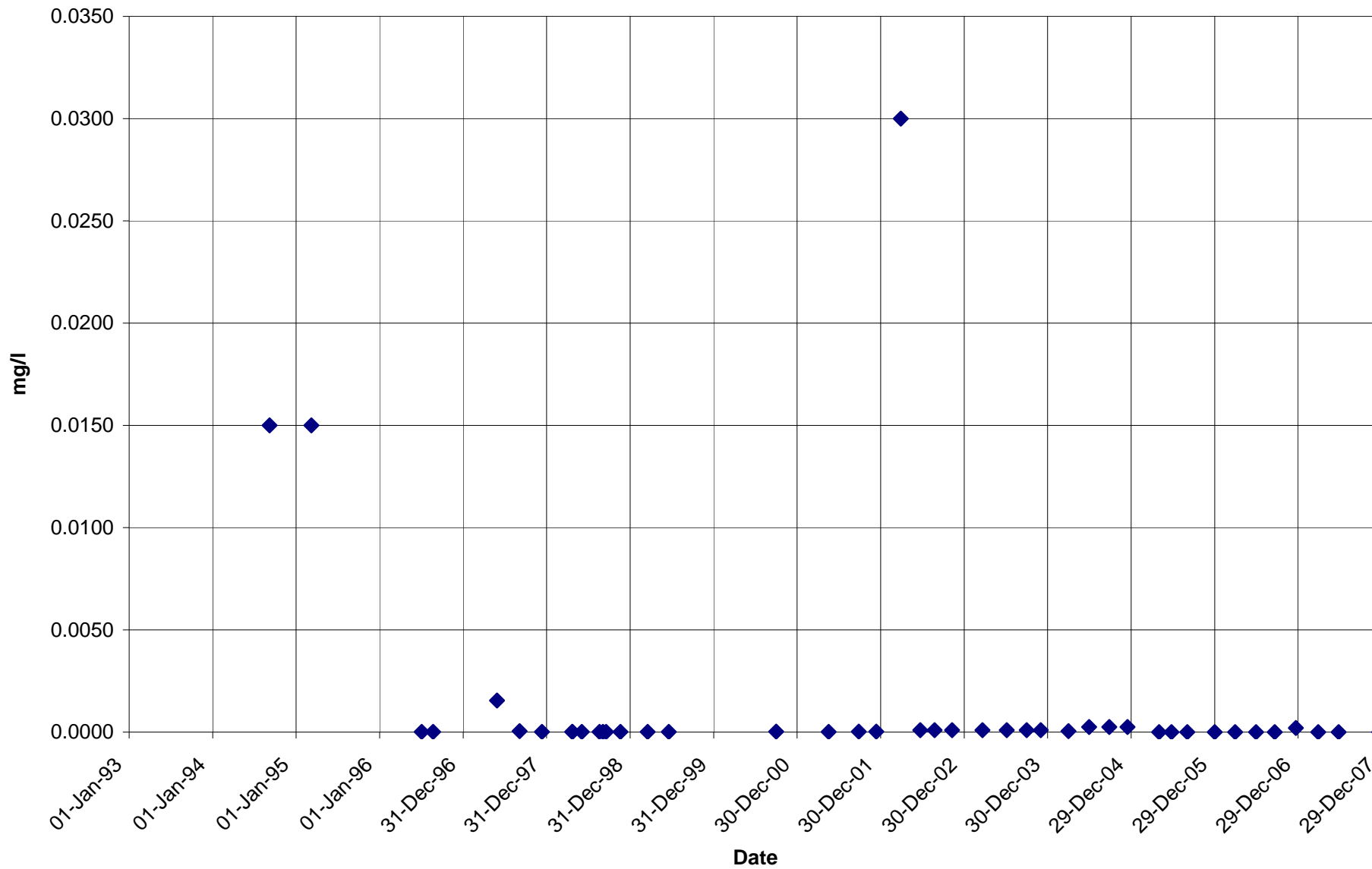


### BC-19 Mercury

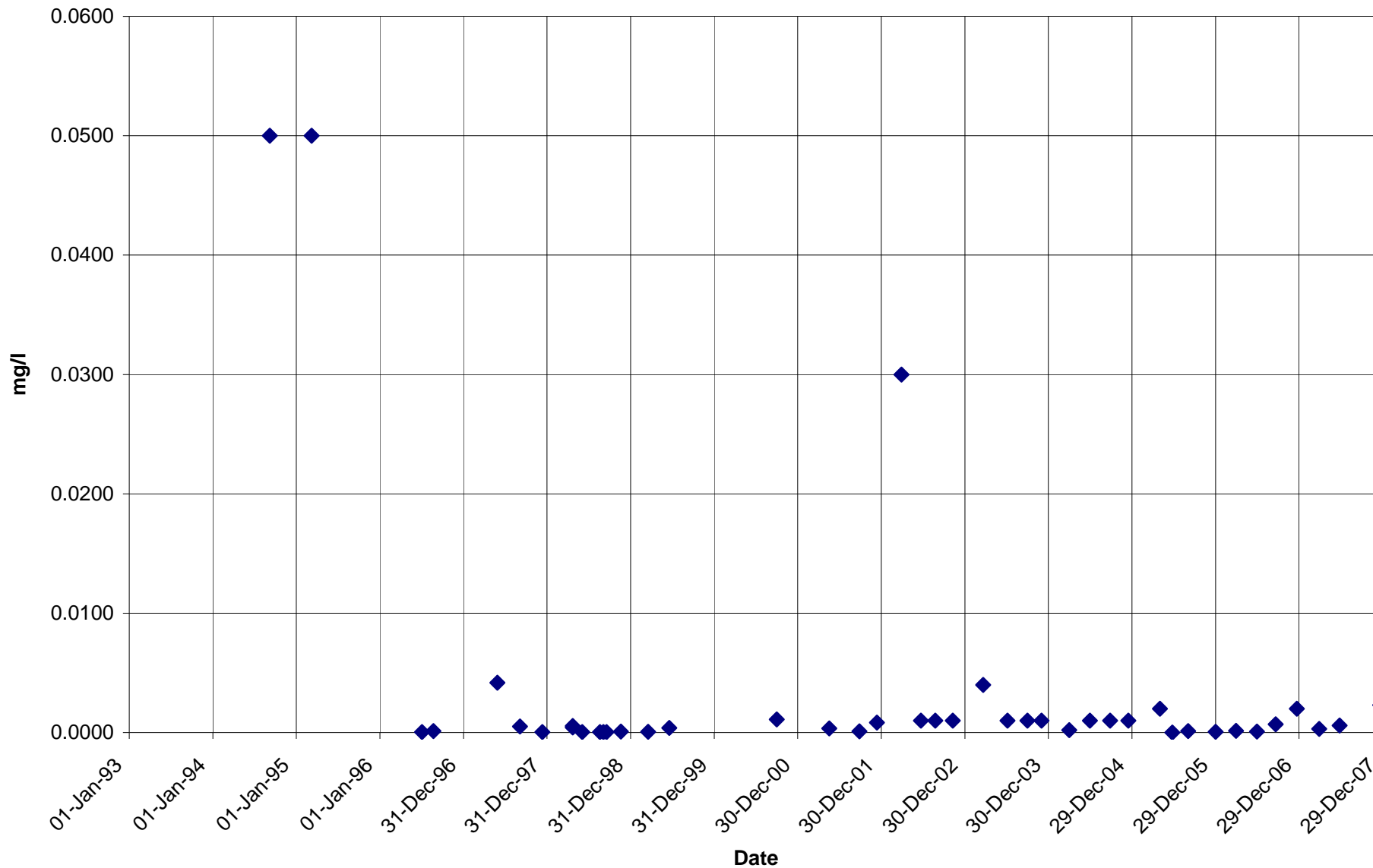




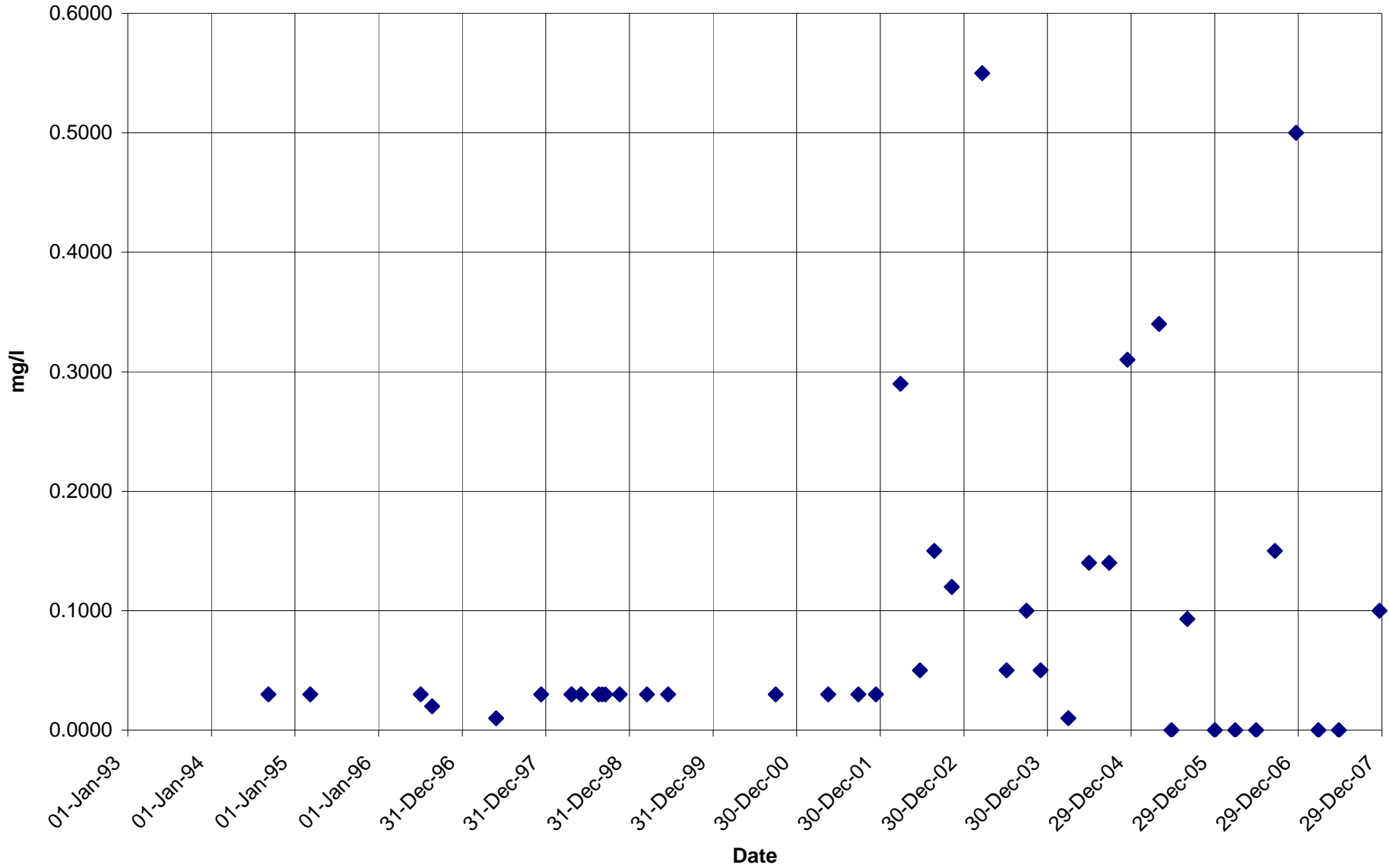
**BC-19  
Silver**



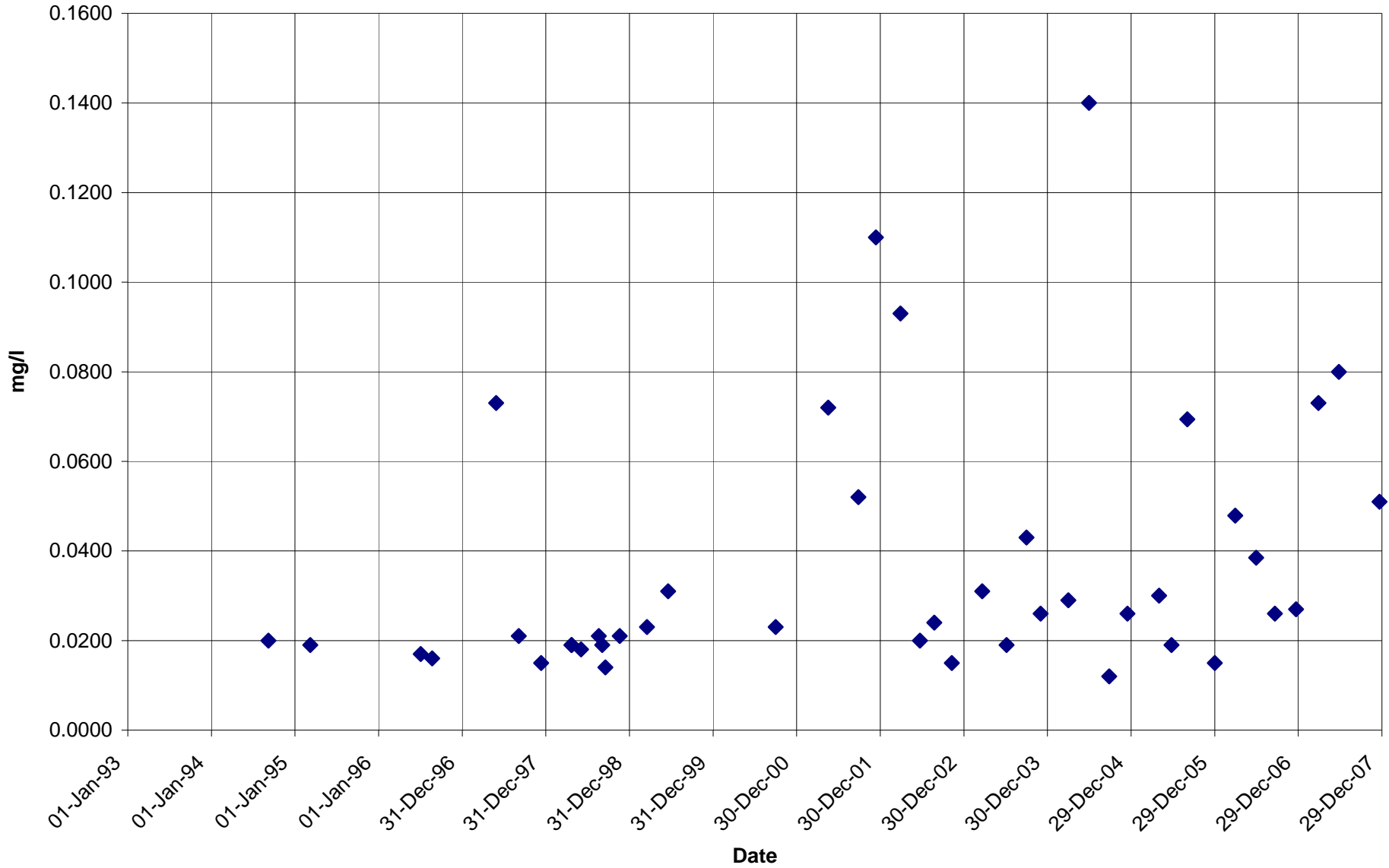
**BC-19  
Lead**



**BC-19  
Iron**

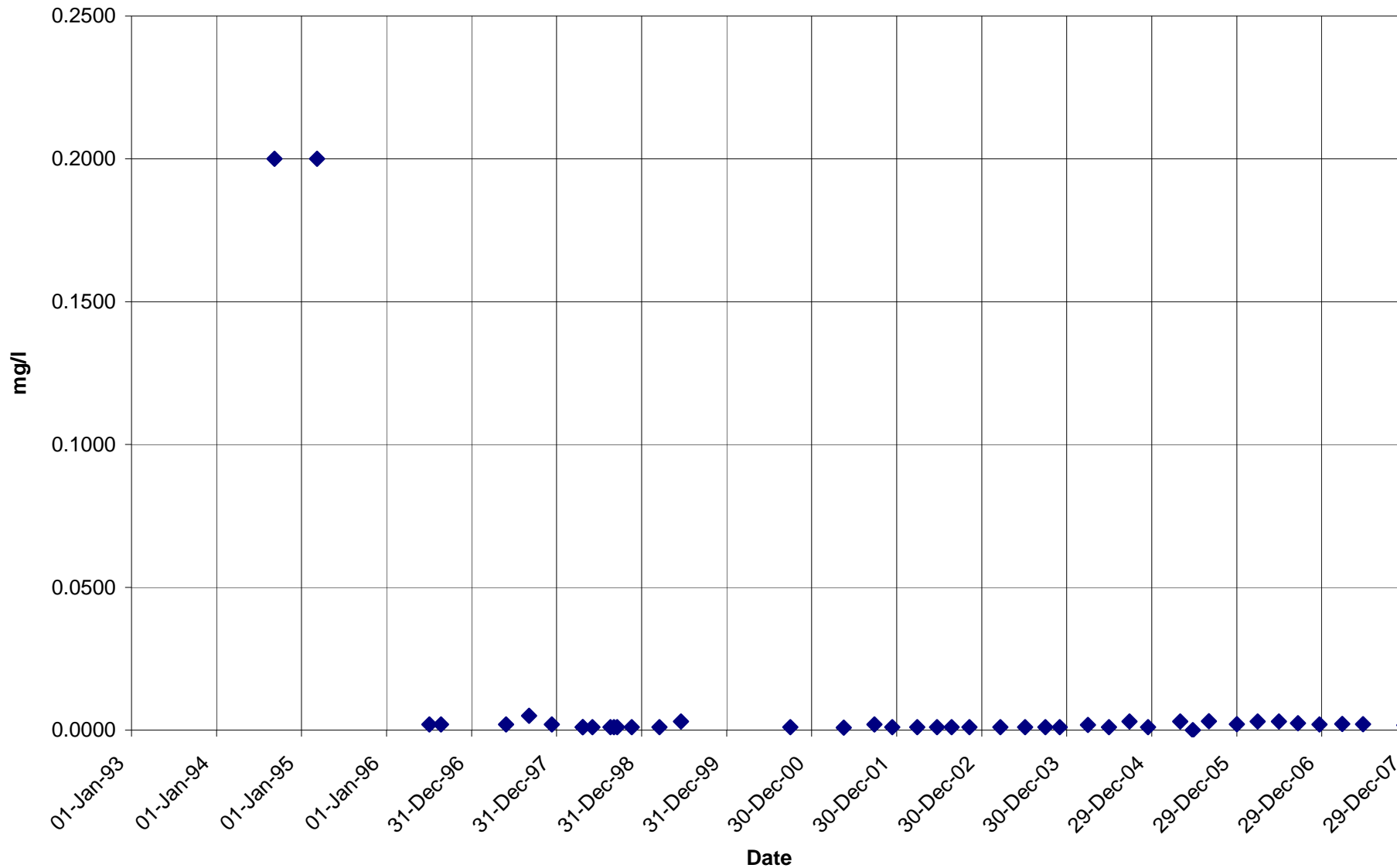


**BC-19  
Zinc**



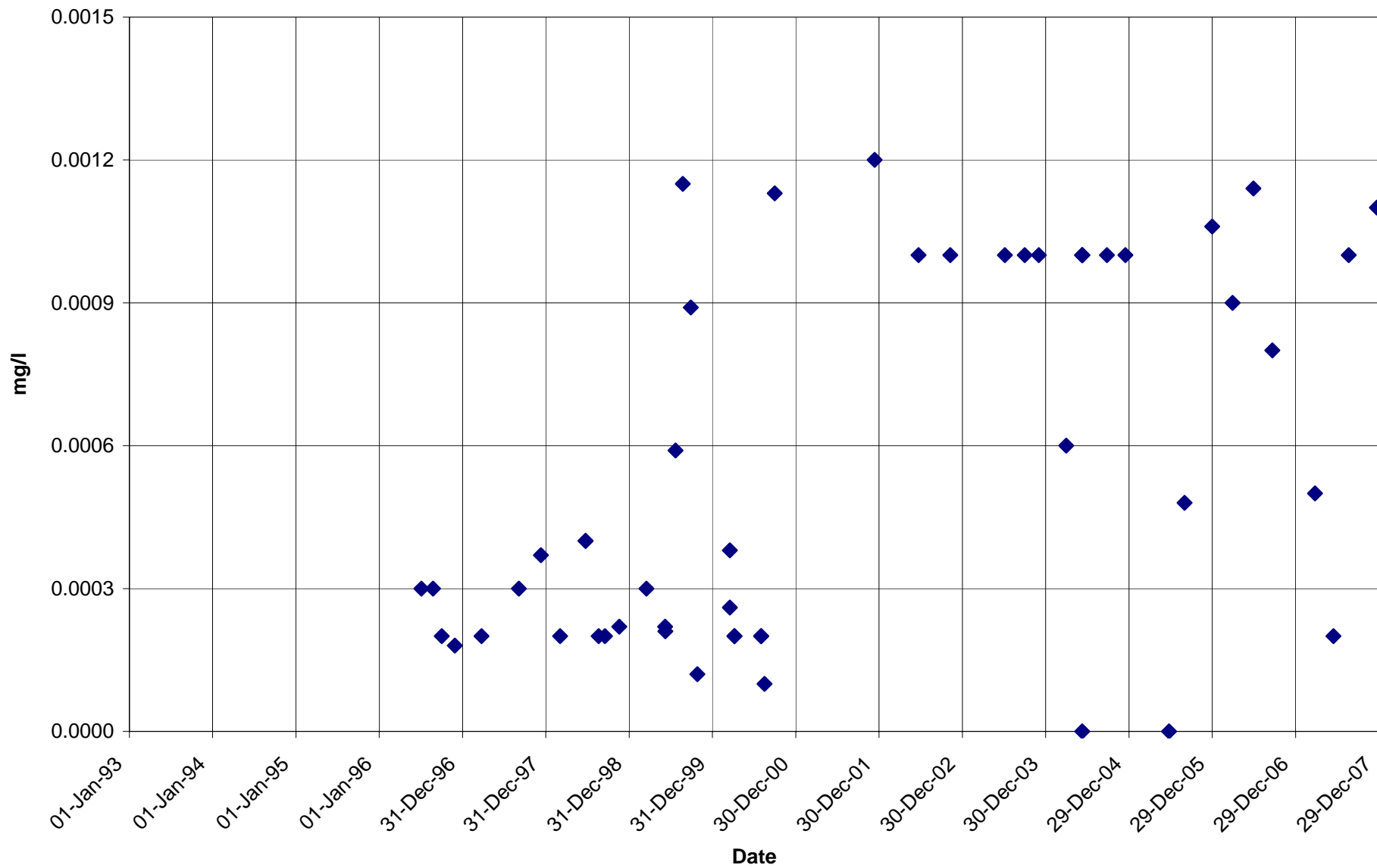


### BC-19 Selenium



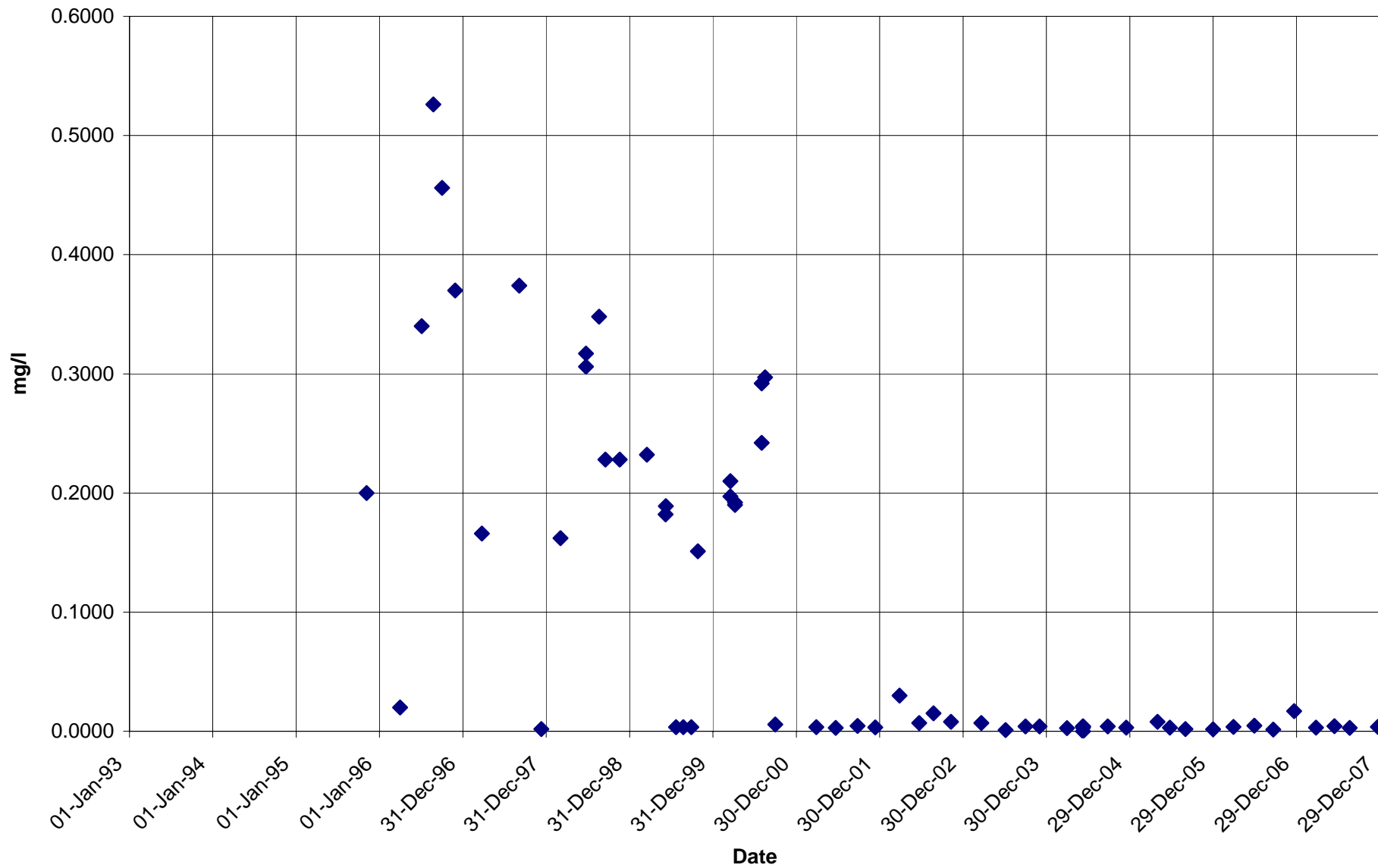
Brewery Creek Mine

BC-21  
Antimony



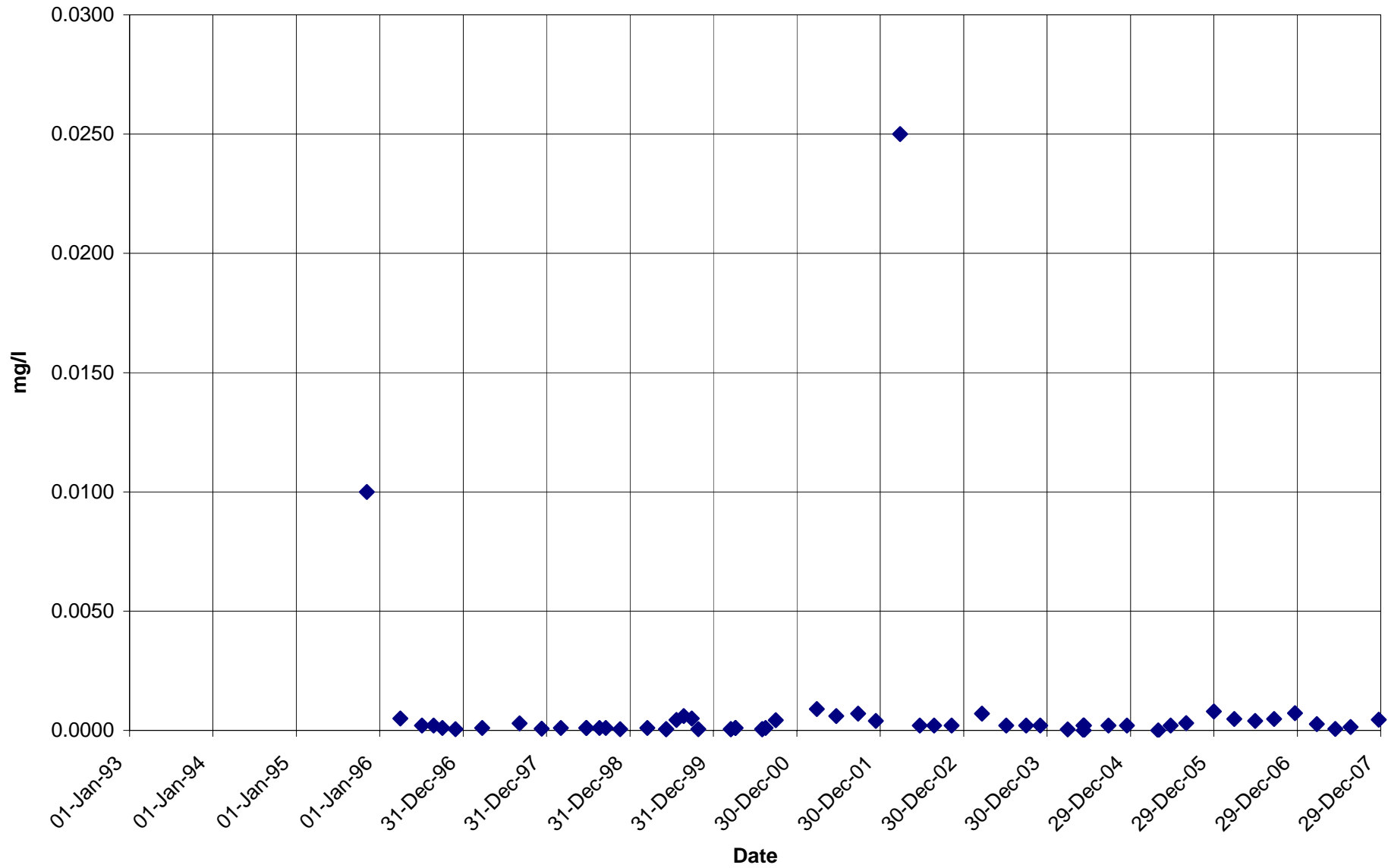
Brewery Creek Mine

BC-21  
Arsenic



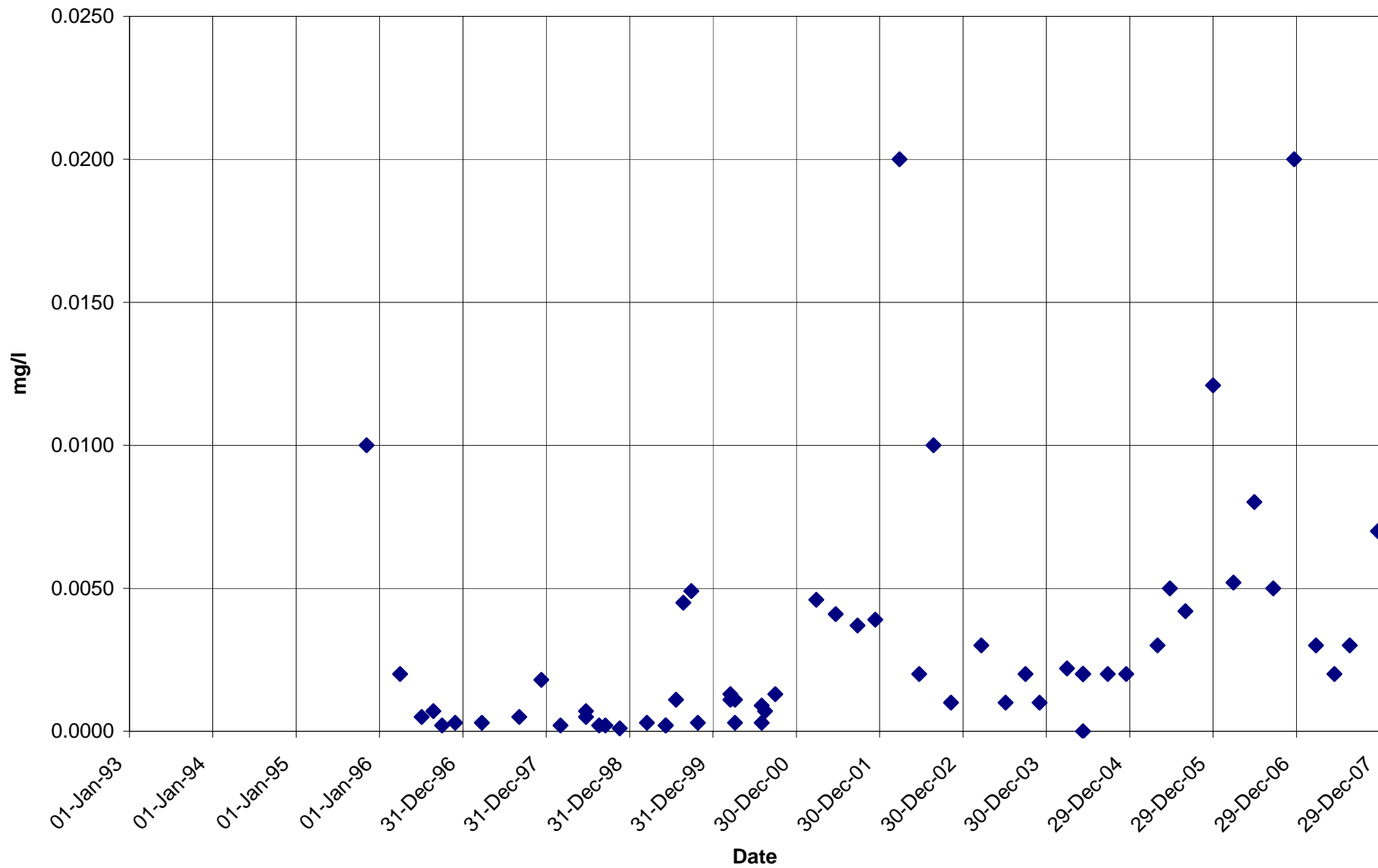
Brewery Creek Mine

BC-21  
Cadmium



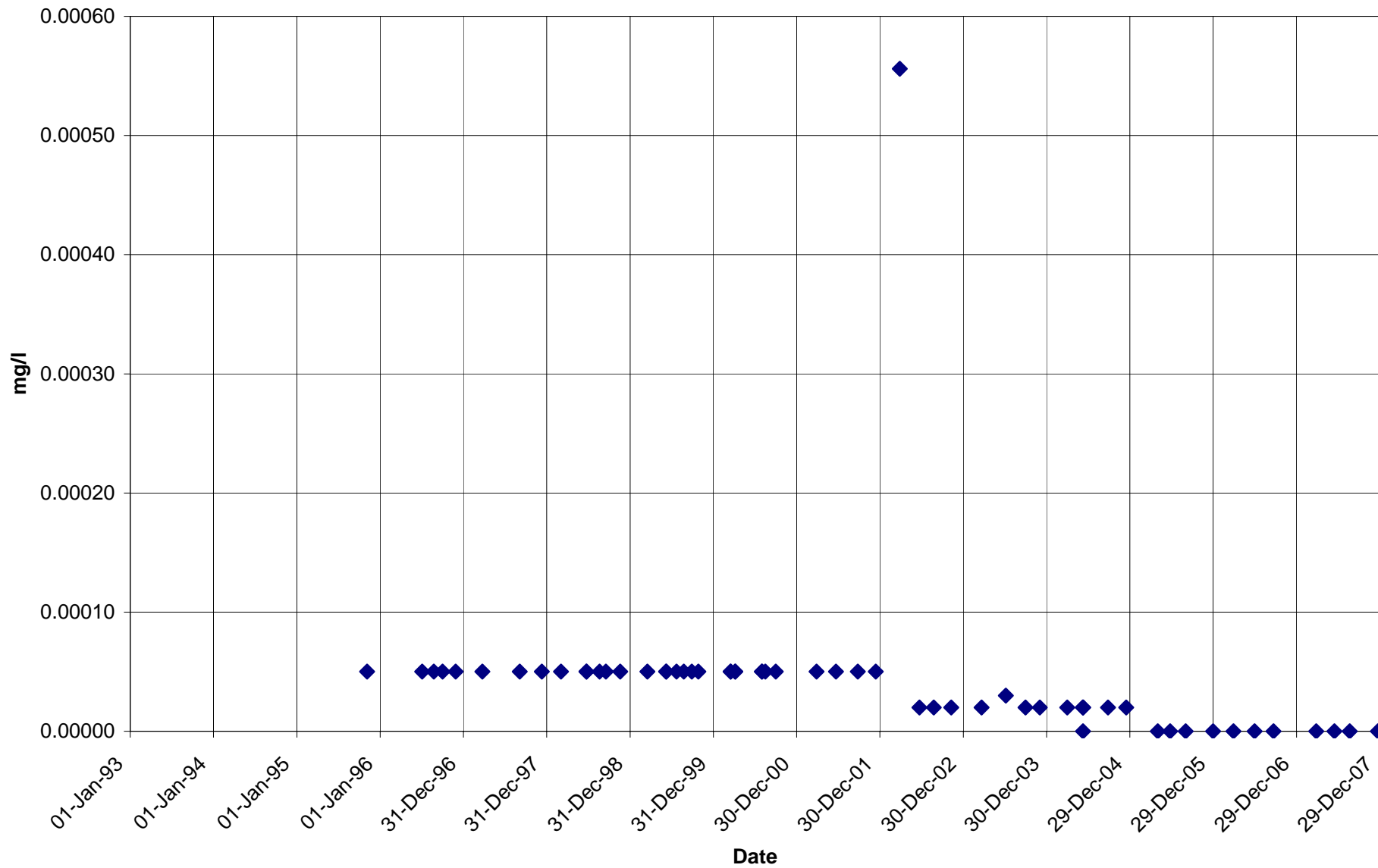
Brewery Creek Mine

BC-21  
Copper



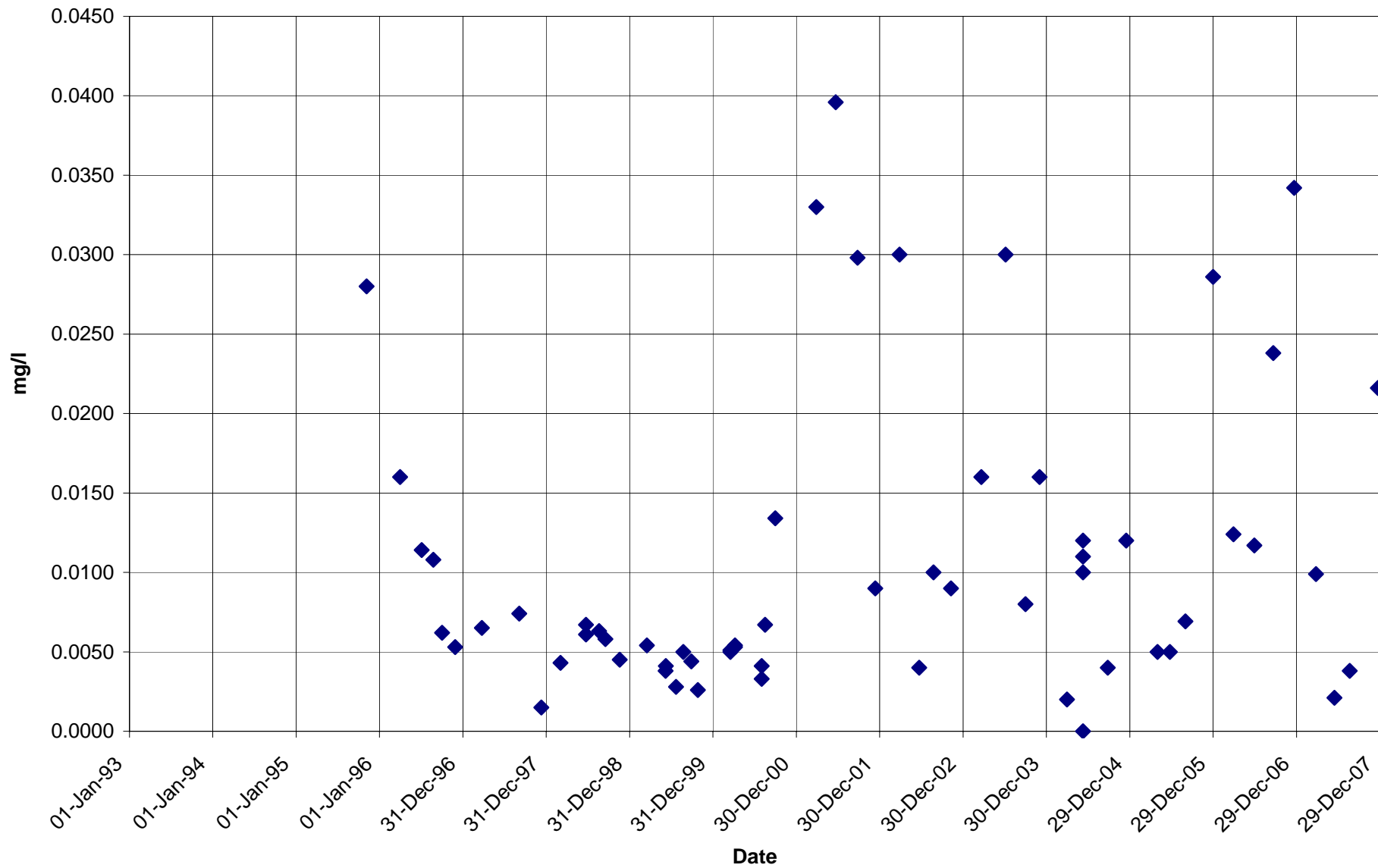
Brewery Creek Mine

BC-21  
Mercury



Brewery Creek Mine

BC-21  
Nickel

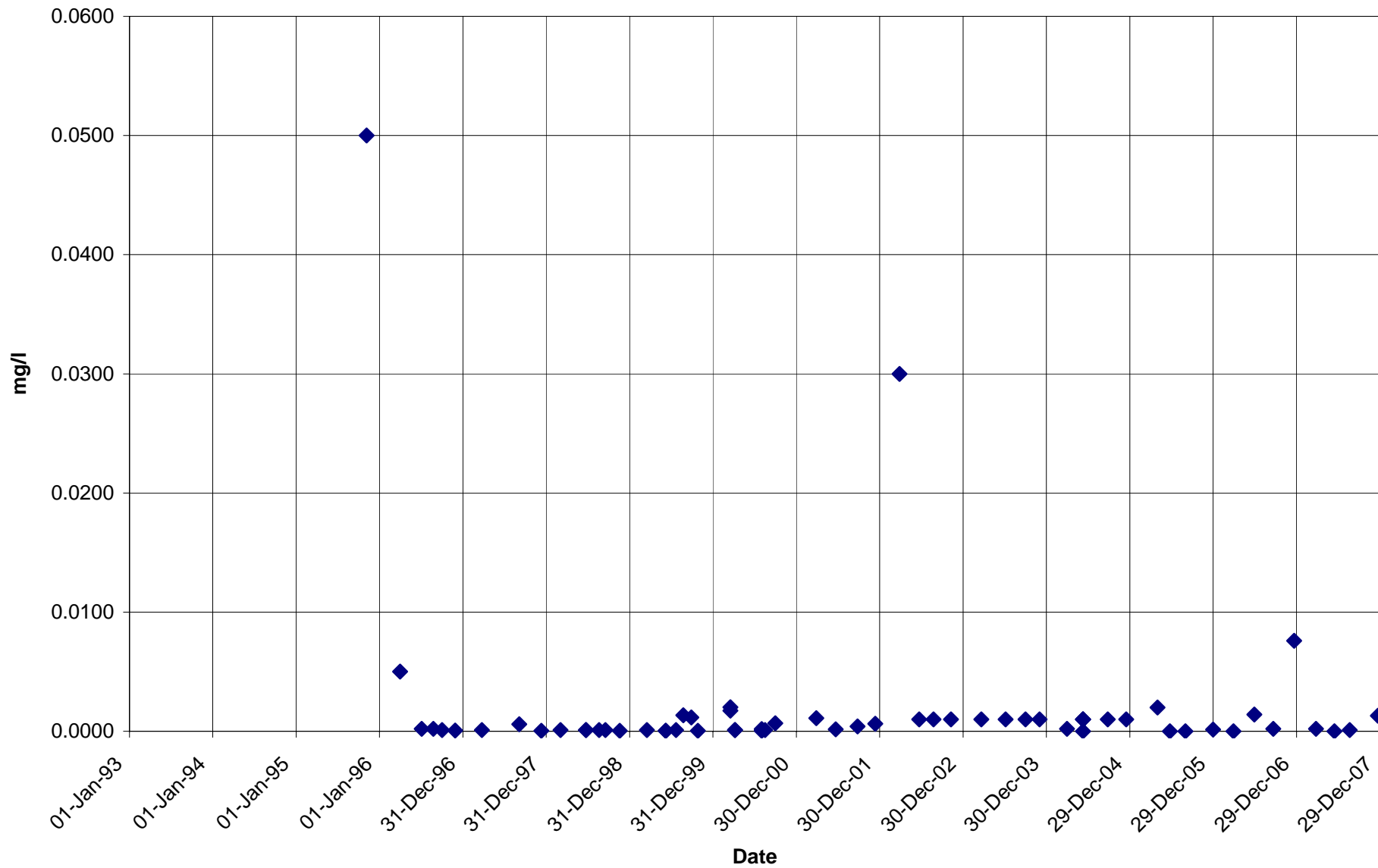






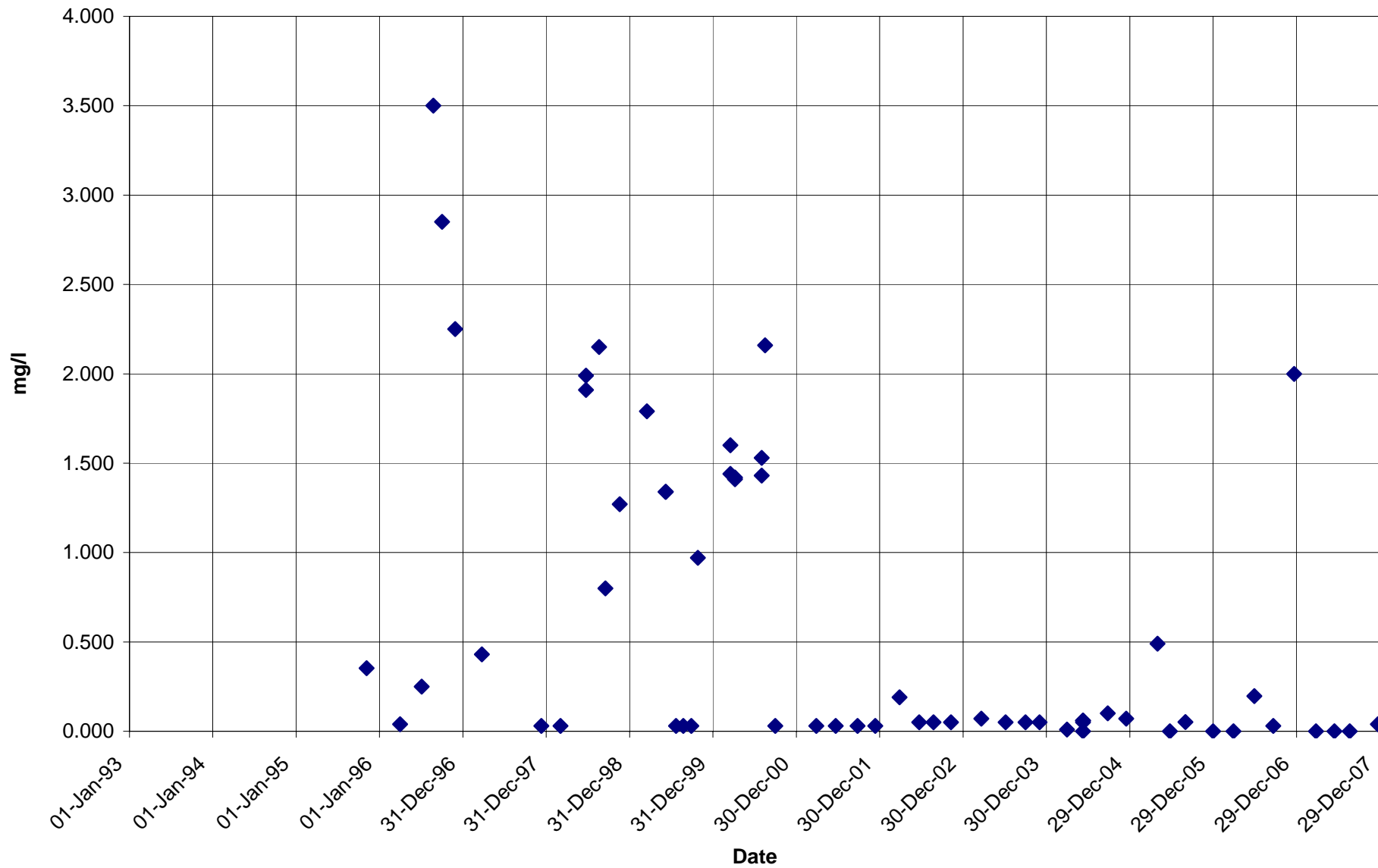
Brewery Creek Mine

BC-21  
Lead



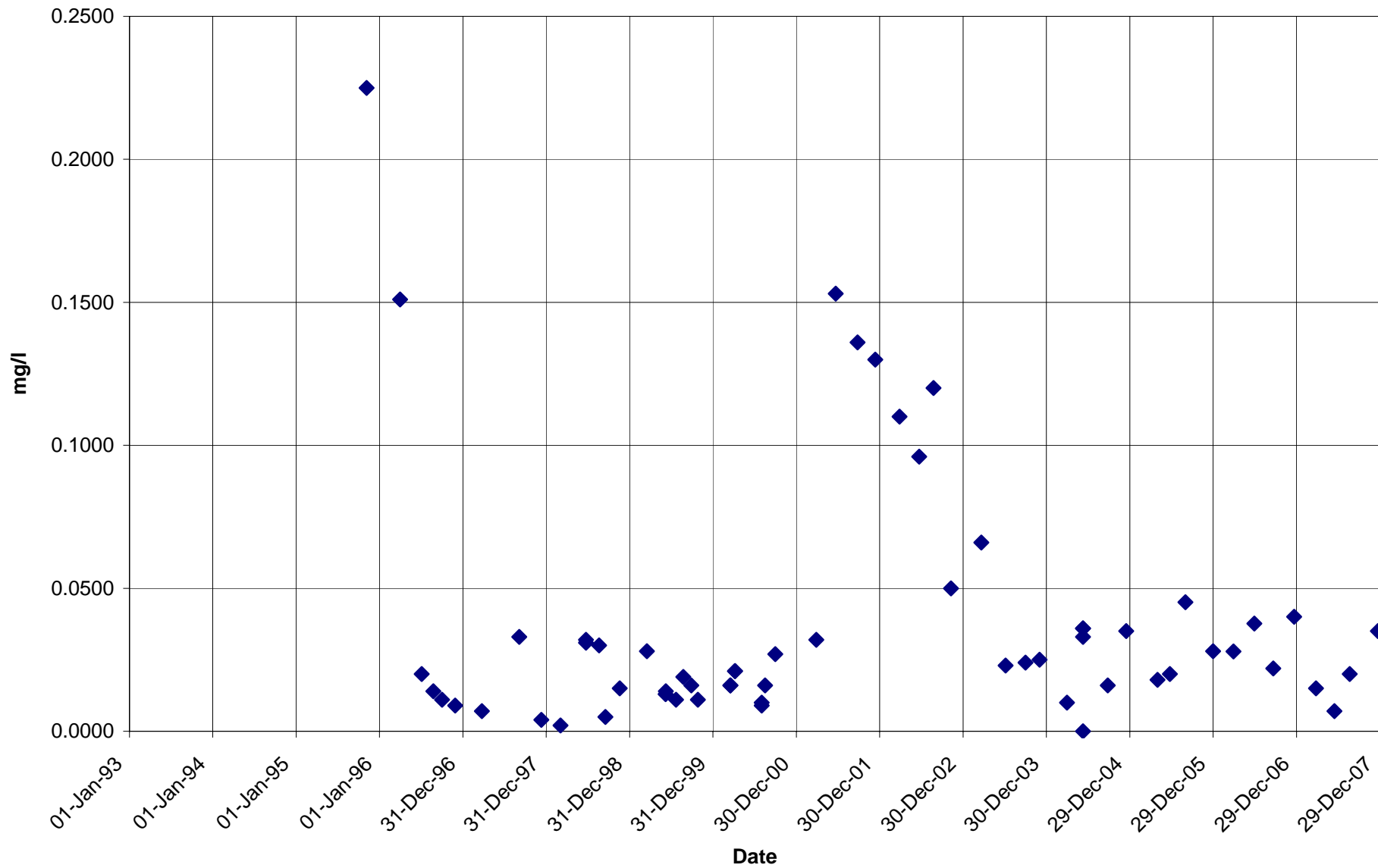
Brewery Creek Mine

BC-21  
Iron



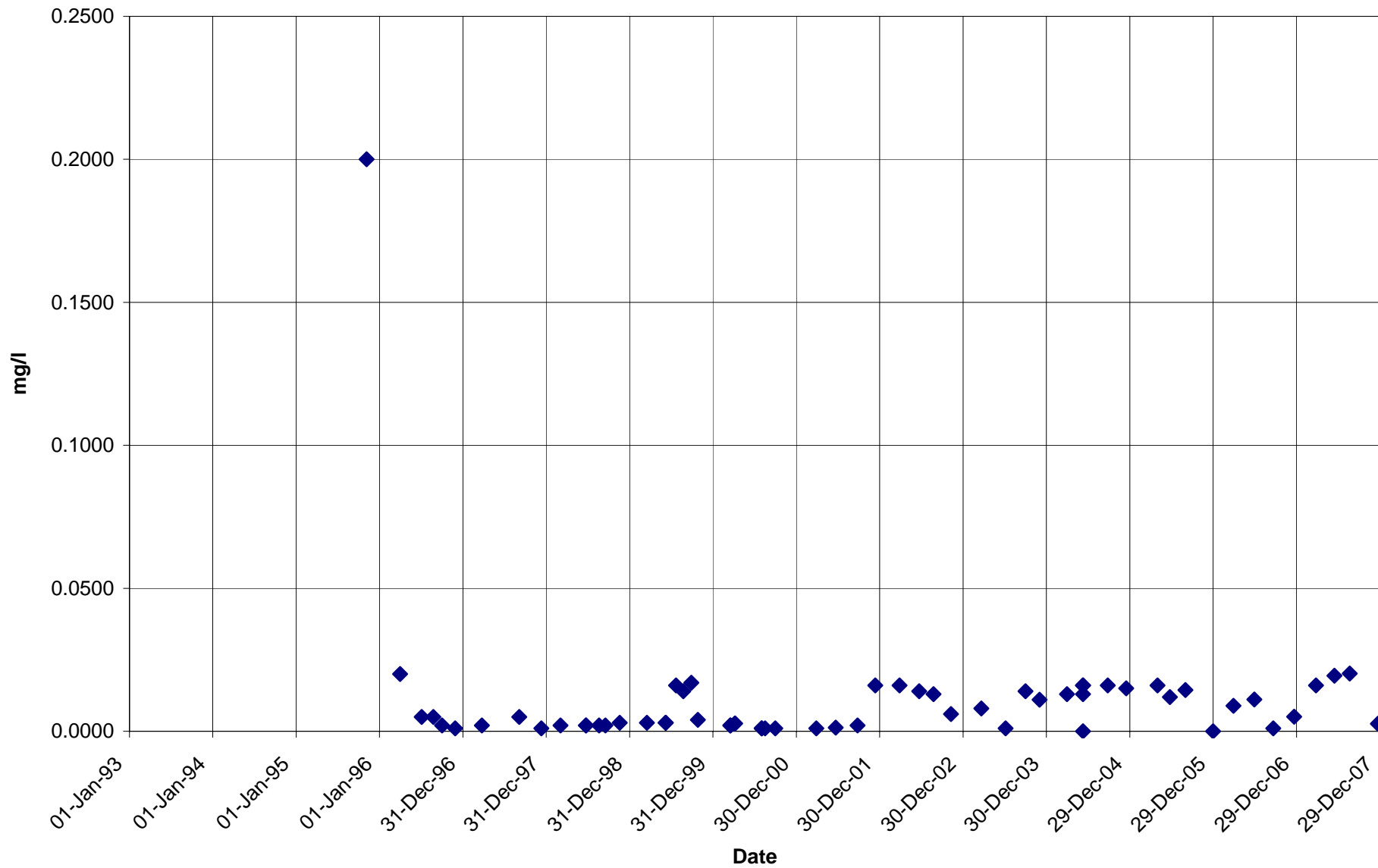
Brewery Creek Mine

BC-21  
Zinc



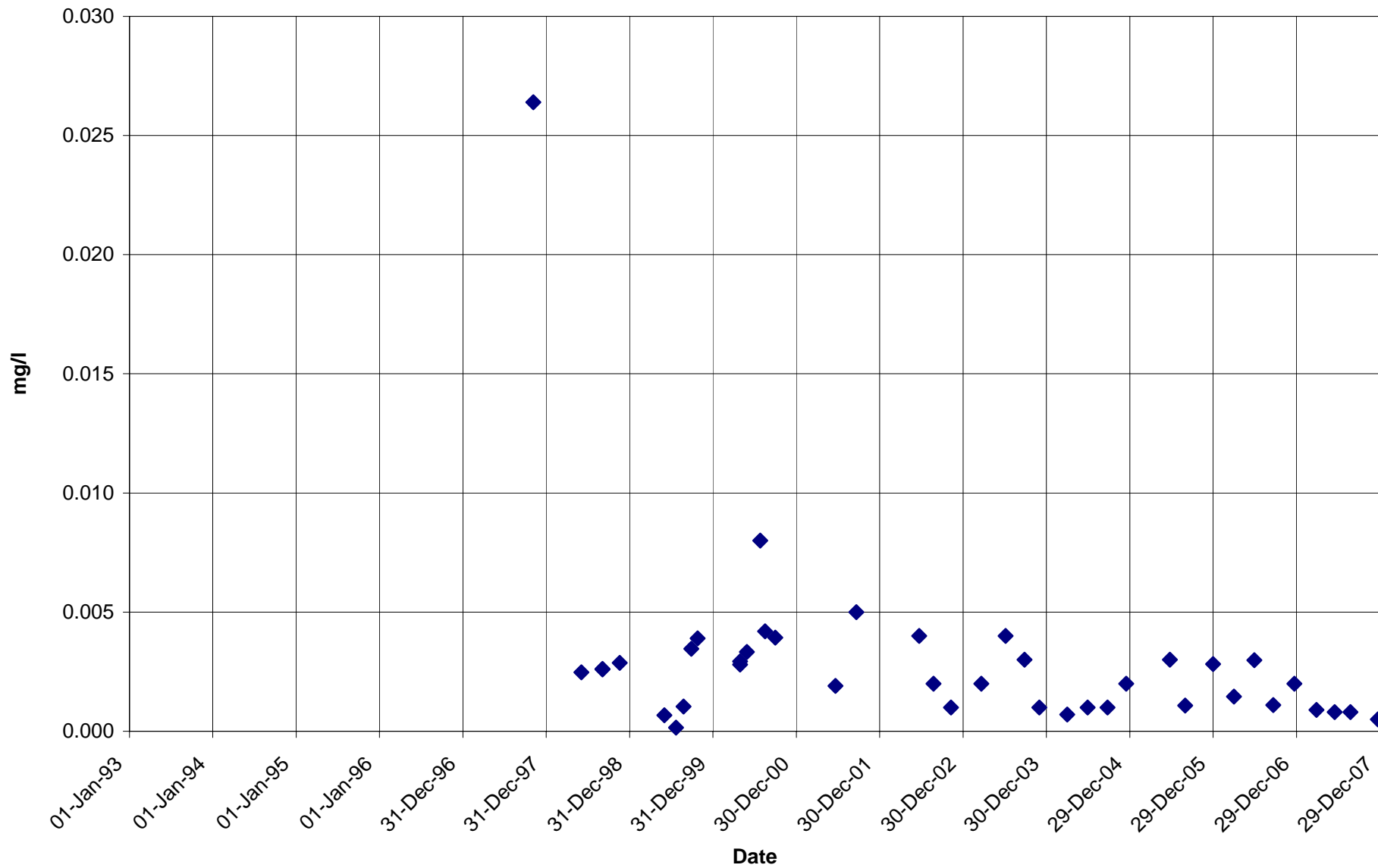
Brewery Creek Mine

BC-21  
Selenium



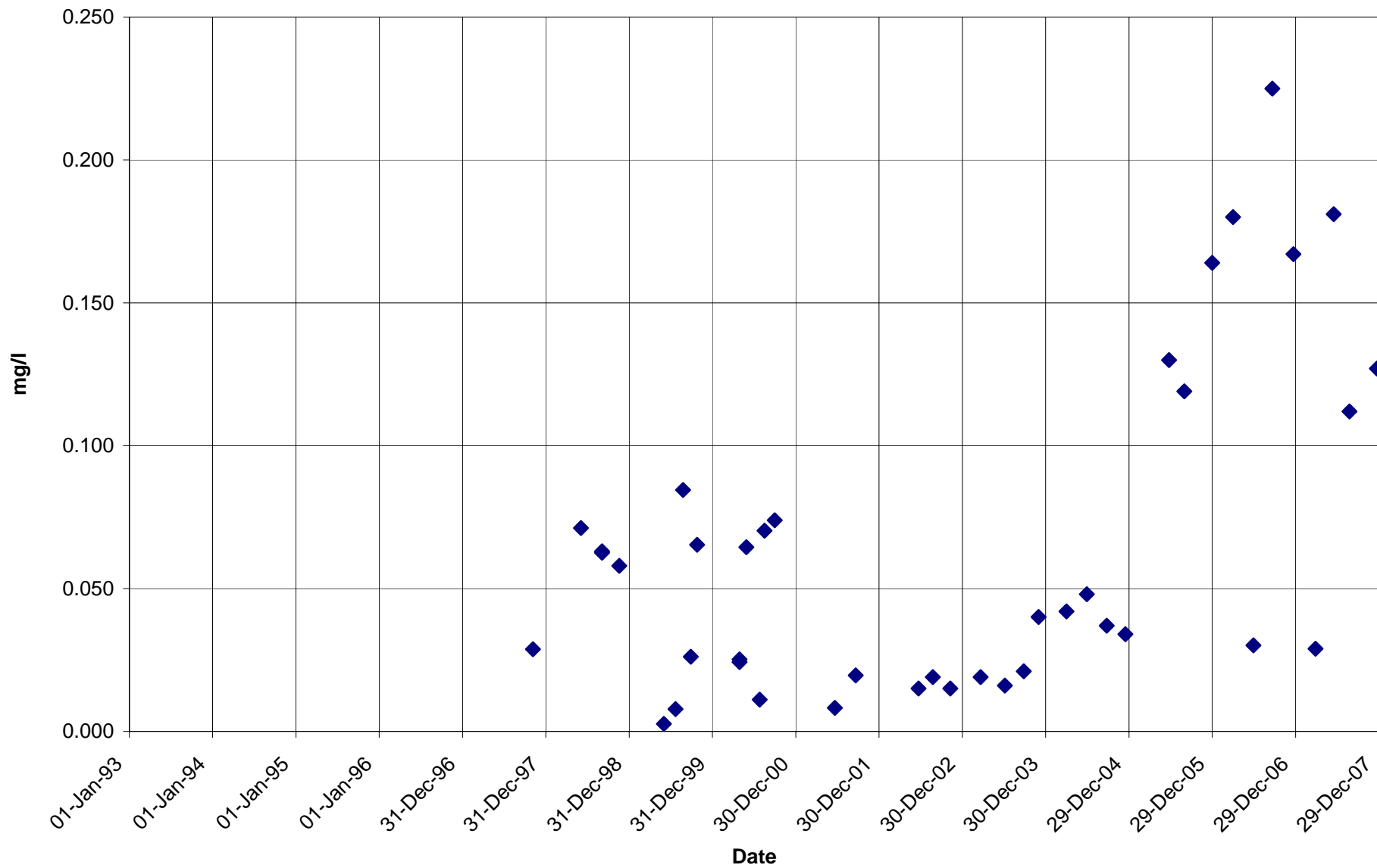
Brewery Creek Mine

BC-27  
Antimony



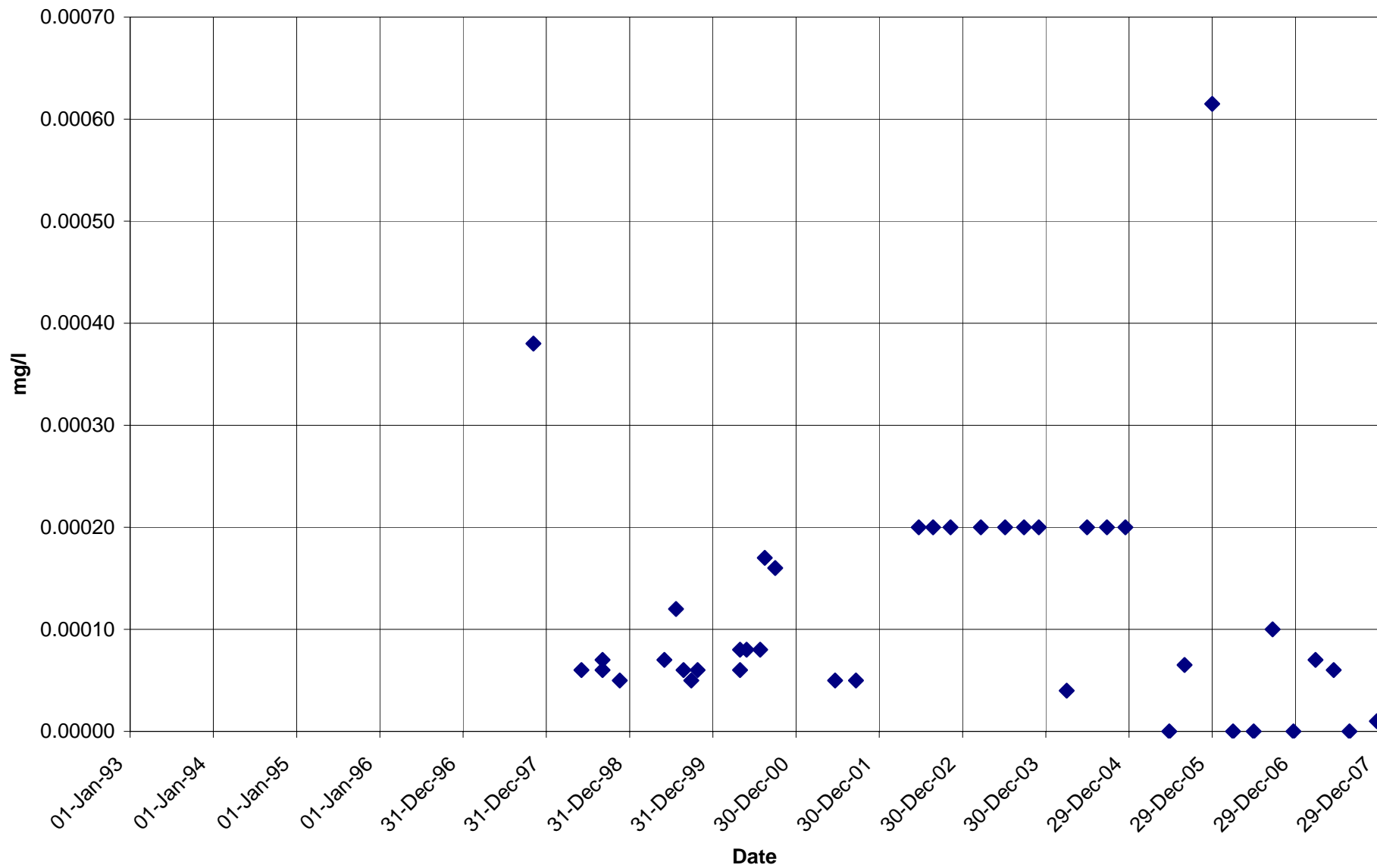
Brewery Creek Mine

BC-27  
Arsenic



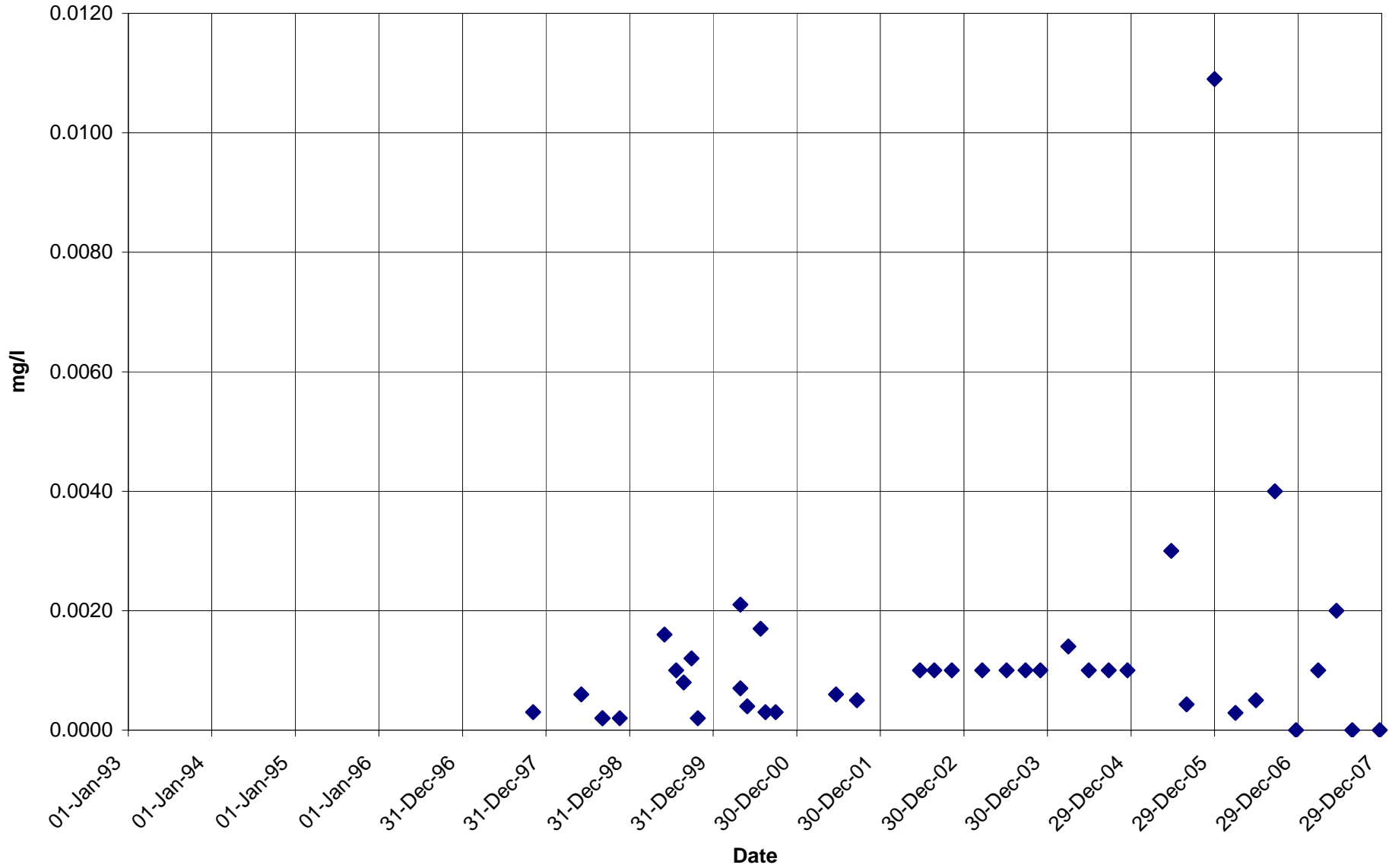
Brewery Creek Mine

BC-27  
Cadmium



Brewery Creek Mine

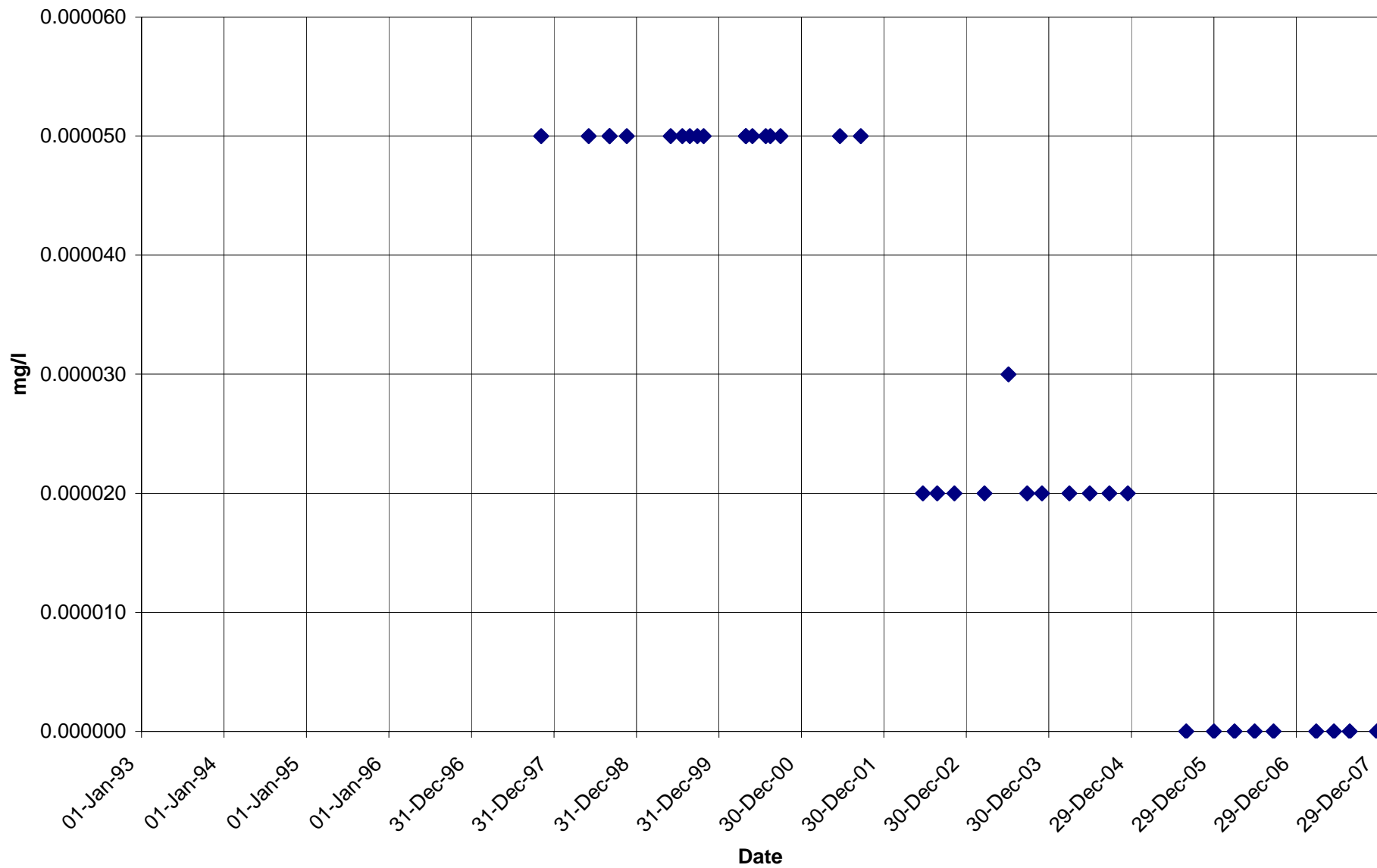
BC-27  
Copper





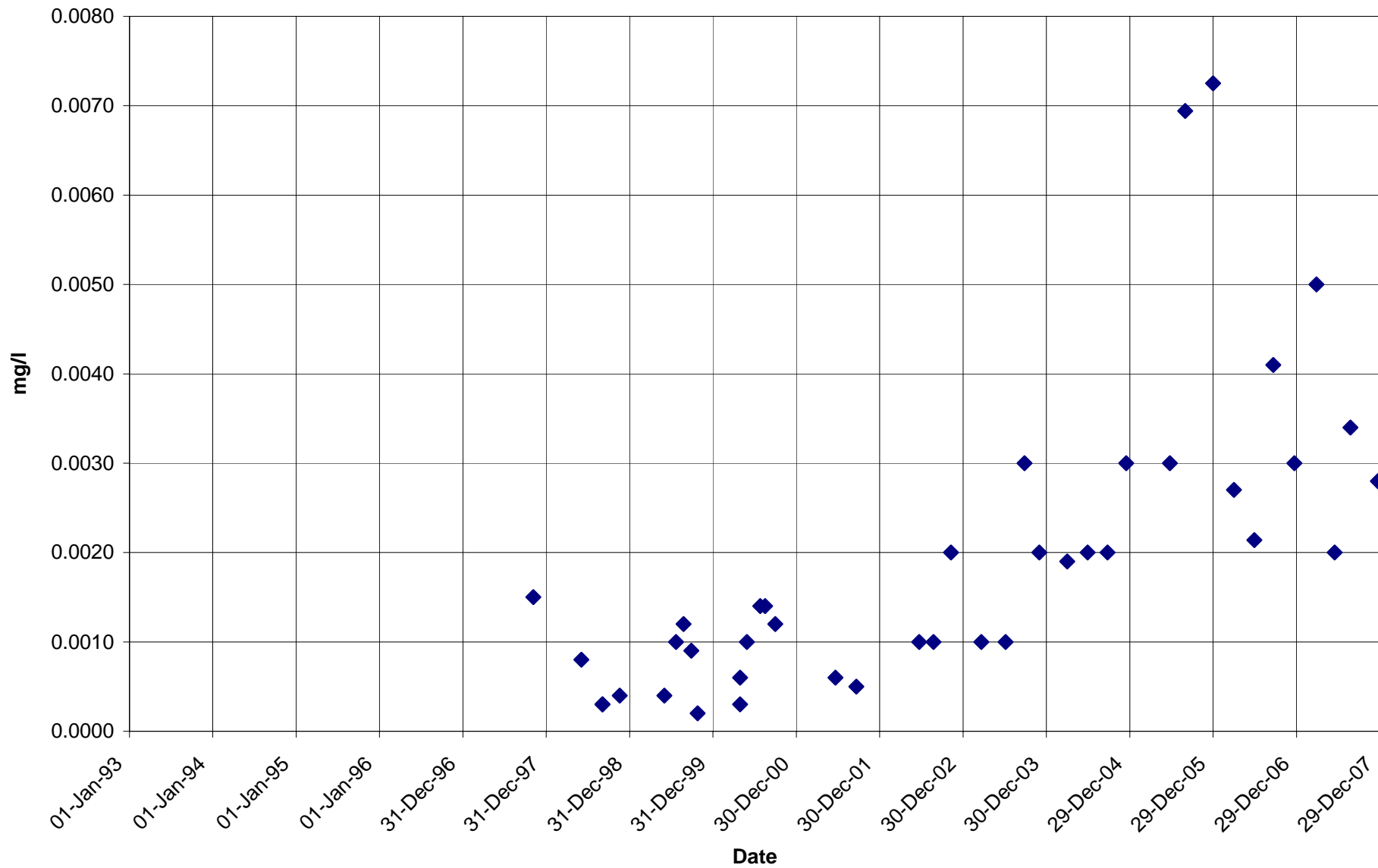
Brewery Creek Mine

BC-27  
Mercury



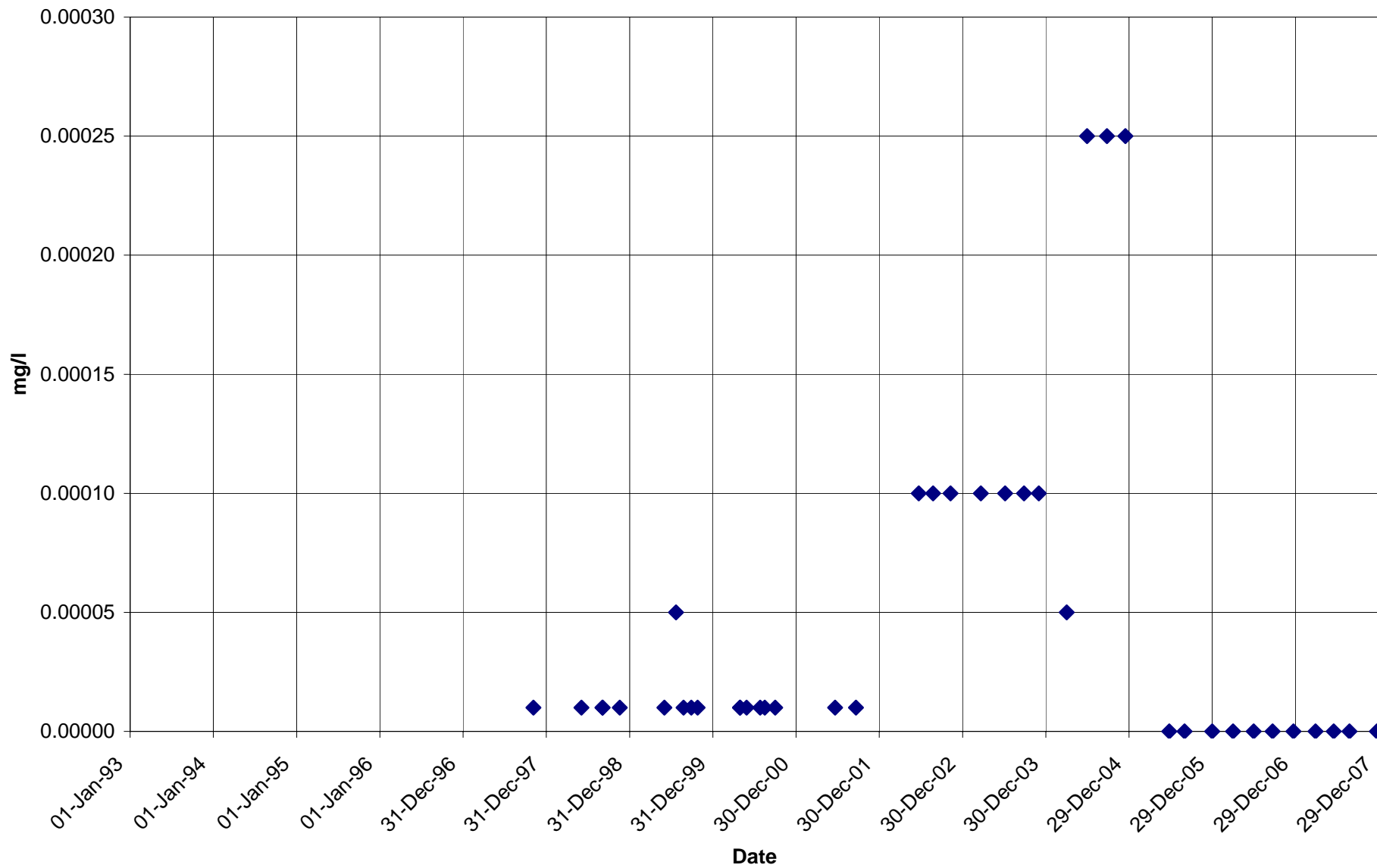
Brewery Creek Mine

BC-27  
Nickel



Brewery Creek Mine

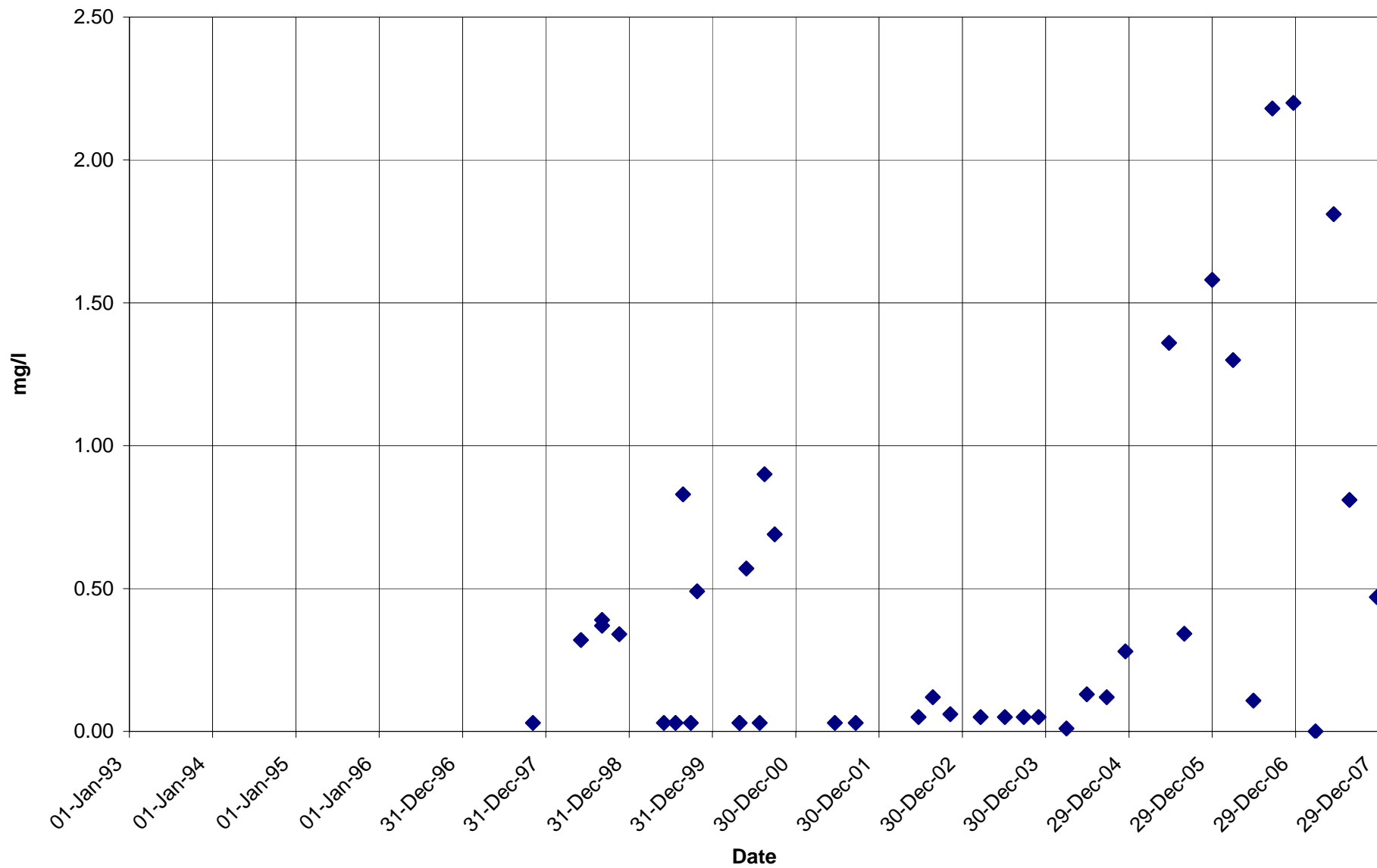
BC-27  
Silver





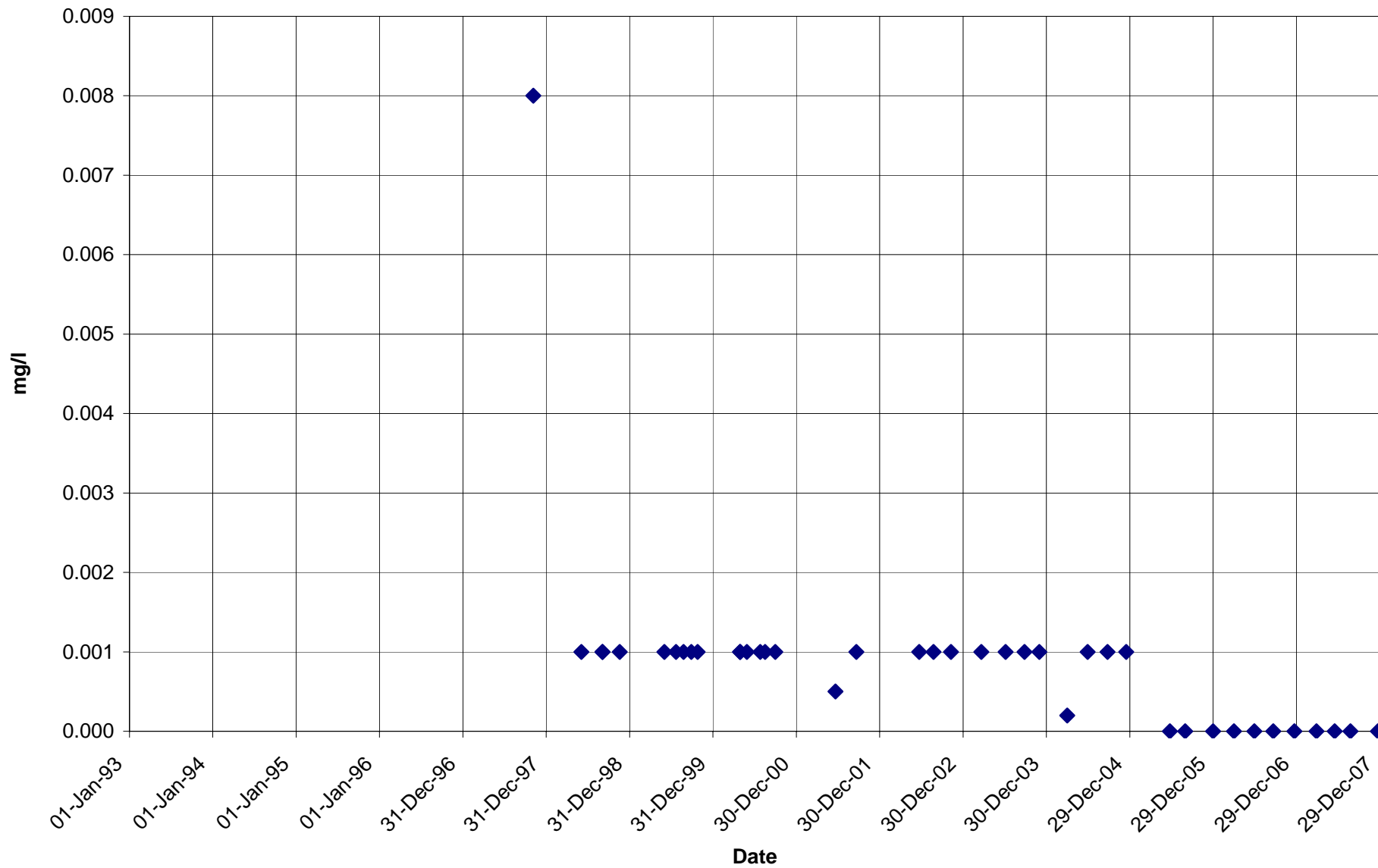
Brewery Creek Mine

BC-27  
Iron



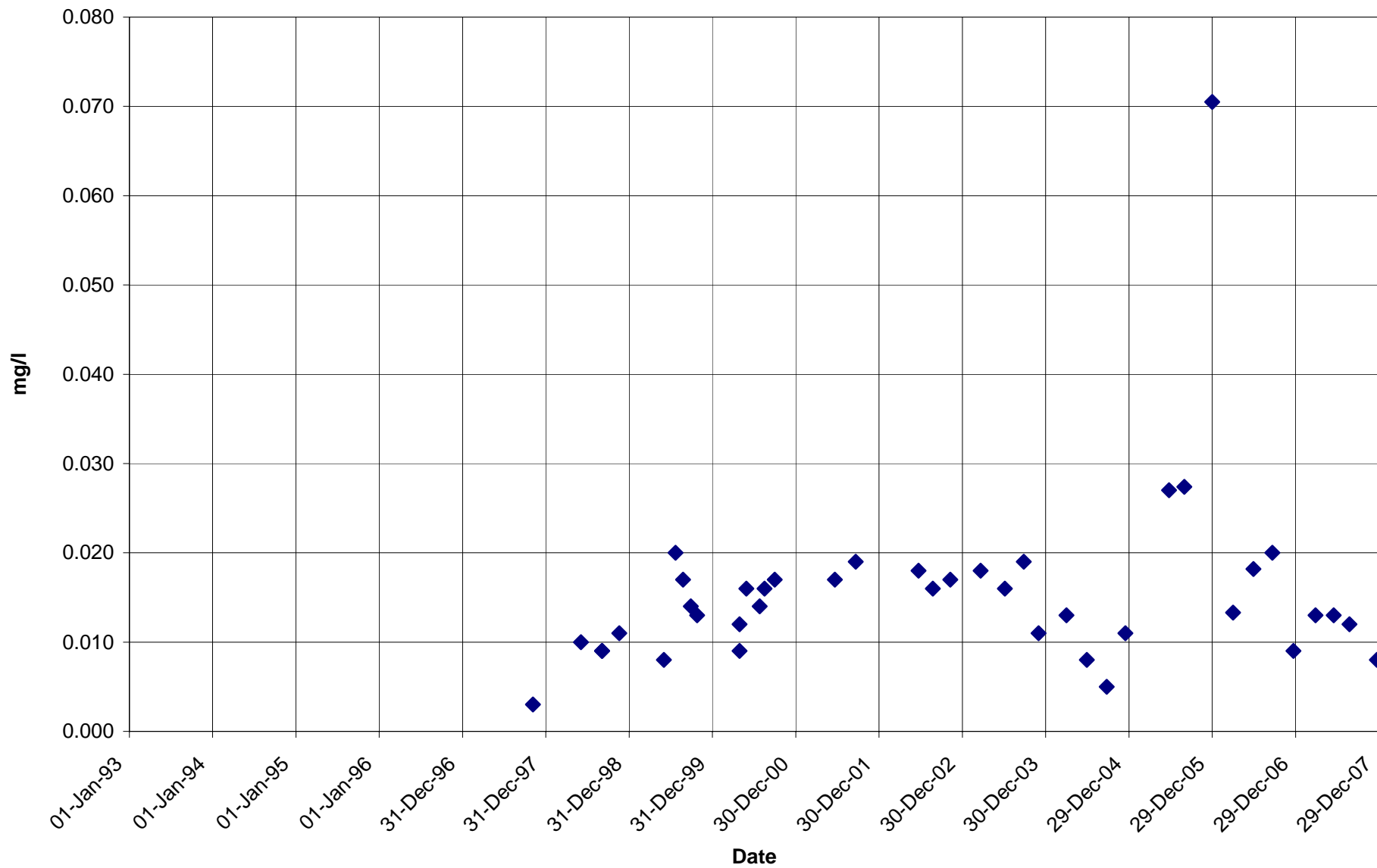
Brewery Creek Mine

BC-27  
Selenium



Brewery Creek Mine

BC-27  
Zinc



# **Appendix C**

## **HYDROLOGY**





**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		23-May-07	15:25	0.52	1.90	0.95	0.95	0.430	0.447	26.805	446.7	7,081.1	
		Temp.	Cond.	PH									
		<i>Intervals &gt;&gt;&gt;</i>											
		<i>Totals</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
10													
Width (m)	1.320	0.10	0.10	0.10	0.10	0.10	0.47	0.10	0.10	0.10	0.10	0.05	
Depth (m)	Enter >>>>>	0.12	0.36	0.37	0.34	0.36	0.34	0.33	0.35	0.30	0.35		
Area (m2)	0.430	0.012	0.036	0.037	0.034	0.036	0.160	0.033	0.035	0.030	0.017	0.000	
Velocity (m/sec)	Enter >>>>>	0.18	0.93	1.18	1.21	1.19	1.19	1.26	1.11	0.4	0.05		
Discharge (m3/sec)	0.447	0.002	0.033	0.044	0.041	0.043	0.190	0.042	0.039	0.012	0.001	0.000	

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		24-May-07	13:05	0.45	1.90	0.95	0.95	0.260	0.264	15.851	264.2	4,187.5	
		Temp.	Cond.	PH									
		<i>Intervals &gt;&gt;&gt;</i>											
		<i>Totals</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
10													
Width (m)	0.950	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	Enter >>>>>	0.16	0.29	0.30	0.31	0.30	0.27	0.26	0.28	0.28	0.30		
Area (m2)	0.260	0.016	0.029	0.030	0.031	0.030	0.027	0.026	0.028	0.028	0.015	0.000	
Velocity (m/sec)	Enter >>>>>	1.13	1.01	1.09	1.11	1.16	1.06	1.21	1.18	0.73	0.09		
Discharge (m3/sec)	0.264	0.018	0.029	0.033	0.034	0.035	0.029	0.031	0.033	0.020	0.001	0.000	

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		25-May-07	11:10	0.40	1.90	1.00	0.90	0.228	0.209	12.540	209.0	3,312.7	
		Temp.	Cond.	PH									
		<i>Intervals &gt;&gt;&gt;</i>											
		<i>Totals</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
10													
Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	Enter >>>>>	0.22	0.25	0.26	0.25	0.24	0.25	0.25	0.25	0.27	0.30		
Area (m2)	0.228	0.011	0.025	0.026	0.025	0.024	0.025	0.025	0.025	0.027	0.015	0.000	
Velocity (m/sec)	Enter >>>>>	0.90	0.93	1.07	1.15	1.16	1.16	1.08	0.85	0.52	0.01		
Discharge (m3/sec)	0.209	0.010	0.023	0.028	0.029	0.028	0.029	0.027	0.021	0.014	0.000	0.000	

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

STATION ID:		Date		Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge			
BC 3					(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)
		28-May-07		12:05	0.55	1.95	0.90	1.05	0.411	0.390	23.390	389.8	6,179.0
		Temp.		Cond.	PH								
		<i>Intervals &gt;&gt;&gt;</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
		<i>Totals</i>	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	1.050	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
	Depth (m)	Enter >>>>>	0.37	0.38	0.39	0.40	0.40	0.40	0.39	0.39	0.40	0.40	
	Area (m2)	0.411	0.056	0.038	0.039	0.040	0.040	0.040	0.039	0.039	0.040	0.040	0.000
	Velocity (m/sec)	Enter >>>>>	0.95	0.97	1.10	1.18	1.15	1.24	1.19	1.06	0.55	0.12	
	Discharge (m3/sec)	0.390	0.053	0.037	0.043	0.047	0.046	0.050	0.046	0.041	0.022	0.005	0.000

STATION ID:		Date		Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge			
BC 3					(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)
		29-May-07		14:00	0.44	1.90	1.00	0.90	0.256	0.225	13.501	225.0	3,566.5
		Temp.		Cond.	PH								
		<i>Intervals &gt;&gt;&gt;</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
		<i>Totals</i>	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
	Depth (m)	Enter >>>>>	0.26	0.26	0.27	0.29	0.29	0.29	0.28	0.30	0.30	0.30	
	Area (m2)	0.256	0.013	0.026	0.027	0.029	0.029	0.029	0.028	0.030	0.030	0.015	0.000
	Velocity (m/sec)	Enter >>>>>	0.99	0.90	1.04	1.07	1.13	1.09	1.05	0.60	0.58	0.03	
	Discharge (m3/sec)	0.225	0.013	0.023	0.028	0.031	0.033	0.032	0.029	0.018	0.017	0.000	0.000

STATION ID:		Date		Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge			
BC 3					(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)
		30-May-07		8:00	0.36	1.90	1.00	0.90	0.197	0.171	10.237	170.6	2,704.4
		Temp.		Cond.	PH								
		<i>Intervals &gt;&gt;&gt;</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
		<i>Totals</i>	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
	Depth (m)	Enter >>>>>	0.21	0.21	0.22	0.21	0.23	0.22	0.20	0.22	0.24	0.23	
	Area (m2)	0.197	0.011	0.021	0.022	0.021	0.023	0.022	0.020	0.022	0.024	0.012	0.000
	Velocity (m/sec)	Enter >>>>>	0.71	0.88	1.03	1.05	1.09	1.07	0.71	0.91	0.7	0.03	
	Discharge (m3/sec)	0.171	0.007	0.018	0.023	0.022	0.025	0.024	0.014	0.020	0.017	0.000	0.000

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

<b>STATION ID:</b>	<b>BC 3</b>	<b>Date</b>	<b>Time</b>	<b>Staff Gauge</b>	<b>Left Bank</b>	<b>Right Bank</b>	<b>Width</b>	<b>Area</b>	<b>Discharge</b>					
				<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>(m<sup>2</sup>)</b>	<b>(m<sup>3</sup>/sec)</b>	<b>(m<sup>3</sup>/min)</b>	<b>(L/sec)</b>	<b>(USGPM)</b>		
		31-May-07	11:45	0.36	1.90	1.00	0.90	0.197	0.173	10.369	172.8	2,739.1		
		<b>Temp.</b>	<b>Cond.</b>	<b>PH</b>										
		<i>Intervals &gt;&gt;&gt;</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	
		<i>Totals</i>	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90		
10		<b>Width (m)</b>	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05		
		<b>Depth (m)</b>	Enter >>>>>	0.17	0.21	0.22	0.22	0.22	0.21	0.21	0.22	0.25	0.24	
		<b>Area (m2)</b>	0.197	0.009	0.021	0.022	0.022	0.022	0.021	0.021	0.022	0.025	0.012	0.000
		<b>Velocity (m/sec)</b>	Enter >>>>>	0.72	0.83	1.05	1.03	1.05	1.09	0.97	0.75	0.72	0.22	
		<b>Discharge (m3/sec)</b>	0.173	0.006	0.017	0.023	0.023	0.023	0.023	0.020	0.017	0.018	0.003	0.000

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

<b>STATION ID:</b>	<b>BC 3</b>	<b>Date</b>	<b>Time</b>	<b>Staff Gauge (m)</b>	<b>Left Bank (m)</b>	<b>Right Bank (m)</b>	<b>Width (m)</b>	<b>Area (m<sup>2</sup>)</b>	<b>Discharge</b>				
									<b>(m<sup>3</sup>/sec)</b>	<b>(m<sup>3</sup>/min)</b>	<b>(L/sec)</b>	<b>(USGPM)</b>	
		01-Jun-07	12:50	0.37	1.90	1.00	0.90	0.218	0.199	11.938	199.0	3,153.7	
		<b>Temp.</b>	<b>Cond.</b>	<b>PH</b>									
		<b>Intervals &gt;&gt;&gt;</b>											
		<b>Totals</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
10			1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
Width (m)	<b>0.900</b>	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.18	0.23	0.24	0.25	0.25	0.24	0.24	0.25	0.26	0.26	0.26	
Area (m2)	<b>0.218</b>	<b>0.009</b>	<b>0.023</b>	<b>0.024</b>	<b>0.025</b>	<b>0.025</b>	<b>0.024</b>	<b>0.024</b>	<b>0.025</b>	<b>0.026</b>	<b>0.013</b>	<b>0.000</b>	
Velocity (m/sec)	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.85	0.85	1.06	1.06	1.08	1.09	1.04	0.93	0.68	0.06		
Discharge (m3/sec)	<b>0.199</b>	<b>0.008</b>	<b>0.020</b>	<b>0.025</b>	<b>0.027</b>	<b>0.027</b>	<b>0.026</b>	<b>0.025</b>	<b>0.023</b>	<b>0.018</b>	<b>0.001</b>	<b>0.000</b>	
<hr/>													
<b>STATION ID:</b>	<b>BC 3</b>	<b>Date</b>	<b>Time</b>	<b>Staff Gauge (m)</b>	<b>Left Bank (m)</b>	<b>Right Bank (m)</b>	<b>Width (m)</b>	<b>Area (m<sup>2</sup>)</b>	<b>Discharge</b>				
									<b>(m<sup>3</sup>/sec)</b>	<b>(m<sup>3</sup>/min)</b>	<b>(L/sec)</b>	<b>(USGPM)</b>	
		04-Jun-07	13:15	0.36	1.90	1.00	0.90	0.183	0.155	9.311	155.2	2,459.8	
		<b>Temp.</b>	<b>Cond.</b>	<b>PH</b>									
		<b>Intervals &gt;&gt;&gt;</b>											
		<b>Totals</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
10			1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
Width (m)	<b>0.900</b>	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.21	0.22	0.22	0.22	
Area (m2)	<b>0.183</b>	<b>0.010</b>	<b>0.020</b>	<b>0.020</b>	<b>0.020</b>	<b>0.020</b>	<b>0.020</b>	<b>0.019</b>	<b>0.021</b>	<b>0.022</b>	<b>0.011</b>	<b>0.000</b>	
Velocity (m/sec)		0.82	0.94	1.09	1.08	1.05	1.10	0.96	0.76	0.34	0.01		
Discharge (m3/sec)	<b>0.155</b>	<b>0.008</b>	<b>0.019</b>	<b>0.022</b>	<b>0.022</b>	<b>0.021</b>	<b>0.022</b>	<b>0.018</b>	<b>0.016</b>	<b>0.007</b>	<b>0.000</b>	<b>0.000</b>	
<hr/>													
<b>STATION ID:</b>	<b>BC 3</b>	<b>Date</b>	<b>Time</b>	<b>Staff Gauge (m)</b>	<b>Left Bank (m)</b>	<b>Right Bank (m)</b>	<b>Width (m)</b>	<b>Area (m<sup>2</sup>)</b>	<b>Discharge</b>				
									<b>(m<sup>3</sup>/sec)</b>	<b>(m<sup>3</sup>/min)</b>	<b>(L/sec)</b>	<b>(USGPM)</b>	
		05-Jun-07	11:35	0.35	1.90	1.00	0.90	0.160	0.132	7.921	132.0	2,092.6	
		<b>Temp.</b>	<b>Cond.</b>	<b>PH</b>									
		<b>Intervals &gt;&gt;&gt;</b>											
		<b>Totals</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
10			1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
Width (m)	<b>0.800</b>	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.20	0.20	0.21	0.21	
Area (m2)	<b>0.160</b>	<b>0.010</b>	<b>0.020</b>	<b>0.000</b>	<b>0.020</b>	<b>0.020</b>	<b>0.020</b>	<b>0.019</b>	<b>0.020</b>	<b>0.020</b>	<b>0.011</b>	<b>0.000</b>	
Velocity (m/sec)	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.72	0.77	1.00	0.98	1.04	1.05	0.98	0.85	0.62	0		
Discharge (m3/sec)	<b>0.132</b>	<b>0.007</b>	<b>0.015</b>	<b>0.000</b>	<b>0.020</b>	<b>0.021</b>	<b>0.021</b>	<b>0.019</b>	<b>0.017</b>	<b>0.012</b>	<b>0.000</b>	<b>0.000</b>	

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		06-Jun-07	11:00	36.00	1.90	1.00	0.90	0.228	0.195	11.713	195.2	3,094.2	
		Temp.	Cond.	PH									
		Intervals >>>	1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.950	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
	Depth (m)	Enter >>>>>	0.23	0.24	0.24	0.25	0.24	0.23	0.21	0.25	0.25	0.25	
	Area (m2)	0.228	0.012	0.024	0.024	0.025	0.024	0.023	0.021	0.025	0.025	0.025	0.000
	Velocity (m/sec)	Enter >>>>>	0.75	0.80	1.02	1.09	1.10	1.13	1.12	0.75	0.81	0.03	
	Discharge (m3/sec)	0.195	0.009	0.019	0.024	0.027	0.026	0.026	0.024	0.019	0.020	0.001	0.000

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		07-Jun-07	12:45	0.57	1.90	1.00	0.90	0.361	0.366	21.988	366.5	5,808.5	
		Temp.	Cond.	PH									
		Intervals >>>	1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
	Depth (m)	Enter >>>>>	0.31	0.40	0.40	0.42	0.42	0.41	0.40	0.40	0.40	0.40	
	Area (m2)	0.361	0.016	0.040	0.040	0.042	0.042	0.041	0.040	0.040	0.040	0.020	0.000
	Velocity (m/sec)	Enter >>>>>	1.04	0.85	1.07	1.15	1.21	1.22	1.20	1.12	0.77	0.04	
	Discharge (m3/sec)	0.366	0.016	0.034	0.043	0.048	0.051	0.050	0.048	0.045	0.031	0.001	0.000

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		08-Jun-07	13:30	0.40	1.90	1.00	0.90	0.234	0.209	12.554	209.2	3,316.5	
		Temp.	Cond.	PH									
		Intervals >>>	1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
	Depth (m)	Enter >>>>>	0.24	0.25	0.26	0.27	0.28	0.25	0.25	0.25	0.27	0.27	
	Area (m2)	0.234	0.012	0.025	0.026	0.027	0.028	0.025	0.025	0.025	0.027	0.014	0.000
	Velocity (m/sec)	Enter >>>>>	0.92	0.95	1.10	1.12	1.12	1.11	0.93	0.79	0.49	0.02	
	Discharge (m3/sec)	0.209	0.011	0.024	0.029	0.030	0.031	0.028	0.023	0.020	0.013	0.000	0.000

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		11-Jun-07	12:10	0.32	1.90	1.00	0.90	0.177	0.133	7.989	133.1	2,110.4	
		Temp.	Cond.	PH									
		Intervals >>>	1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
	Depth (m)	Enter >>>>>	0.19	0.20	0.19	0.20	0.20	0.19	0.19	0.20	0.20	0.20	
	Area (m2)	0.177	0.010	0.020	0.019	0.020	0.020	0.019	0.019	0.020	0.020	0.010	0.000
	Velocity (m/sec)	Enter >>>>>	0.59	0.76	0.93	0.94	0.95	0.96	0.77	0.57	0.47	0.32	
	Discharge (m3/sec)	0.133	0.006	0.015	0.018	0.019	0.019	0.018	0.015	0.011	0.009	0.003	0.000

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		12-Jun-07	12:20	0.32	1.90	1.00	0.90	0.175	0.138	8.280	138.0	2,187.3	
		Temp.	Cond.	PH									
		Intervals >>>	1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
10	Width (m)	0.900	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
	Depth (m)	Enter >>>>>	0.19	0.19	0.20	0.20	0.20	0.20	0.18	0.18	0.20	0.20	
	Area (m2)	0.175	0.010	0.019	0.020	0.020	0.020	0.020	0.018	0.018	0.020	0.010	0.000
	Velocity (m/sec)	Enter >>>>>	0.67	0.80	0.95	0.95	0.96	0.89	0.78	0.86	0.5	0.2	
	Discharge (m3/sec)	0.138	0.006	0.015	0.019	0.019	0.019	0.018	0.014	0.015	0.010	0.002	0.000

STATION ID:	BC 3	Date	Time	Staff Gauge	Left Bank	Right Bank	Width	Area	Discharge				
				(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)	
		15-Jun-07	10:30	0.31	2.90	2.00	0.90	0.170	0.102	6.122	102.0	1,617.2	
		Temp.	Cond.	PH									
		Intervals >>>	1	2	3	4	5	6	7	8	9	10	11
		Totals	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90		
9	Width (m)	0.900	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05		
	Depth (m)	Enter >>>>>	0.20	0.20	0.21	0.21	0.19	0.14	0.16	0.19	0.20		
	Area (m2)	0.170	0.030	0.020	0.021	0.021	0.019	0.014	0.016	0.019	0.010	0.000	0.000
	Velocity (m/sec)	Enter >>>>>	0.38	0.71	0.72	0.70	0.73	0.78	0.74	0.52	0.01		
	Discharge (m3/sec)	0.102	0.011	0.014	0.015	0.015	0.014	0.011	0.012	0.010	0.000	0.000	0.000

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

STATION ID:	BC 3	Date	Time	Staff Gauge (m)	Left Bank (m)	Right Bank (m)	Width (m)	Area (m <sup>2</sup> )	Discharge			
									(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)
		18-Jun-07	12:10	0.30	1.80	1.00	0.80	0.134	0.076	4.536	75.6	1,198.4
		Temp.	Cond.	PH								
		Intervals >>>										
		1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	
Width (m)	0.800	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	Enter >>>>>	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18		
Area (m2)	0.134	0.008	0.016	0.016	0.016	0.017	0.017	0.017	0.018	0.009	0.000	0.000
Velocity (m/sec)	Enter >>>>>	0.39	0.62	0.74	0.75	0.69	0.65	0.33	0.38	0.41		
Discharge (m3/sec)	0.076	0.003	0.010	0.012	0.012	0.012	0.011	0.006	0.007	0.004	0.000	0.000

STATION ID:	BC 3	Date	Time	Staff Gauge (m)	Left Bank (m)	Right Bank (m)	Width (m)	Area (m <sup>2</sup> )	Discharge			
									(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)
		19-Jun-07	9:36	0.26	1.80	1.00	0.80	0.126	0.072	4.295	71.6	1,134.6
		Temp.	Cond.	PH								
		Intervals >>>										
		1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	
Width (m)	0.800	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	Enter >>>>>	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.15	0.16		
Area (m2)	0.126	0.008	0.015	0.016	0.016	0.016	0.016	0.016	0.015	0.008	0.000	0.000
Velocity (m/sec)	Enter >>>>>	0.53	0.60	0.70	0.70	0.71	0.58	0.36	0.43	0.42		
Discharge (m3/sec)	0.072	0.004	0.009	0.011	0.011	0.011	0.009	0.006	0.006	0.003	0.000	0.000

STATION ID:	BC 3	Date	Time	Staff Gauge (m)	Left Bank (m)	Right Bank (m)	Width (m)	Area (m <sup>2</sup> )	Discharge			
									(m <sup>3</sup> /sec)	(m <sup>3</sup> /min)	(L/sec)	(USGPM)
		20-Jun-07	12:35	0.25	1.80	1.00	0.80	0.125	0.072	4.295	71.6	1,134.7
		Temp.	Cond.	PH								
		Intervals >>>										
		1	2	3	4	5	6	7	8	9	10	11
		Totals	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	
Width (m)	0.800	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	
Depth (m)	Enter >>>>>	0.15	0.16	0.15	0.16	0.16	0.16	0.15	0.15	0.16		
Area (m2)	0.125	0.008	0.016	0.015	0.016	0.016	0.016	0.015	0.015	0.008	0.000	0.000
Velocity (m/sec)	Enter >>>>>	0.44	0.62	0.66	0.68	0.67	0.58	0.58	0.39	0.38		
Discharge (m3/sec)	0.072	0.003	0.010	0.010	0.011	0.011	0.009	0.009	0.006	0.003	0.000	0.000



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

<b>STATION ID:</b>	<b>BC 3</b>	<b>Date</b>	<b>Time</b>	<b>Staff Gauge</b>	<b>Left Bank</b>	<b>Right Bank</b>	<b>Width</b>	<b>Area</b>	<b>Discharge</b>					
				<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>(m<sup>2</sup>)</b>	<b>(m<sup>3</sup>/sec)</b>	<b>(m<sup>3</sup>/min)</b>	<b>(L/sec)</b>	<b>(USGPM)</b>		
		21-Jun-07	14:30	0.26	1.80	1.00	0.80	0.131	0.081	4.877	81.3	1,288.5		
		<b>Temp.</b>	<b>Cond.</b>	<b>PH</b>										
		<i>Intervals &gt;&gt;&gt;</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	
		<i>Totals</i>	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80			
	9	<b>Width (m)</b>	0.800	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.05			
		<b>Depth (m)</b>	Enter >>>>>	0.16	0.16	0.16	0.16	0.17	0.16	0.17	0.17			
		<b>Area (m2)</b>	0.131	0.008	0.016	0.016	0.016	0.017	0.016	0.017	0.009	0.000	0.000	
		<b>Velocity (m/sec)</b>	Enter >>>>>	0.54	0.61	0.73	0.72	0.71	0.61	0.60	0.54	0.40		
		<b>Discharge (m3/sec)</b>	0.081	0.004	0.010	0.012	0.012	0.012	0.010	0.010	0.009	0.003	0.000	0.000

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

<b>STATION ID:</b>	<b>BC 53</b>	<b>Date</b>	<b>Time</b>	<b>Staff Gauge</b>	<b>Left Bank</b>	<b>Right Bank</b>	<b>Width</b>	<b>Area</b>	<b>Discharge</b>				
				<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>(m<sup>2</sup>)</b>	<b>(m<sup>3</sup>/sec)</b>	<b>(m<sup>3</sup>/min)</b>	<b>(L/sec)</b>	<b>(USGPM)</b>	
		31-Jul-07	11:25	n/a	2.20	0.00	2.20	0.633	0.077	4.611	76.9	1,218.1	
		<b>Temp.</b>	<b>Cond.</b>	<b>PH</b>									
		<i>Intervals &gt;&gt;&gt;</i>											
		<i>Totals</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
11		<b>2.200</b>	0.10	0.30	0.45	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
<b>Width (m)</b>		0.20	0.18	0.15	0.18	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30
<b>Depth (m)</b>	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.12	0.25	0.26	0.27	0.28	0.29	0.31	0.35	0.36	0.40	0.40	0.27
<b>Area (m2)</b>		<b>0.633</b>	<b>0.024</b>	<b>0.044</b>	<b>0.039</b>	<b>0.047</b>	<b>0.056</b>	<b>0.058</b>	<b>0.062</b>	<b>0.070</b>	<b>0.072</b>	<b>0.080</b>	<b>0.081</b>
<b>Velocity (m/sec)</b>	<b>Enter &gt;&gt;&gt;&gt;&gt;</b>	0.19	0.36	0.38	0.32	0.18	0.13	0.02	0.09	0.02	0	0	0
<b>Discharge (m3/sec)</b>		<b>0.077</b>	<b>0.005</b>	<b>0.016</b>	<b>0.015</b>	<b>0.015</b>	<b>0.010</b>	<b>0.008</b>	<b>0.001</b>	<b>0.006</b>	<b>0.001</b>	<b>0.000</b>	<b>0.000</b>

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

Swoffer Model 1600

BC-53						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.10					
	0.20	0.2	0.13	0.2	0.04	0.0052
	0.50	0.3	0.19	0.25	0.075	0.01425
	0.70	0.26	0.36	0.25	0.065	0.0234
	1.00	0.45	0.29	0.3	0.135	0.03915
	1.30	0.38	0.2	0.3	0.114	0.0228
	1.60	0.32	0.08	0.3	0.096	0.00768
	1.90	0.24	0.09	0.3	0.072	0.00648
	2.20	0.12	0.05	0.3	0.036	0.0018
RHB (m)	2.50					
Total Discharge =						0.12076 m <sup>3</sup> /sec

BC-39						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.1					
	0.2	0.04	0.6	0.1	0.004	0.0024
	0.3	0.07	0.7	0.1	0.007	0.0049
	0.4	0.06	0.56	0.1	0.006	0.00336
	0.5	0.06	0.72	0.1	0.006	0.00432
	0.6	0.11	0.76	0.1	0.011	0.00836
	0.7	0.15	0.94	0.1	0.015	0.0141
	0.8	0.15	0.77	0.1	0.015	0.01155
	0.9	0.17	0.77	0.1	0.017	0.01309
	1	0.2	0.67	0.1	0.02	0.0134
	1.1	0.25	0.63	0.1	0.025	0.01575
	1.2	0.25	0.42	0.1	0.025	0.0105
	1.3	0.19	0.43	0.1	0.019	0.00817
	1.4	0.23	46	0.1	0.023	1.058
	1.5	0.17	0.36	0.1	0.017	0.00612
	1.6	0.17	0.1	0.1	0.017	0.0017
RHB (m)	1.7					
Total Discharge =						1.17572 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

Swoffer Model 1600

BC-39 June , 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	2.44					
	2.74	0.08	0.04	0.23	0.0184	0.000736
	2.90	0.15	0.13	0.155	0.02325	0.0030225
	3.05	0.16	0.58	0.15	0.024	0.01392
	3.20	0.18	0.52	0.15	0.027	0.01404
	3.35	0.2	0.58	0.155	0.031	0.01798
	3.51	0.23	0.33	0.155	0.03565	0.0117645
	3.66	0.14	0.3	0.15	0.021	0.0063
	3.81	0.11	0.26	0.15	0.0165	0.00429
RHB (m)	3.96					
Total Discharge =						0.072053 m <sup>3</sup> /sec

BC-1 June, 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	2.02					
	2.13	0.23	0.13	0.21	0.0483	0.006279
	2.44	0.21	0.24	0.275	0.05775	0.01386
	2.68	0.19	0.39	0.23	0.0437	0.017043
	2.9	0.2	0.43	0.22	0.044	0.01892
	3.12	0.25	0.4	0.25	0.0625	0.025
	3.4	0.22	0.51	0.27	0.0594	0.030294
	3.66	0.24	0.41	0.245	0.0588	0.024108
	3.89	0.21	0.36	0.225	0.04725	0.01701
	4.11	0.18	0.32	0.205	0.0369	0.011808
RHB (m)	4.3					
Total Discharge =						0.164322 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC-3 June, 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	2					
	2.05	0.23	0.51	0.05	0.0115	0.005865
	2.1	0.24	0.66	0.075	0.018	0.01188
	2.2	0.26	0.71	0.1	0.026	0.01846
	2.3	0.26	0.85	0.075	0.0195	0.016575
	2.35	0.26	0.91	0.05	0.013	0.01183
	2.4	0.25	0.89	0.075	0.01875	0.0166875
	2.5	0.22	0.96	0.075	0.0165	0.01584
	2.55	0.21	0.85	0.05	0.0105	0.008925
	2.6	0.21	0.63	0.075	0.01575	0.0099225
	2.7	0.18	0.83	0.1	0.018	0.01494
RHB (m)	2.8					
Total Discharge =						0.130925 m <sup>3</sup> /sec

BC-31 June, 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.91					
	1.22	0.21	0.25	0.305	0.06405	0.0160125
	1.52	0.24	0.41	0.305	0.0732	0.030012
	1.83	0.29	0.37	0.305	0.08845	0.0327265
	2.13	0.35	0.53	0.305	0.10675	0.0565775
	2.44	0.35	0.51	0.305	0.10675	0.0544425
	2.74	0.39	0.53	0.305	0.11895	0.0630435
	3.05	0.41	0.49	0.305	0.12505	0.0612745
	3.35	0.44	0.72	0.305	0.1342	0.096624
	3.66	0.44	0.78	0.305	0.1342	0.104676
	3.96	0.46	0.98	0.31	0.1426	0.139748
	4.28	0.5	0.67	0.305	0.1525	0.102175
	4.57	0.57	0.66	0.3	0.171	0.11286
	4.88	0.61	0.79	0.305	0.18605	0.1469795
	5.18	0.44	0.63	0.31	0.1364	0.085932
RHB (m)	5.5					
Total Discharge =						1.1030835 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC-5 June, 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	1.37					
	1.52	0.21	0	0.305	0.06405	0
	1.98	0.3	0.17	0.305	0.0915	0.015555
	2.13	0.33	0.12	0.155	0.05115	0.006138
	2.29	0.36	0.1	0.155	0.0558	0.00558
	2.44	0.36	0.19	0.15	0.054	0.01026
	2.59	0.38	0.22	0.15	0.057	0.01254
	2.74	0.41	0.19	0.155	0.06355	0.0120745
	2.9	0.43	0.33	0.155	0.06665	0.0219945
	3.05	0.41	0.3	0.15	0.0615	0.01845
	3.2	0.42	0.22	0.15	0.063	0.01386
RHB (m)	3.35					
Total Discharge =					0.116452	m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

Swoffer Model 1600

BC-3 July 14 , 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.00					
	0.10	0.14	0.1	0.1	0.014	0.0014
	0.20	0.18	0.45	0.1	0.018	0.0081
	0.30	0.17	0.52	0.1	0.017	0.00884
	0.40	0.19	0.55	0.1	0.019	0.01045
	0.50	0.21	0.56	0.1	0.021	0.01176
	0.60	0.2	0.57	0.1	0.02	0.0114
	0.70	0.15	0.61	0.1	0.015	0.00915
	0.80	0.12	0.39	0.1	0.012	0.00468
	0.90	0.12	0	0.1	0.012	0
RHB (m)	1.00					
Total Discharge =						0.06578 m <sup>3</sup> /sec

BC-1 July 14, 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.3					
	0.4		0	0.1	0	0
	0.5		0	0.1	0	0
	0.6	0.22	0	0.1	0.022	0
	0.7	0.25	0.01	0.1	0.025	0.00025
	0.8	0.32	0.03	0.1	0.032	0.00096
	0.9	0.35	0.2	0.1	0.035	0.007
	1	0.41	0.6	0.1	0.041	0.0246
	1.1	0.43	0.7	0.1	0.043	0.0301
	1.2	0.45	0.21	0.1	0.045	0.00945
	1.3	0.45	0.26	0.1	0.045	0.0117
	1.4	0.44	0.3	0.1	0.044	0.0132
	1.5	0.44	0.31	0.1	0.044	0.01364
	1.6	0.43	0.29	0.1	0.043	0.01247
	1.7	0.42	0.25	0.1	0.042	0.0105
	1.8	0.49	0.1	0.1	0.049	0.0049
	1.9	0.42	0	0.1	0.042	0
	2	0.44	0	0.1	0.044	0
RHB (m)	2.1					
Total Discharge =						0.13877 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC-53 July 14, 2007						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.1					
	0.2		0	0.2	0	0
	0.5	0.36	0	0.25	0.09	0
	0.7	0.4	0.26	0.25	0.1	0.026
	1	0.42	0.15	0.3	0.126	0.0189
	1.3	0.37	0.12	0.3	0.111	0.01332
	1.6	0.29	0.01	0.3	0.087	0.00087
	1.9	0.21	0	0.3	0.063	0
	2.2	0.11	0	0.3	0.033	0
RHB (m)	2.5					
Total Discharge =						0.05909 m <sup>3</sup> /sec



**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

Swoffer Model 1600

BC3						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0	0.16	0	0.05	0.008	0
	0.1	0.16	0.44	0.1	0.016	0.00704
	0.2	0.16	0.51	0.1	0.016	0.00816
	0.3	0.16	0.52	0.1	0.016	0.00832
	0.4	0.15	0.52	0.1	0.015	0.0078
	0.5	0.18	0.5	0.1	0.018	0.009
	0.6	0.17	0.47	0.1	0.017	0.00799
	0.7	0.16	0.42	0.1	0.016	0.00672
	0.8	0.14	0.43	0.1	0.014	0.00602
	0.9	0.32	0	0.05	0.016	0
RHB (m)	0.9					
Total Discharge =					0.06105	m <sup>3</sup> /sec

BC53						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.2					
	0.3	0.04	0	0.125	0.005	0
	0.45	0.14	0.04	0.15	0.021	0.00084
	0.6	0.22	0.01	0.15	0.033	0.00033
	0.75	0.25	0.04	0.15	0.0375	0.0015
	0.9	0.31	0.14	0.15	0.0465	0.00651
	1.05	0.32	0.1	0.15	0.048	0.0048
	1.2	0.33	0.16	0.15	0.0495	0.00792
	1.35	0.33	0.11	0.15	0.0495	0.005445
	1.5	0.34	0.17	0.15	0.051	0.00867
	1.65	0.34	0.15	0.15	0.051	0.00765
	1.8	0.32	0	0.125	0.04	0
RHB (m)	1.9					
Total Discharge =					0.043665	m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC33						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.2					
	0.4	0.42	0.49	0.3	0.126	0.06174
	0.8	0.4	0.45	0.4	0.16	0.072
	1.2	0.47	0.62	0.4	0.188	0.11656
	1.6	0.5	0.58	0.4	0.2	0.116
	2	0.57	0.46	0.4	0.228	0.10488
	2.4	0.6	0.38	0.4	0.24	0.0912
	2.8	0.5	0.4	0.4	0.2	0.08
	3.2	0.42	0.55	0.4	0.168	0.0924
	3.6	0.39	0.5	0.4	0.156	0.078
	4	0.32	0.44	0.6	0.192	0.08448
	4.4	0.27	0.32	0.6	0.162	0.05184
	4.8	0.18	0.15	0.6	0.108	0.0162
	5.2	0.09	0.03	0.4	0.036	0.00108
RHB (m)	5.6					
Total Discharge =						0.96638 m <sup>3</sup> /sec
BC4						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.6					
	0.6	0.03	0.03	0.05	0.0015	0.000045
	0.7	0.07	0.26	0.1	0.007	0.00182
	0.8	0.06	0.22	0.1	0.006	0.00132
	0.9	0.07	0.41	0.1	0.007	0.00287
	1	0.07	0.3	0.1	0.007	0.0021
	1.1	0.1	0.34	0.1	0.01	0.0034
	1.2	0.12	0.39	0.1	0.012	0.00468
	1.3	0.12	0.53	0.1	0.012	0.00636
	1.4	0.11	0.43	0.1	0.011	0.00473
	1.5	0.07	0.27	0.15	0.0105	0.002835
	1.6	0.06	0.16	0.15	0.009	0.00144
	1.7	0.04	0	0.15	0.006	0
	1.8	0	0	0.05	0	0
RHB (m)	1.8					
Total Discharge =						0.0316 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC39						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.5					
	0.5	0.05	0	0.075	0.00375	0
	0.65	0.12	0.2	0.15	0.018	0.0036
	0.8	0.16	0.18	0.15	0.024	0.00432
	0.95	0.15	0.5	0.15	0.0225	0.01125
	1.1	0.13	0.47	0.15	0.0195	0.009165
	1.25	0.13	0.18	0.15	0.0195	0.00351
	1.4	0.12	0.01	0.15	0.018	0.00018
	1.55	0.02	0	0.075	0.0015	0
RHB (m)	1.55					
Total Discharge =						0.032025 m <sup>3</sup> /sec

BC1						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0.2	0.22	0.19	0.2	0.044	0.00836
	0.4	0.22	0.32	0.2	0.044	0.01408
	0.6	0.21	0.36	0.2	0.042	0.01512
	0.8	0.21	0.34	0.2	0.042	0.01428
	1	0.21	0.25	0.2	0.042	0.0105
	1.2	0.21	0.22	0.2	0.042	0.00924
	1.4	0.2	0.23	0.2	0.04	0.0092
	1.6	0.21	0.32	0.2	0.042	0.01344
	1.8	0.2	0.32	0.2	0.04	0.0128
	2	0.2	0.2	0.1	0.02	0.004
RHB (m)	2					
Total Discharge =						0.11102 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC31						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0	0	0	0.125	0	0
	0.25	0.14	0	0.25	0.035	0
	0.5	0.2	0	0.25	0.05	0
	0.75	0.29	0.03	0.25	0.0725	0.002175
	1	0.35	0.14	0.25	0.0875	0.01225
	1.25	0.4	0.19	0.25	0.1	0.019
	1.5	0.42	0.29	0.25	0.105	0.03045
	1.75	0.45	0.31	0.25	0.1125	0.034875
	2	0.47	0.35	0.25	0.1175	0.041125
	2.25	0.47	0.41	0.25	0.1175	0.048175
	2.5	0.55	0.39	0.25	0.1375	0.053625
	2.75	0.53	0.42	0.25	0.1325	0.05565
	3	0.6	0.36	0.25	0.15	0.054
	3.25	0.53	0.32	0.125	0.06625	0.0212
RHB (m)	3.25					
Total Discharge =						0.372525 m <sup>3</sup> /sec

BC5						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0.2	0.33	0.01	0.175	0.05775	0.0005775
	0.35	0.34	0.06	0.15	0.051	0.00306
	0.5	0.33	0.11	0.15	0.0495	0.005445
	0.65	0.32	0.12	0.15	0.048	0.00576
	0.8	0.3	0.15	0.15	0.045	0.00675
	0.95	0.27	0.17	0.15	0.0405	0.006885
	1.1	0.27	0.21	0.15	0.0405	0.008505
	1.25	0.2	0.28	0.15	0.03	0.0084
	1.4	0.2	0.27	0.15	0.03	0.0081
	1.55	0.15	0.27	0.225	0.03375	0.0091125
	1.7	0.14	0.26	0.15	0.021	0.00546
	1.85	0.11	0.01	0.15	0.0165	0.000165
RHB (m)	1.85					
Total Discharge =						0.06822 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC36						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0.2	0.09	0.68	0.2	0.018	0.01224
	0.4	0.13	0.79	0.2	0.026	0.02054
	0.6	0.14	0.95	0.2	0.028	0.0266
	0.8	0.13	1.03	0.2	0.026	0.02678
	1	0.16	1.04	-0.34	-0.0544	-0.056576
	0.12	0.14	0.88	-0.43	-0.0602	-0.052976
	0.14	0.12	0.97	0.02	0.0024	0.002328
	0.16	0.17	1.04	0.02	0.0034	0.003536
	0.18	0.19	0.85	1.02	0.1938	0.16473
	2	0.16	0.63	1.11	0.1776	0.111888
	2.2	0.14	0.8	1.11	0.1554	0.12432
	2.4	0.16	0.43	0.2	0.032	0.01376
RHB (m)	2.6					
Total Discharge =						0.39717 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

Swoffer Model 1600

BC3						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0.1	0.2	0	0.1	0.02	0
	0.2	0.21	0.45	0.1	0.021	0.00945
	0.3	0.2	0.67	0.1	0.02	0.0134
	0.4	0.16	0.74	0.1	0.016	0.01184
	0.5	0.19	0.75	0.1	0.019	0.01425
	0.6	0.2	0.73	0.1	0.02	0.0146
	0.7	0.2	0.72	0.1	0.02	0.0144
	0.8	0.2	0.72	0.1	0.02	0.0144
	0.9	0.17	0.66	0.1	0.017	0.01122
	1	0.15	0.34	0.05	0.0075	0.00255
RHB (m)	1					
Total Discharge =						0.10611 m <sup>3</sup> /sec

BC53						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0	0.03	0	0.075	0.00225	0
	0.15	0.11	0	0.15	0.0165	0
	0.3	0.25	0.09	0.15	0.0375	0.003375
	0.45	0.32	0.08	0.15	0.048	0.00384
	0.6	0.32	0.18	0.15	0.048	0.00864
	0.75	0.34	0.19	0.15	0.051	0.00969
	0.9	0.32	0.22	0.15	0.048	0.01056
	1.05	0.38	0.25	0.15	0.057	0.01425
	1.2	0.38	0.27	0.3	0.114	0.03078
	1.35	0.32	0.26	0.3	0.096	0.02496
	1.5	0.37	0.26	0.225	0.08325	0.021645
	1.65	0.37	0.25	0.3	0.111	0.02775
	1.8	0.35	0.08	0.075	0.02625	0.0021
RHB (m)	1.8					
Total Discharge =						0.15759 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

BC39						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0.5					
	0.5	0.05	0	0.075	0.00375	0
	0.65	0.13	0.23	0.15	0.0195	0.004485
	0.8	0.18	0.18	0.15	0.027	0.00486
	0.95	0.16	0.5	0.15	0.024	0.012
	1.1	0.15	0.5	0.15	0.0225	0.01125
	1.25	0.13	0.21	0.15	0.0195	0.004095
	1.4	0.12	0.01	0.15	0.018	0.00018
	1.55	0.02	0	0.075	0.0015	0
RHB (m)	1.55					
Total Discharge =						0.03687 m <sup>3</sup> /sec

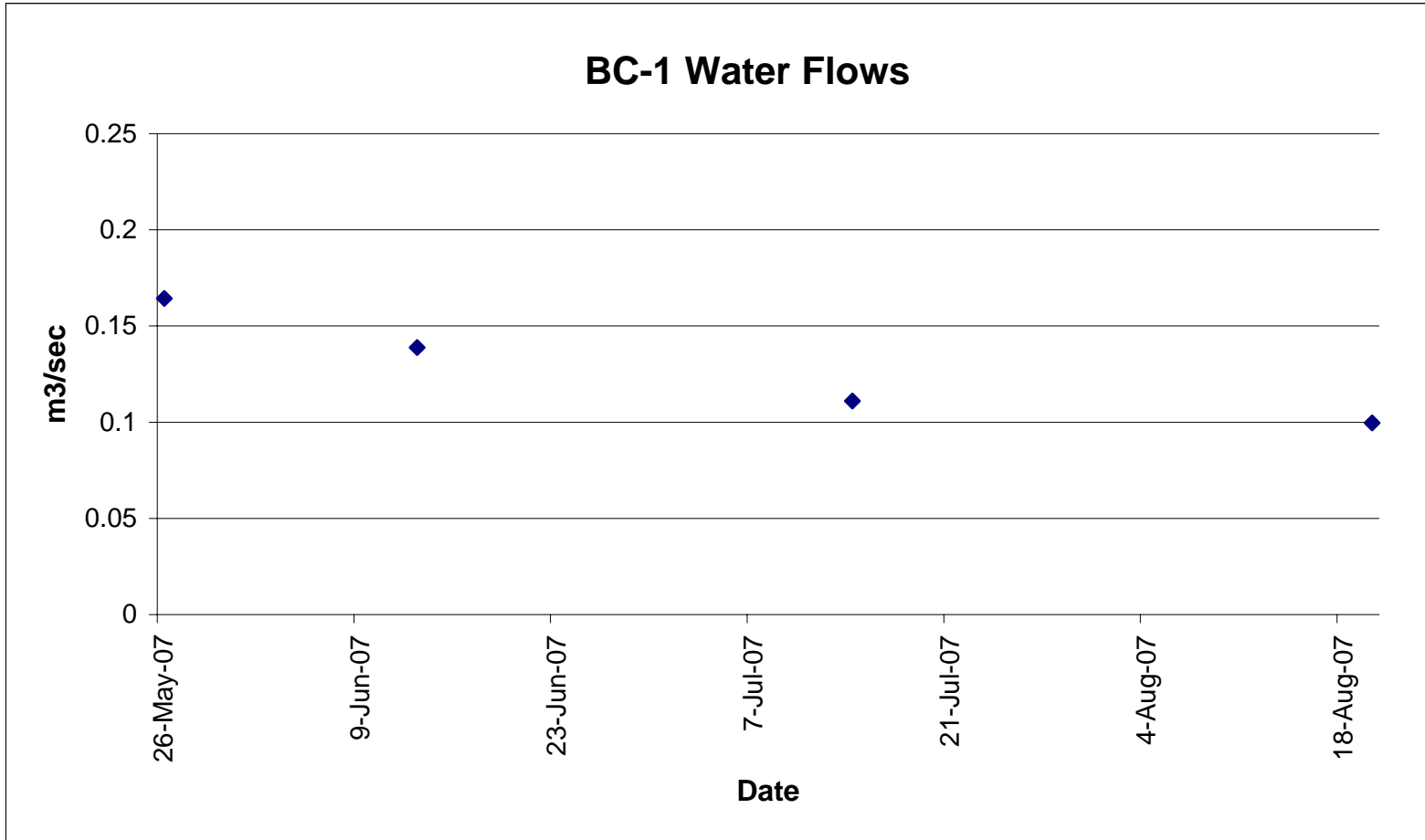
BC1						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0.2	0.18	0	0.2	0.036	0
	0.4	0.22	0.32	0.2	0.044	0.01408
	0.6	0.2	0.34	0.2	0.04	0.0136
	0.8	0.19	0.34	0.2	0.038	0.01292
	1	0.21	0.25	0.2	0.042	0.0105
	1.2	0.21	0.22	0.2	0.042	0.00924
	1.4	0.2	0.23	0.2	0.04	0.0092
	1.6	0.21	0.32	0.2	0.042	0.01344
	1.8	0.2	0.32	0.2	0.04	0.0128
	2	0.2	0.2	0.1	0.02	0.004
RHB (m)	2					
Total Discharge =						0.09978 m <sup>3</sup> /sec

**Alexco Resource Corp.**  
**Brewery Creek Mine**  
**Water Flows**

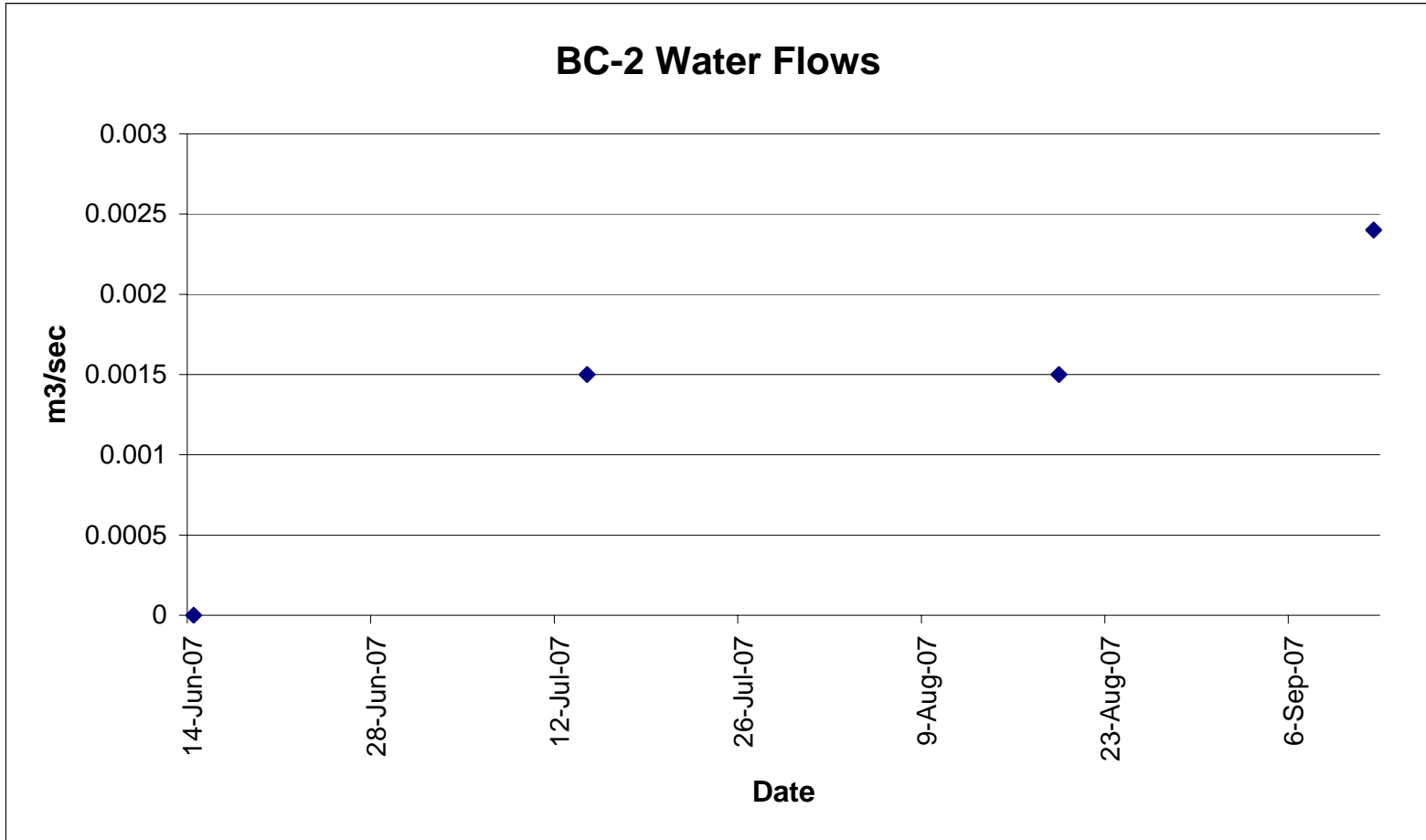
BC37						
Bank	Distance (m)	Depth of Channel (m)	Velocity (m/s)	Section Width (m)	Area (m <sup>2</sup> )	Q (m <sup>3</sup> /sec)
LHB (m)	0					
	0	0	0	0.1	0	0
	0.2	0.01	0	0.2	0.002	0
	0.4	0.2	0	0.2	0.04	0
	0.6	0.1	0.03	0.2	0.02	0.0006
	0.8	0.07	0.02	0.2	0.014	0.00028
	1	0.6	0.19	0.2	0.12	0.0228
	1.2	0.07	0.29	0.2	0.014	0.00406
	1.4	0.11	0.31	0.2	0.022	0.00682
	1.6	0.12	0.35	0.2	0.024	0.0084
	1.8	0.06	0.41	0.2	0.012	0.00492
	2	0.05	0.39	0.2	0.01	0.0039
RHB (m)	2.2					
Total Discharge =						0.05178 m <sup>3</sup> /sec



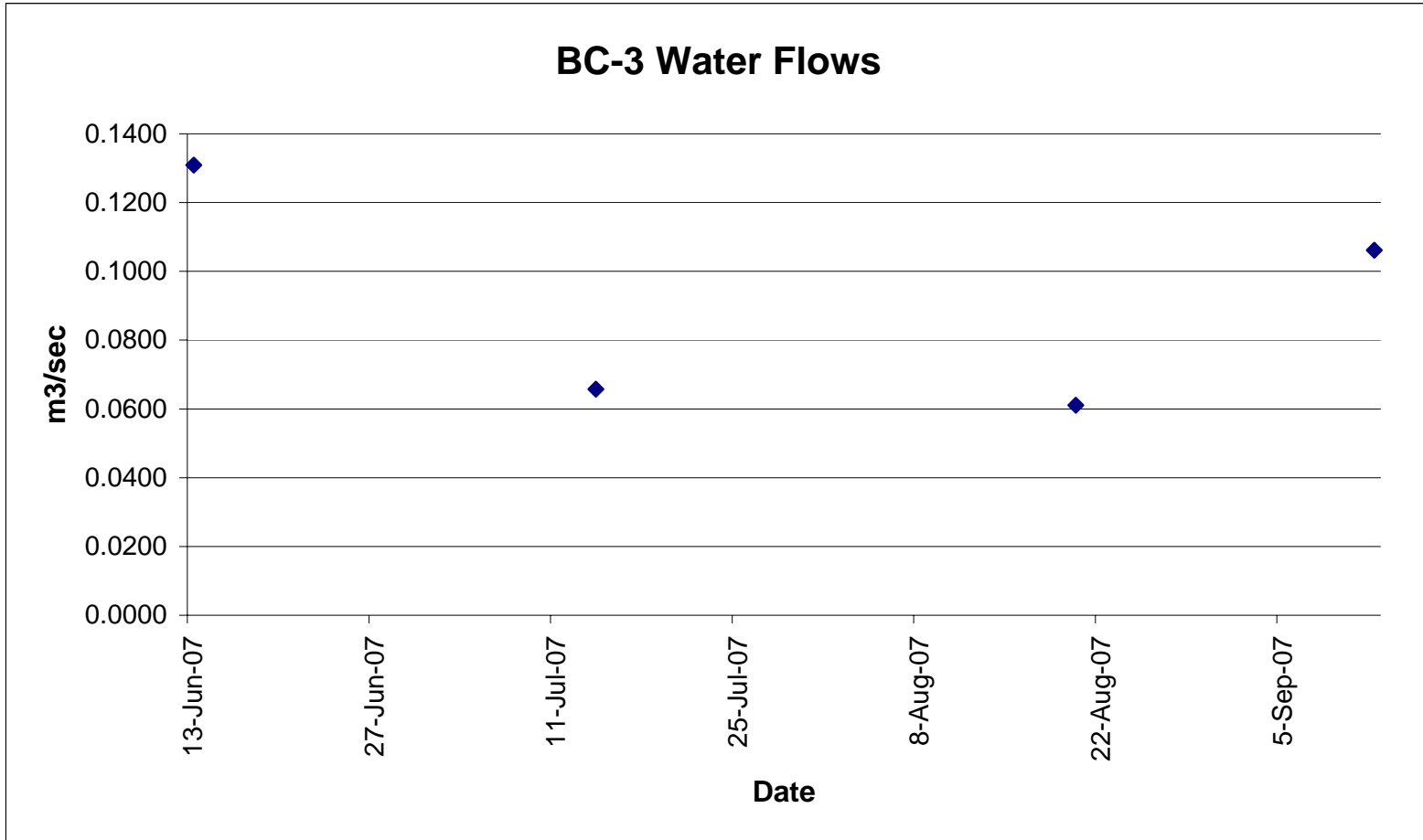
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Brewery Creek Mine  
Water Flows**



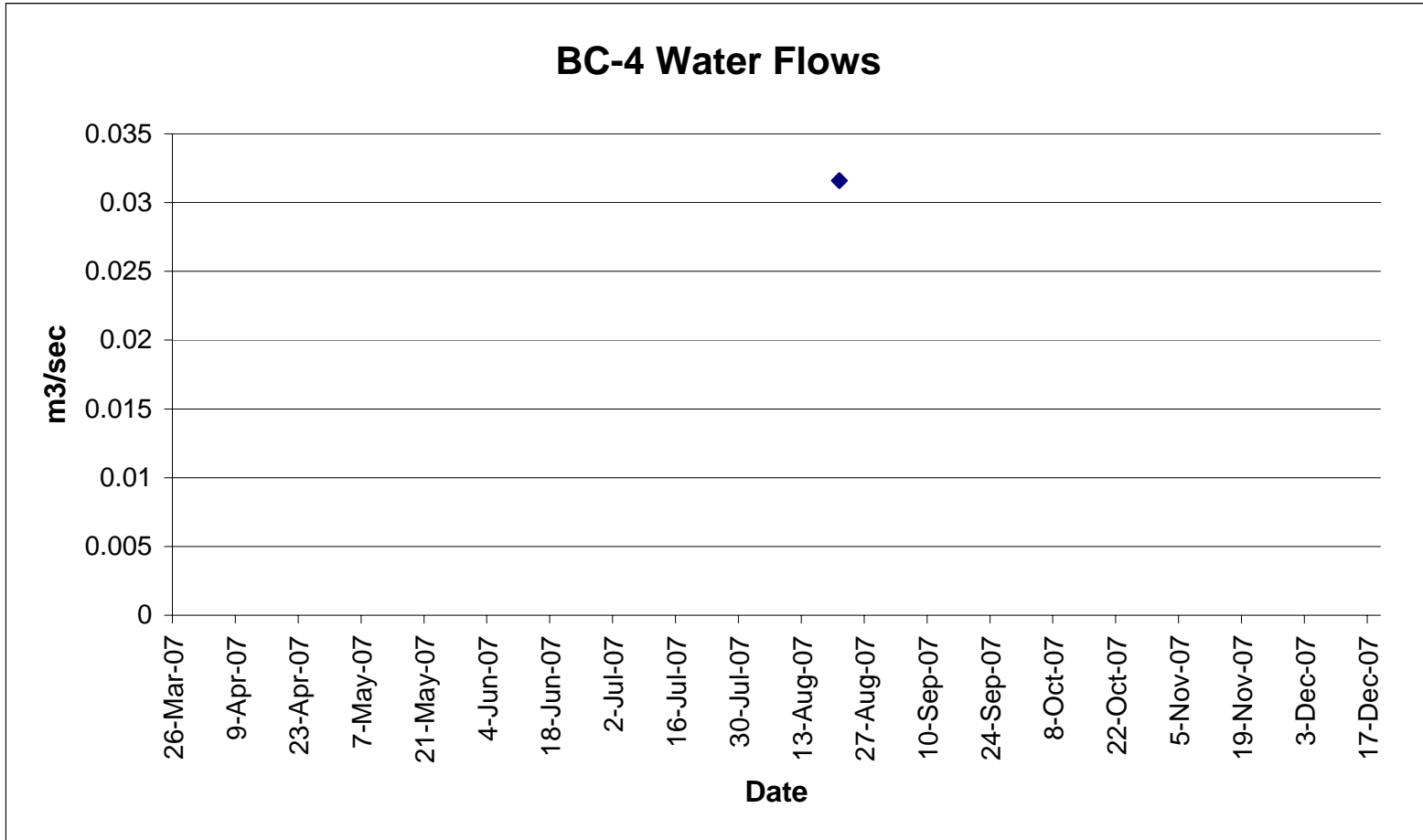
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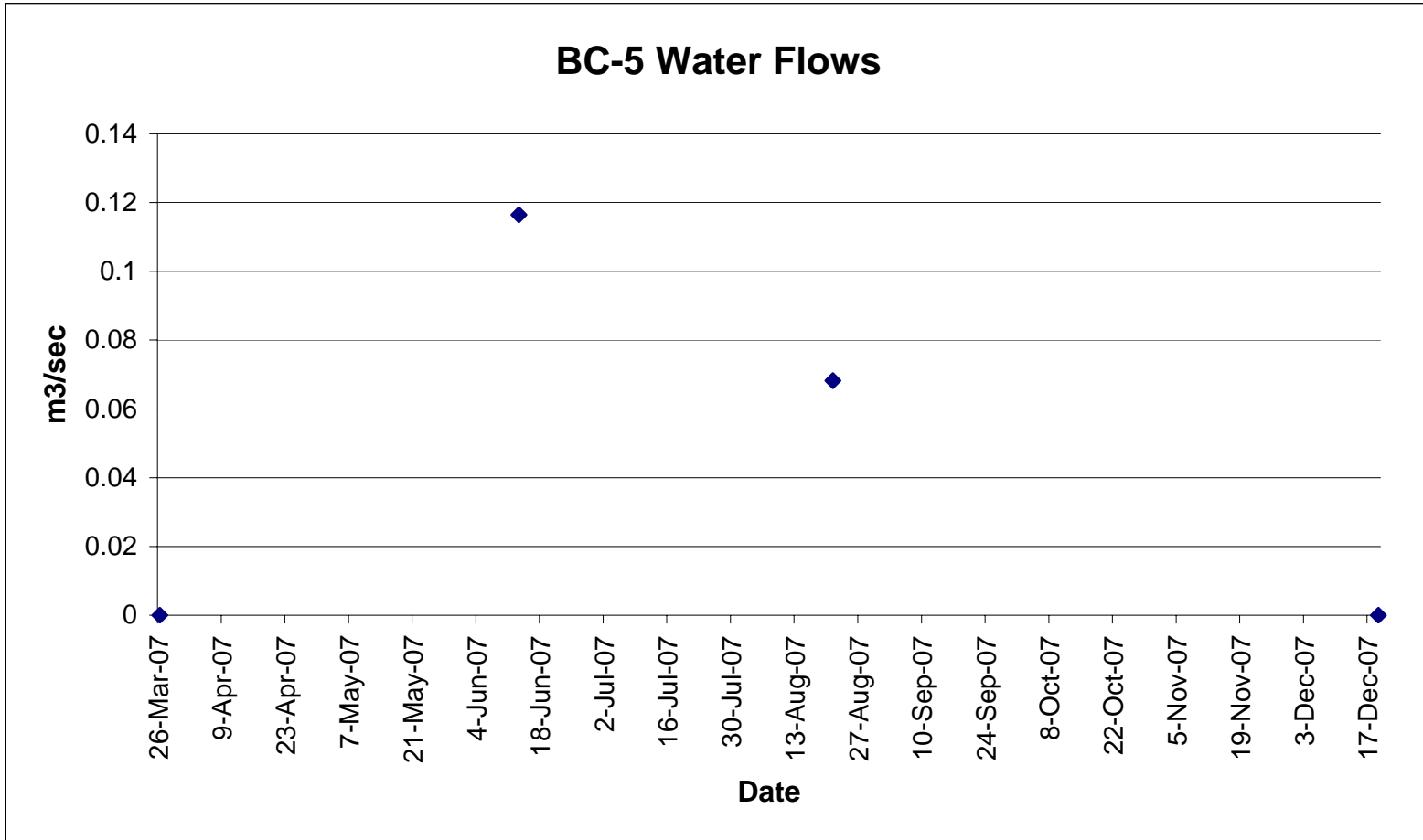
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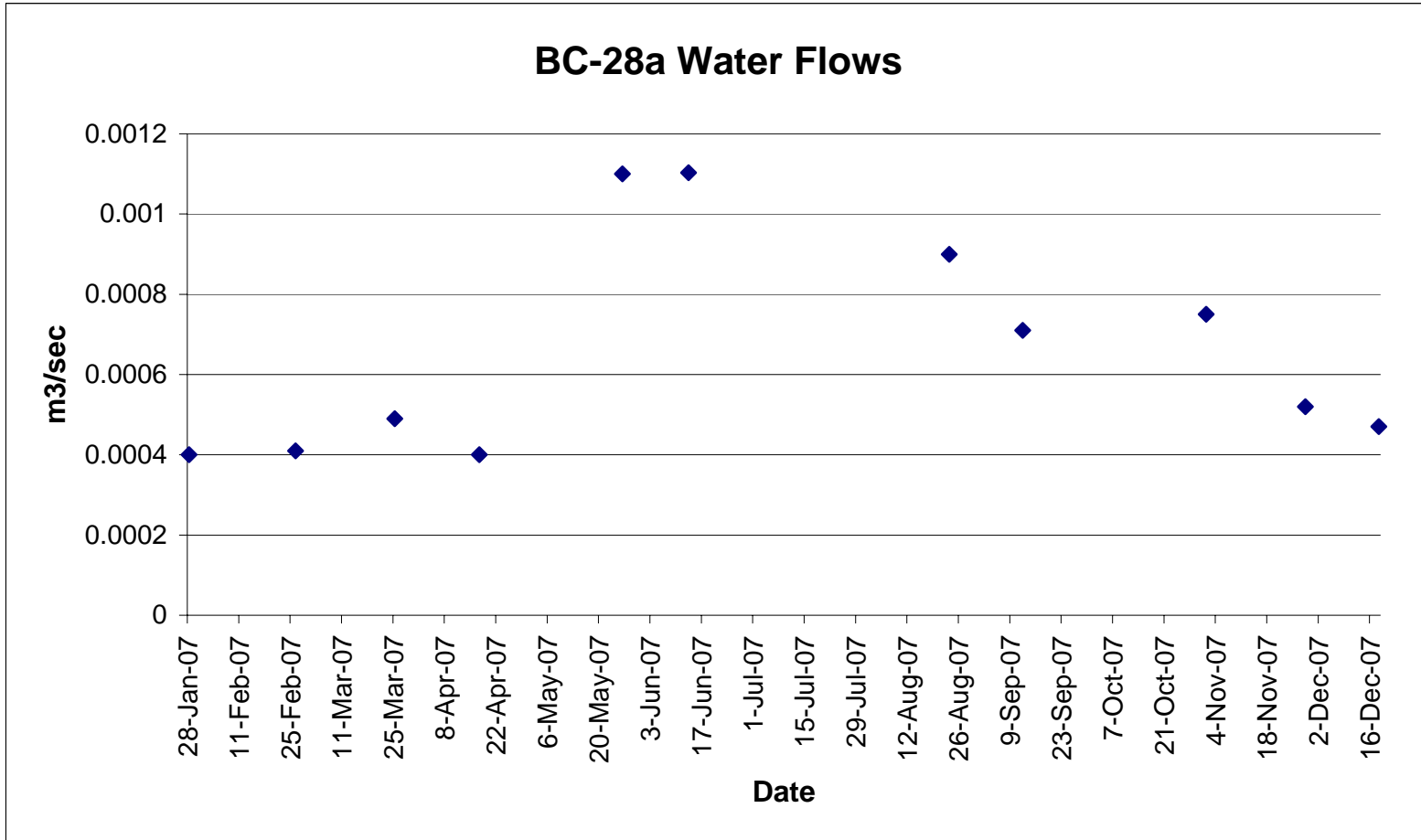
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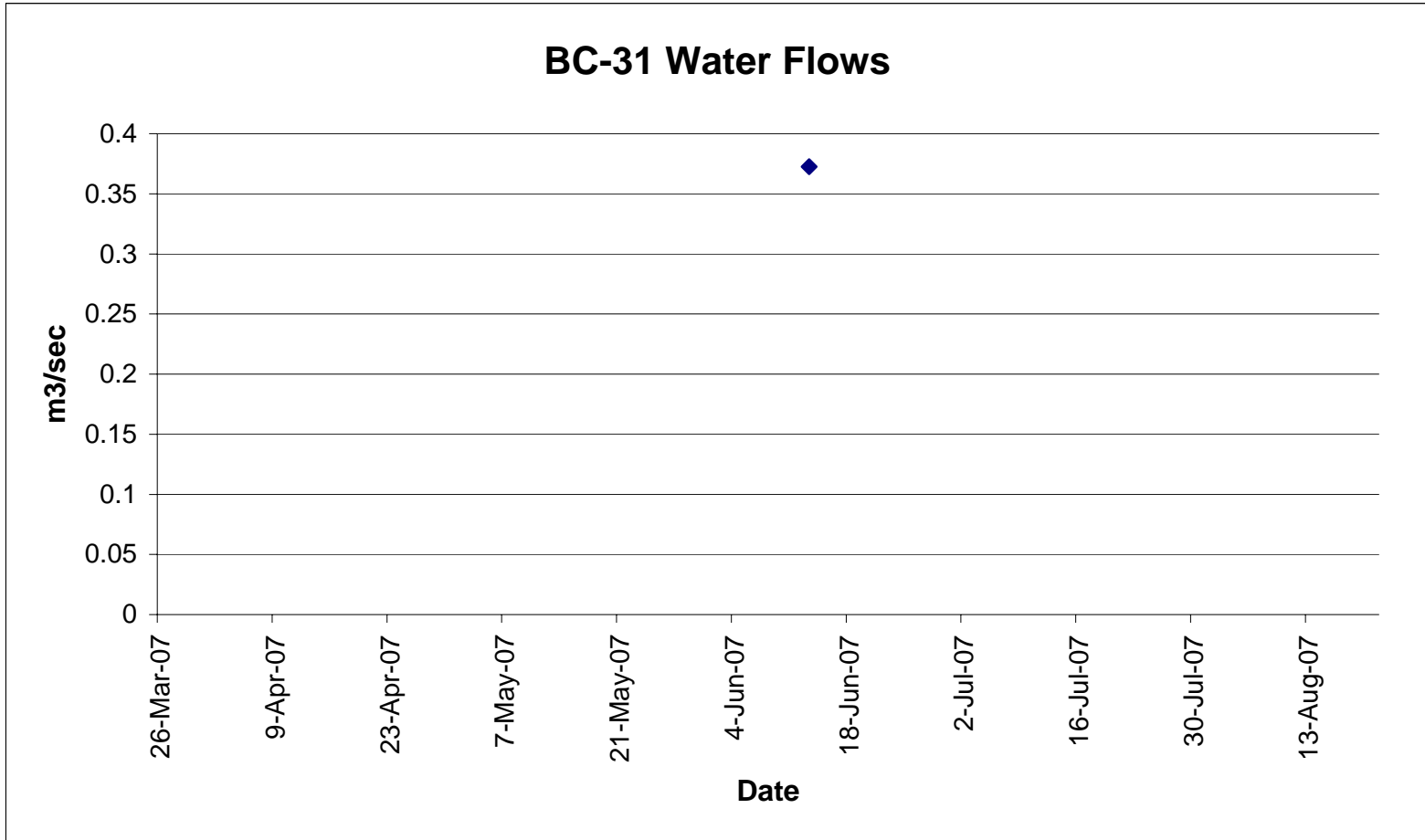
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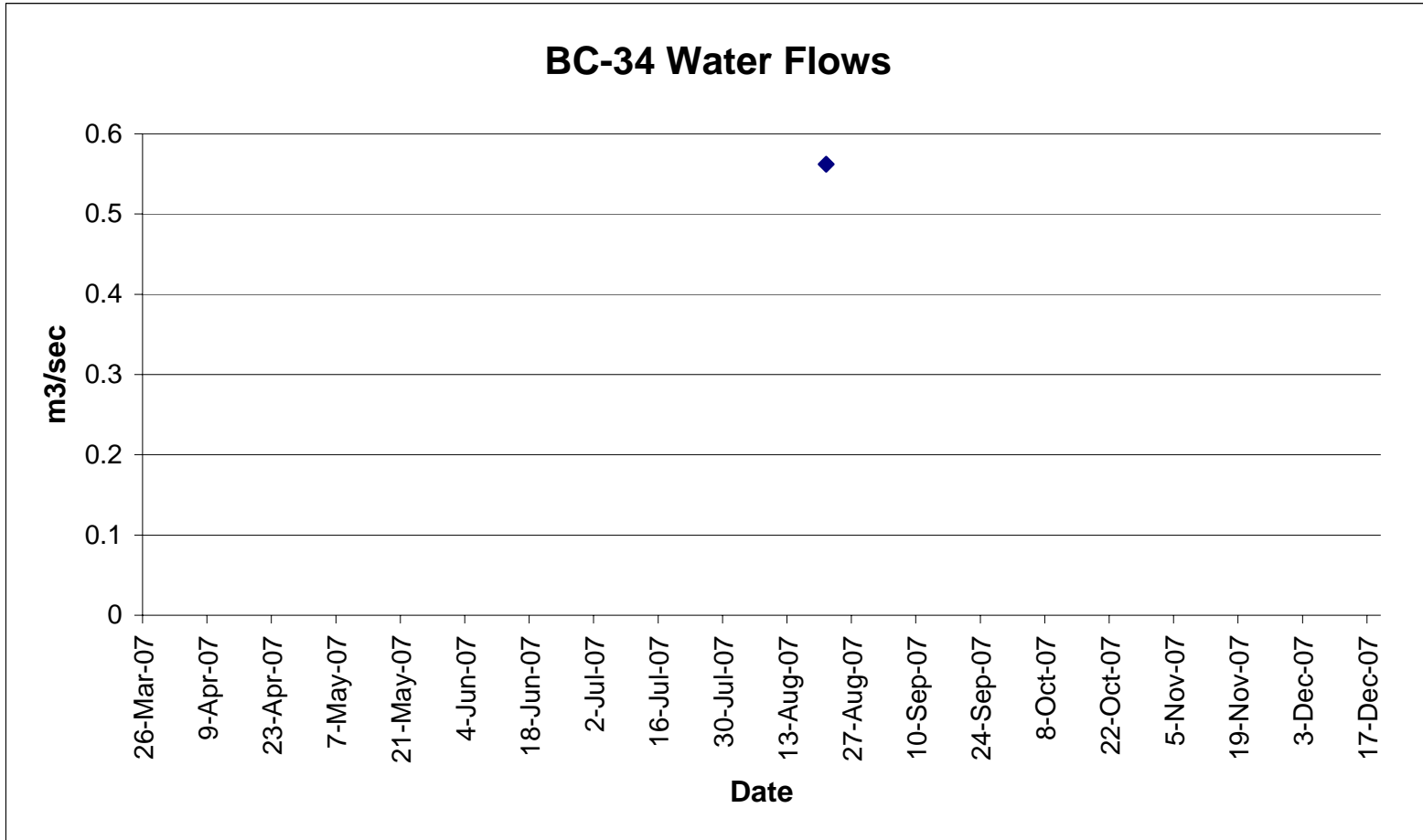
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**Alexco Resource Corp.  
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Water Flows**

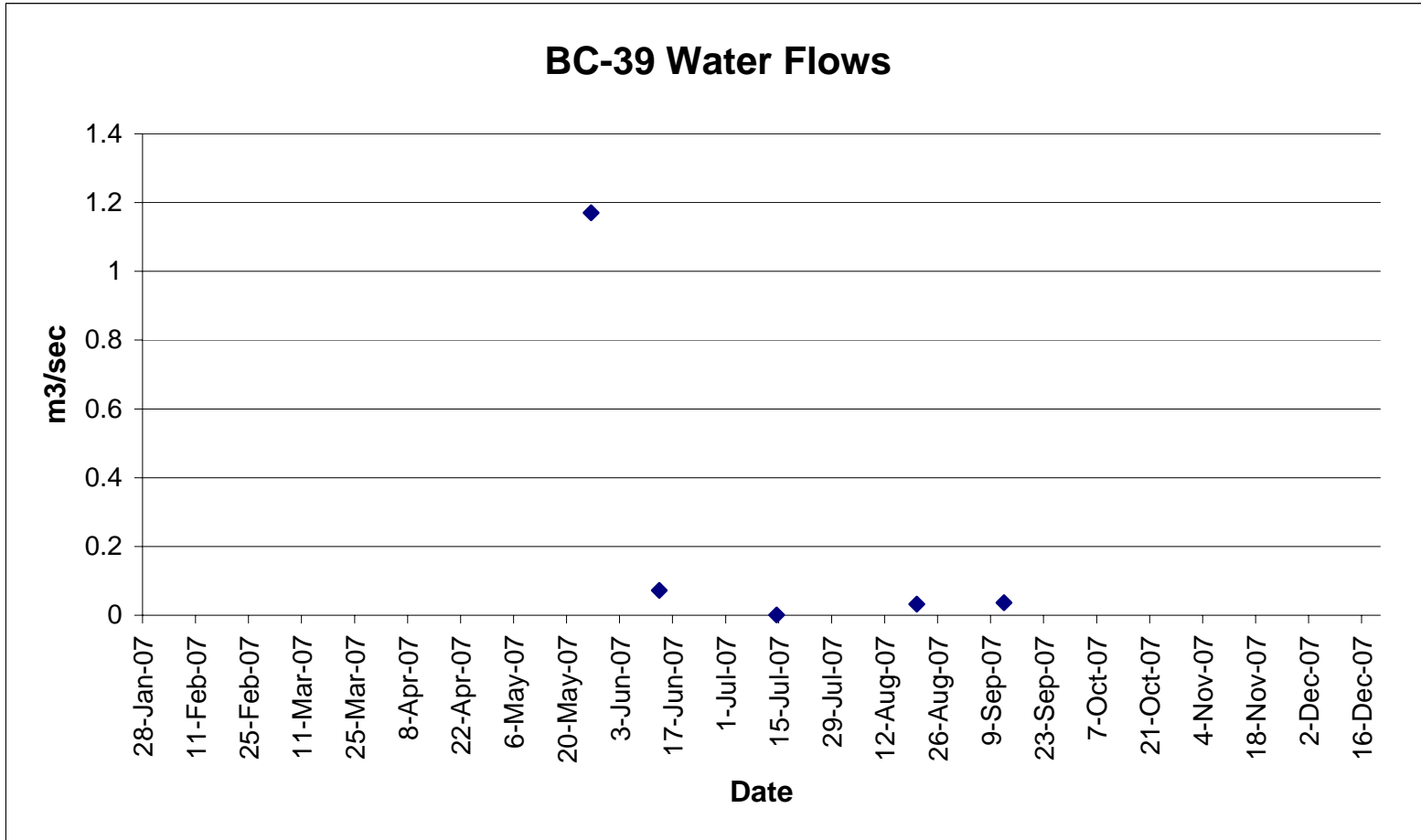


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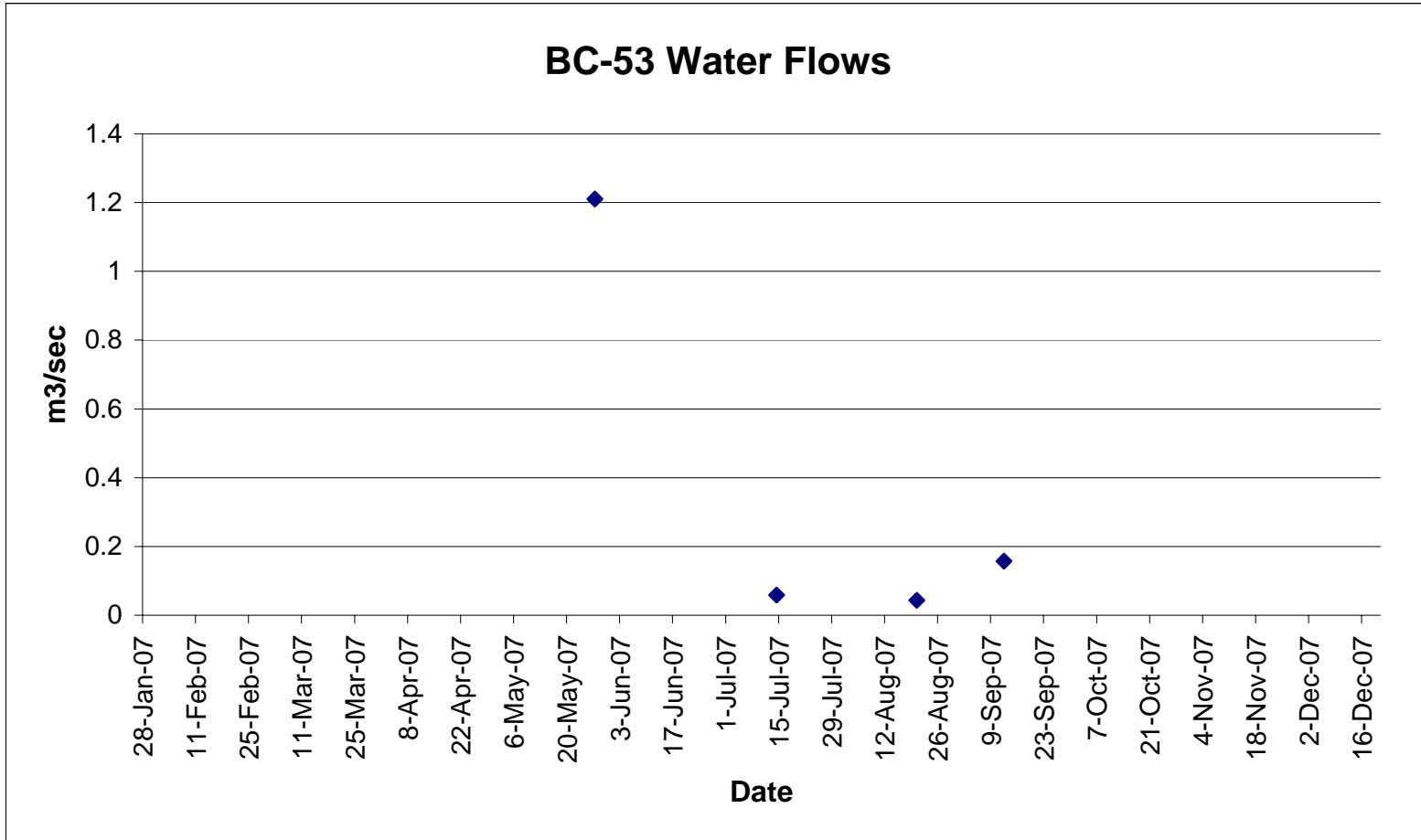




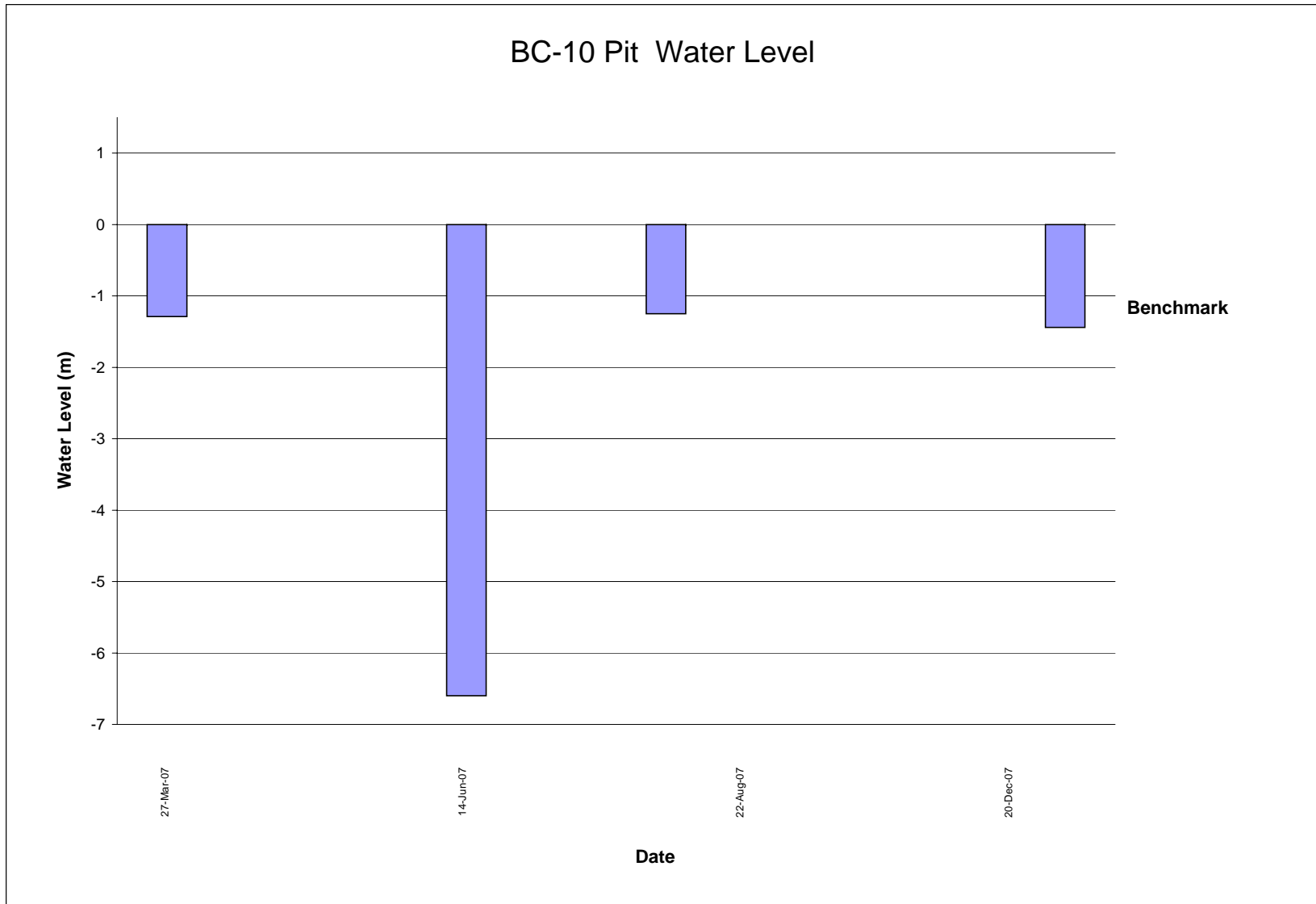
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Water Flows**



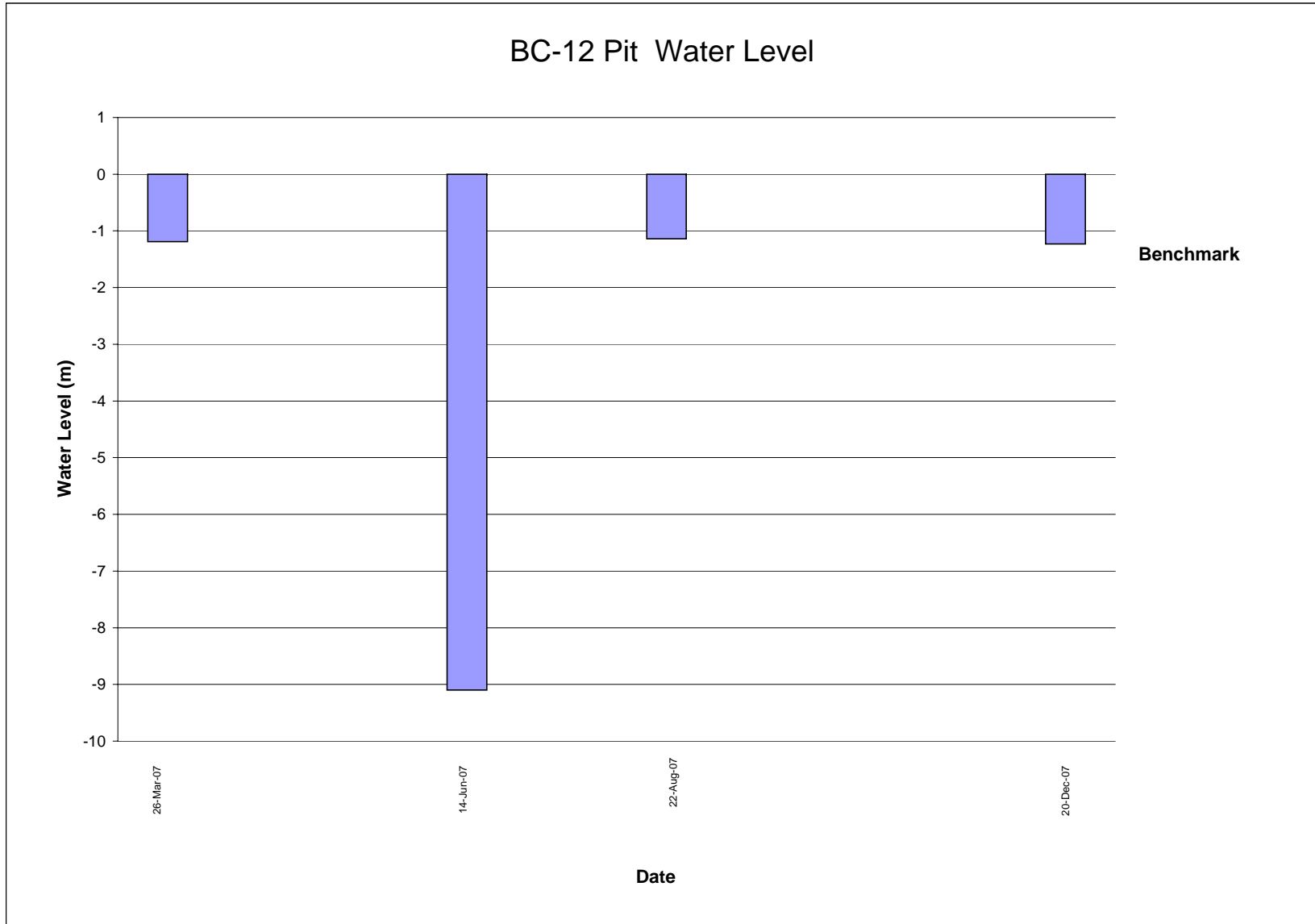
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Brewery Creek Mine  
Water Flows**



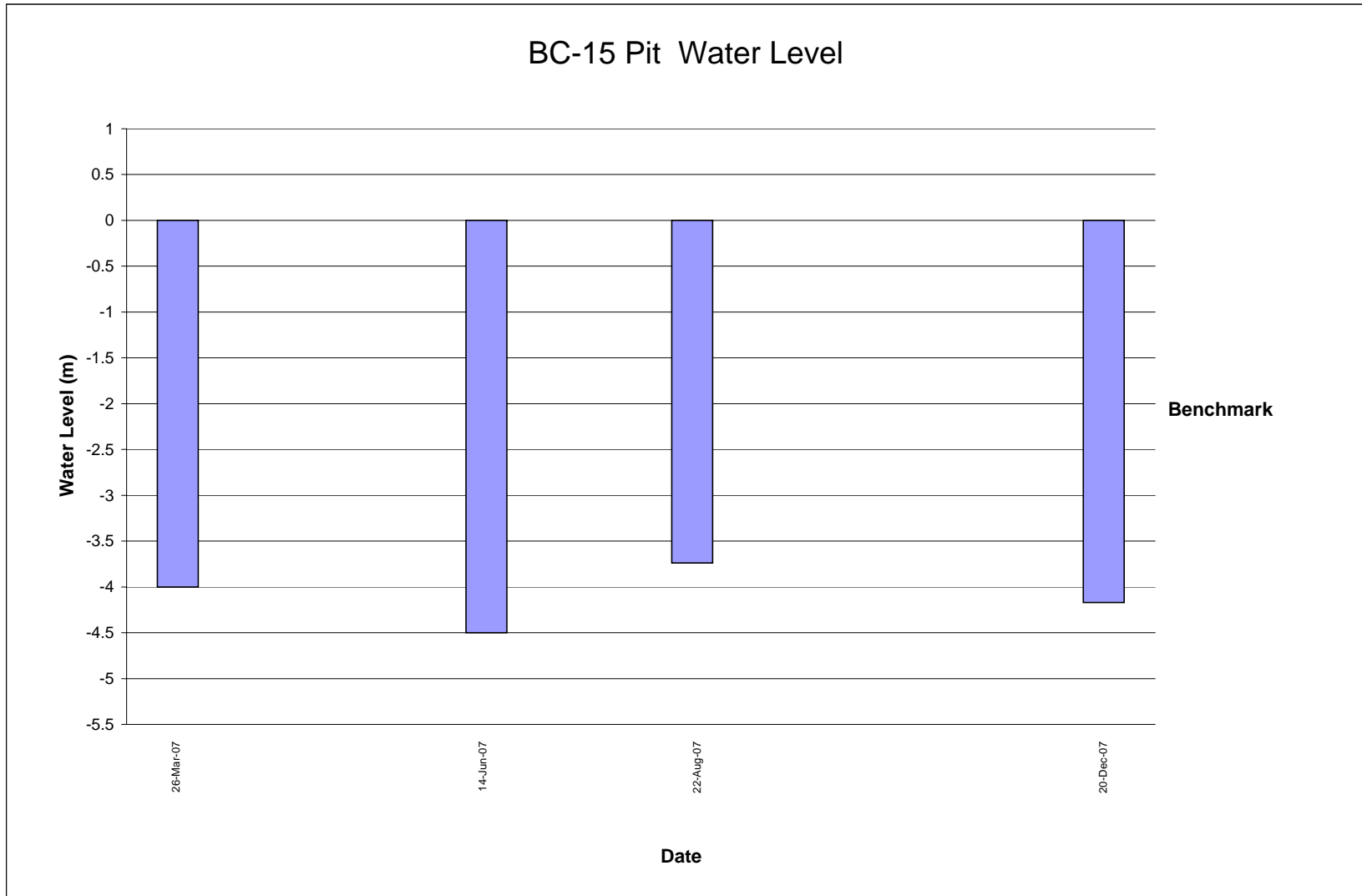
Alexco Resource Corp.  
Brewery Creek Mine  
Pit Water Levels



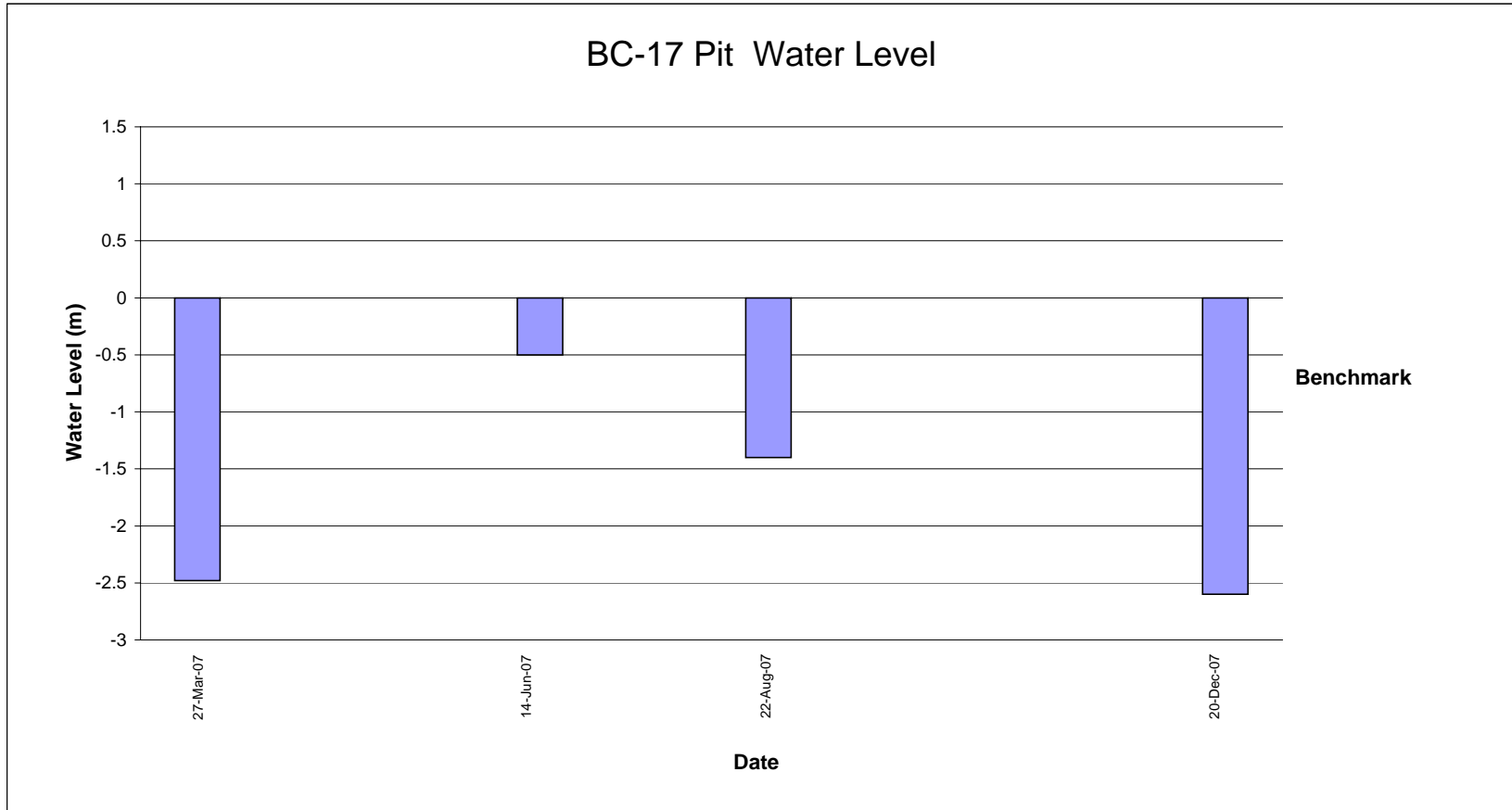
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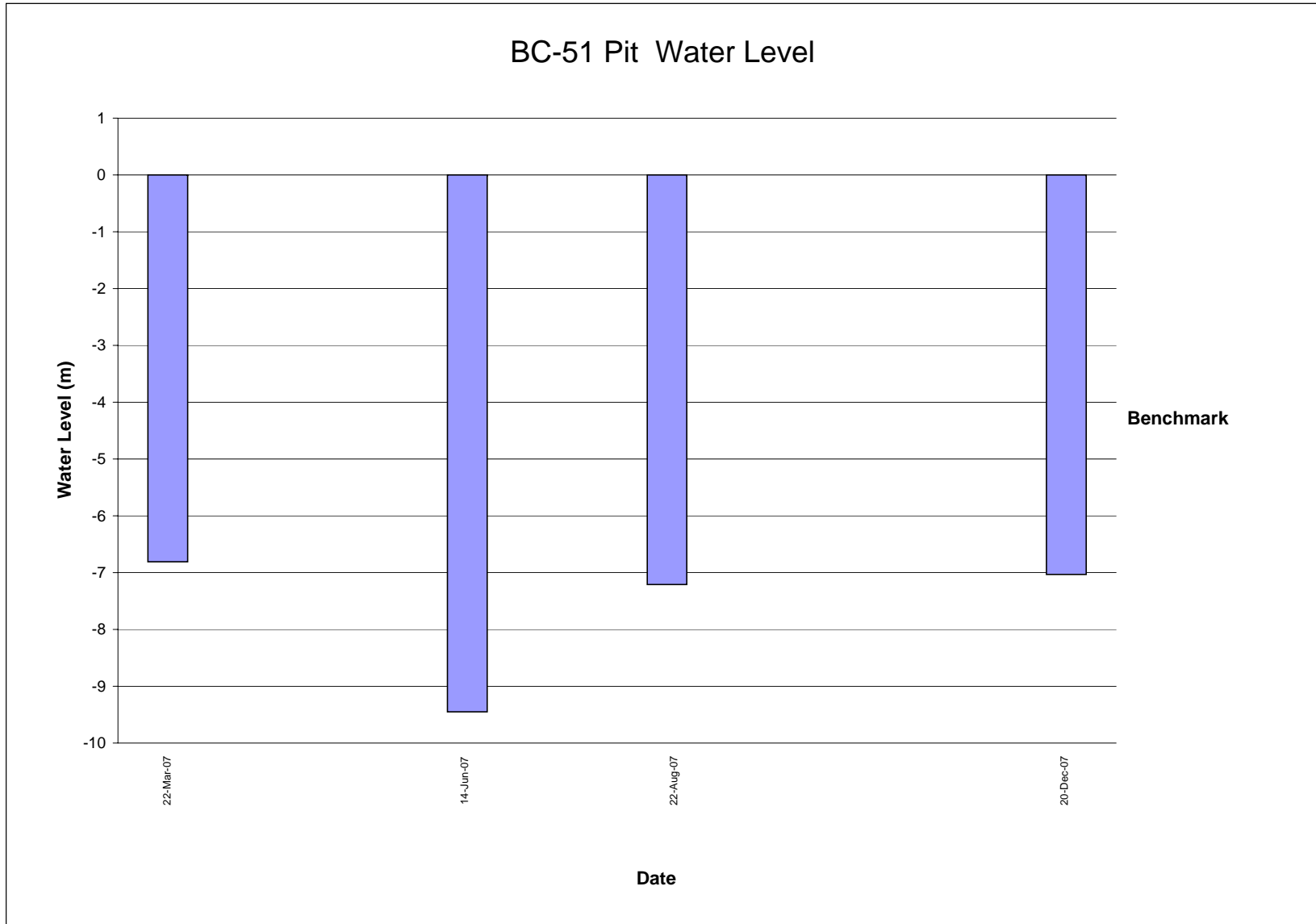
Alexco Resource Corp.  
Brewery Creek Mine  
Pit Water Levels



Alexco Resource Corp.  
Brewery Creek Mine  
Pit Water Levels



Alexco Resource Corp.  
Brewery Creek Mine  
Pit Water Levels



**Appendix D**  
**BENTHIC MONITORING**



**BIOLOGICAL MONITORING PROGRAM**

**AT**

**BREWERY CREEK, Y.T.**

**2007**

Submitted to:

**ALEXCO RESOURCE CORP.**



**ALEXCO**

Prepared by:

**B. E. Burns**

***Laberge***  
ENVIRONMENTAL SERVICES

**January 2008**

# TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	STUDY AREA .....	2
3.0	METHODS .....	4
3.1	WATER QUANTITY.....	4
3.2	WATER QUALITY .....	4
	3.2.1 Field Measurements .....	4
	3.2.2 Chemical Analyses .....	4
3.3	STREAM SEDIMENT SAMPLING .....	5
3.4	BENTHIC INVERTEBRATES.....	5
4.0	RESULTS AND DISCUSSION .....	6
4.1	WATER QUANTITY.....	6
4.2	WATER QUALITY .....	6
4.3	STREAM SEDIMENT QUALITY .....	9
4.4	BENTHIC INVERTEBRATES.....	14
	4.4.1 Abundance and Taxonomic Richness .....	14
	4.4.2 Distribution .....	17
4.5	VEGETATION ASSESSMENT AT B8, LAURA CR IN THE WETLAND .....	19
5.0	SUMMARY .....	21
6.0	REFERENCES.....	22

## APPENDICES

APPENDIX A	Photographs of the new site on Laura Creek
APPENDIX B	Water Quality Results, Brewery Creek 2007
APPENDIX C	Stream Sediment Results, Brewery Creek 2007
APPENDIX D	Benthic Invertebrate Data, 2007

## LIST OF TABLES

Table		Page
1	Site Descriptions and Locations .....	2
2	Discharge Measurements, August 21 <sup>st</sup> and 22 <sup>nd</sup> 2007.....	6
3	Water Quality at Brewery Creek Property, August 21 <sup>st</sup> and 22 <sup>nd</sup> 2007 .....	7
4	Summary of Stream Sediment Metal Concentrations, 2007 .....	9
5	Comparisons of Stream Sediment Analysis Over Time.....	12
6	Abundance and Taxonomic Richness in the Watersheds at Brewery Creek, 2007 .....	14
7	Densities (# of organisms/m <sup>2</sup> ) / Site / Sampler.....	15
8	Taxonomic Distribution of Benthic Invertebrates.....	18
9	Dominant Taxa over the Study Period .....	19

## LIST OF FIGURES

Figure		Page
1	Location of Study Area and Station Locations .....	3
2	Quarterly Concentrations of Lead at Golden Creek, 1991 to 2007 .....	9
3	Arsenic Levels in the Stream Sediments Over Time .....	13
4	Copper Levels in the Stream Sediments Over Time.....	13
5	Selenium Levels in the Stream Sediments Over Time .....	13
6	Zinc Levels in the Stream Sediments Over Time.....	13
7	Densities (#/m <sup>2</sup> ) Over Time per Sampling Date .....	16
8	Densities (#/m <sup>2</sup> ) Over Time per Site.....	16

## 1.0 INTRODUCTION

The Brewery Creek Mine, owned and operated by Alexco Resource Corp (Alexco), is located in central Yukon approximately 55 kilometres east of Dawson City. The mine operates under class 'A' Water Use License QZ96-007, originally issued as QZ94-003 in August 1995, and under Yukon Quartz Mining License A99-001 issued in 1999. The oxide reserves have been open pit mined and were subjected to a heap leach gold recovery operation. Licence number QZ96-007, amendment number seven, deals with decommissioning and monitoring activities to be conducted between April 2005 and December 2021.

Over the past several years, various reclamation and decommissioning activities have taken place. All mined areas and most of the roads have now been recontoured and planted. The ADR gold recovery plant and all buildings with the exception of the warehouse have been removed. The heap leach pad has been detoxified, recontoured and seeded. The heap effluent water was released through a combination of land application and direct release during the summer seasons of 2002 - 2005. Annual release of compliant heap effluent continues at a rate not exceeding 25,000 m<sup>3</sup>/year. Both the land applied and direct release water eventually migrate to downstream receiving waters in Laura Creek.

Laberge Environmental Services (LES) was contracted by Alexco to undertake the benthic monitoring program in 2007, as specified in Part F, Section 41, of the licence. Alexco personnel collected water quality and stream sediment samples concurrently at each of the benthic sites.

This report contains all of the data collected during the monitoring program in 2007, with some comparisons with historic studies.

## 2.0 STUDY AREA

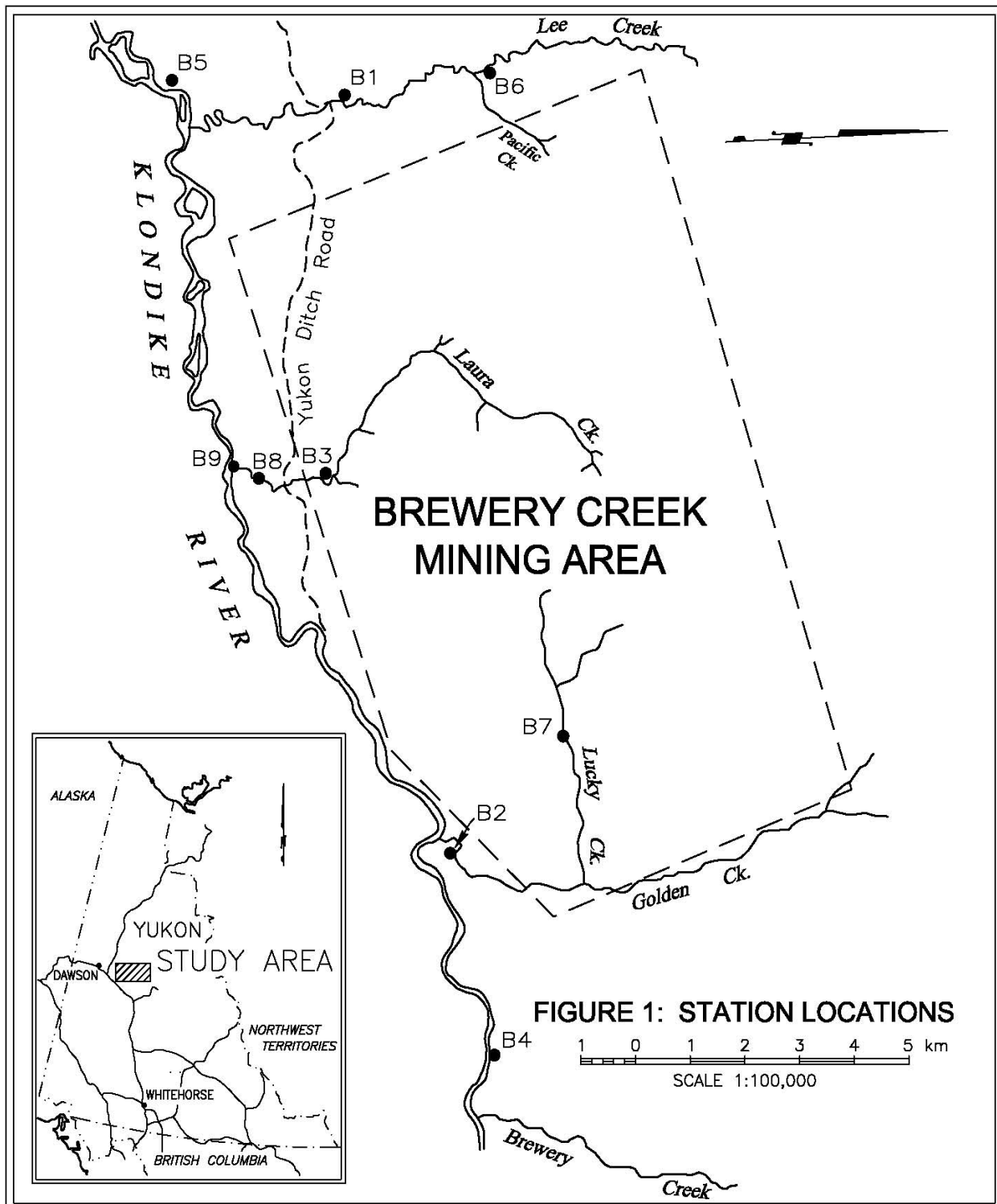
The study area is located approximately 55 kilometres east of Dawson City and north of the South Klondike River, bordered by Lee Creek on the west and Golden Creek on the east.

As specified in the Licence, seven sites, B1 to B7 (Figure 1), were sampled for benthic invertebrates, water quality and stream sediment quality. Additional sampling was undertaken to comply with components of various management plans. Specifics within the Lower Laura Creek Impact Study Plan state that benthic invertebrates are also to be collected from the water quality sites BC39 (Laura Creek u/s of the South Klondike River) and BC53 (Laura Creek in the wetland) during the regular benthos monitoring program. These sites have been named B8 and B9 respectively to follow consistency with the established nomenclature. The location and description of each of these sites is outlined in Table 1. In addition, components of the Heap Leach Pad Monitoring Program, Blue Zone Monitoring and Assessment Program and the Lower Laura Creek Impact Study Plan require the annual collection of stream sediment samples from BC39 (B9) and BC53 (B8).

The seven licensed sites were sampled for benthos in September 1994 (Burns, 1994), August 1995 (Burns, 1995), August 1997 (Burns, 1998), August 1999 (Burns, 1999), August 2001 (Burns, 2002) September 2003 (Burns, 2004) and August 2005 (Burns 2006). Similar locations were also sampled by Norecol on behalf of the Company, and by Environment Canada, Environmental Protection, in July 1991. B8 was sampled for the first time in 2003 and B9 in 2005. Some comparisons with the above referenced data have been drawn and are discussed in Section 4.4.

**TABLE 1  
SITE DESCRIPTIONS AND LOCATIONS**

<b>SITE #</b>	<b>SITE DESCRIPTION</b>	<b>COORDINATES</b>
B1	Lee Creek at Yukon Ditch Road	N 64°01'55" W 138°23'04"
B2	Golden Creek	N 64°01'51" W 138°04'57"
B3	Laura Creek	N 63°59'54" W 138°14'49"
B4	South Klondike River upstream of Golden Creek	N 64°01'14" W 138°05'29"
B5	South Klondike River downstream of Lee Creek	N 63°58'40" W 138°23'27"
B6	Lee Creek upstream of Pacific Creek	N 64°01'54" W 138°23'18"
B7	Lucky Creek	N 64°04'02" W 138°09'06"
B8	Laura Creek in the wetland	N 63°59'55" W 138°15'54"
B9	Laura Creek near mouth u/s of the South Klondike River	N 63°59'14" W 138°18'43"



**FIGURE 1: STATION LOCATIONS**

## **3.0 METHODS**

Sampling was conducted on August 21<sup>st</sup> and 22<sup>nd</sup>, 2007. With the exception of B1, B3, B8 and B9, all sites were accessed by helicopter.

### **3.1 WATER QUANTITY**

Instantaneous discharge was measured where possible. An area with a uniform cross section was chosen and the velocity and depth were measured using a Swaffer current velocity meter (model 2100). Depending on the stream width, a number of readings were taken across the profile of the stream. Total discharge was calculated as the sum of these individual discharges (area x velocity).

### **3.2 WATER QUALITY**

Water quality samples were collected at each site. The samples were collected in a fast flowing section of the stream, prior to any other sampling activity.

#### **3.2.1 Field Measurements**

In-situ measurements were taken at each site. Conductivity, total dissolved solids and water temperature were determined with a 3301 WTW conductivity meter. A UP5 Denver Instrument was used to measure pH.

#### **3.2.2 Chemical Analyses**

All sample bottles were supplied by Bodycote Laboratories, Surrey, B.C. At each site, samples were collected in a one litre plastic bottle for the analyses of nutrients, dissolved anions and for physical tests. Samples to be analyzed for total metals were collected in 250 ml plastic bottles and preserved with nitric acid. Samples to be analyzed for total cyanide were collected in one litre plastic bottles which already contained sodium hydroxide as a preservative. Samples were kept cool prior to shipment to the laboratory. The methods used by Bodycote are based on *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, published by the American Public Health Association. The procedures involve a variety of instrumental analyses including atomic emission mass spectrophotometry (ICP-MS) and atomic absorption spectrophotometry (AA) to obtain the required detection limit for each element.

### **3.3 STREAM SEDIMENT SAMPLING**

Triplicate stream sediment samples were collected at each of the nine stations. Sample sites were selected from an exposed area of the stream bank where possible, generally characterized by the finest grain size evident at the site. Samples were collected with an aluminum scoop, placed in plastic bags and shipped to Bodycote Laboratories in Surrey, BC.

At the lab, the samples were dried, passed through a 100 mesh (0.15 mm) stainless steel sieve, and then run through an ultra trace ICP to determine total metals levels.

A portion of the sample was dried and a "loss on ignition (LOI)" test performed on -100 mesh material at 600°C. A sieve analysis was also performed using 10, 20, 40, 60, 100, 140, and 270 ASTM mesh sizes. The data from these two analyses are not included in this report but are available in the 2007 annual report.

### **3.4 BENTHIC INVERTEBRATES**

Invertebrates were sampled in triplicate at the nine sites on August 21<sup>st</sup> or 22<sup>nd</sup>, 2007. The samples were collected from an undisturbed, fast flowing, gravel strewn riffle habitat (where possible) at each of the sites.

Collections were made with a Surber sampler (area = 0.0929 m<sup>2</sup>) which had a 300 micron mesh. The bed material within the frame was cleaned and washed by hand, with the fast flowing current carrying the disturbed bottom fauna and detritus into the collection bag. The level of effort for each sample and at each site was comparable. The captured invertebrates and detritus were placed in one litre nalgene bottles, preserved with 10% formalin, and shipped to an entomologist for sorting, identification and enumeration.

Analysis of the benthic invertebrate samples was conducted by Charles J. Low, PhD, an invertebrate biologist in Victoria, B.C. All samples were washed through two screens with mesh sizes 1 millimetre and 180 microns. All of the organisms retained by the coarse screen were counted and identified, whereas the organisms on the 180 micron screen were subsampled as necessary. A Folsom plankton splitter was used for the subsampling. The majority of the benthos was identified to the genus level.



## 4.0 RESULTS AND DISCUSSION

### 4.1 WATER QUANTITY

With the exception B4 and B5, discharge measurements were made at all of the sites (Table 2). The flow in the South Klondike River is too great to measure by wading. Water levels were quite low at all of the sites. It appears that there is a negative flow in Laura Creek and volumes were visibly lower at B9. It has been well documented over the years, that all or part of Laura Creek typically goes to ground between the ditch road and the South Klondike River at various times of the year.

**TABLE 2  
DISCHARGE MEASUREMENTS, AUGUST 21<sup>st</sup> & 22<sup>nd</sup> 2007**

SITE	SITE DESCRIPTION	TIME	FLOW (m <sup>3</sup> /sec)
B1	Lee Cr u/s Ditch Road	18:00	0.562
B2	Golden Creek	10:00	0.373
B3	Laura Creek u/s Yukon Ditch Road	15:30	0.111
B6	Lee Cr u/s of Pacific Creek	13:00	0.966
B7	Lucky Creek	10:45	0.032
B8	Laura Cr d/s Yukon Ditch Road	16:00	0.044
B9	Laura Cr u/s Klondike River	17:15	0.032

### 4.2 WATER QUALITY

The laboratory analyses of the water samples are presented in Appendix B.

There were five (5) parameters which fell below the method detection limit in all samples; WAD cyanide, bismuth, mercury, tin and thallium. The detected parameters had generally low concentrations with the exception of the metal cations which are a measure of water hardness.

Selected parameters are presented in Table 3. These concentrations were compared to the Canadian Council of Ministers of the Environment (CCME) 1999 guidelines, for the protection of freshwater aquatic life. Note that these guidelines have generally been established under laboratory conditions or at southern locations, usually using aquatic species exotic to the Yukon. As such, the levels recommended for aquatic life are simply guidelines, and not standards.

TABLE 3  
WATER QUALITY AT BREWERY CREEK PROPERTY, AUGUST 21 & 22, 2007

Site #	B1	B2	B3	B4	B5	B6	B7	B8	B9	Guideline*
Date	August 21	August 21	August 22	August 21	August 21	August 21	August 21	August 21	August 22	
Time	18:00	10:00	18:25	09:15	08:30	13:30	12:00	16:15	17:15	
Water Temperature °C	9.3	5.2	6.2	8.2	8.6	8.0	4.4	9.4	11.8	
Conductivity uS/cm (lab)	509	559	512	268	287	500	744	506	504	
Conductivity uS/cm (field)	476	540	483	266	287	472	706	465	492	
pH (lab)	8.3	8.11	8.18	7.93	7.96	8.21	8.09	8.23	8.31	6.5 to 9.0
pH (field)	7.97	7.76	7.51	7.02	6.9	7.82	7.59	5.95	8.17	
Discharge cms	0.562	0.373	0.111	---	---	0.966	0.032	0.044	0.032	
Total Alkalinity as CaCO3 mg/L	155	184	162	93	97	152	202	157	156	
Sulphate mg/L	133	140	133	52	60	133	244	133	133	
Ammonia Nitrogen mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	1.37**
Nitrate mg/L	<0.1	<0.1	0.2	0.1	0.1	<0.1	0.2	0.2	<0.1	
Total Cyanide mg/L	---	---	0.001	<0.001	<0.001	<0.001	---	0.001	---	0.005
Total Suspended Solids mg/L	<2	<2	28	<2	4	<2	292	16	<2	
Total Dissolved Solids mg/L (lab)	412	458	422	206	228	418	664	358	402	
Total Dissolved Solids mg/L (field)	423	486	432	236	250	420	628	411	435	
Total Metals mg/L										
Arsenic	0.0002	0.0027	0.0052	0.0004	0.0005	0.0002	0.0136	0.0047	0.0035	0.005
Cadmium	0.0001	0.0006	0.00006	0.00003	0.00005	0.00007	0.00039	0.00004	0.00002	***
Copper	0.002	0.003	0.002	<0.001	<0.001	0.001	0.009	0.002	0.001	0.003
Iron	0.2	0.3	1.2	<0.1	<0.1	<0.1	6.1	0.8	0.1	0.3
Lead	0.0006	0.062	0.0005	0.0002	0.0002	0.0007	0.0067	0.0007	0.0003	0.004
Mercury	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.0001
Selenium	0.0015	0.0014	0.0013	0.0004	0.0004	0.0017	0.0027	0.0012	0.0012	0.001
Zinc	0.015	0.042	0.01	0.006	0.007	0.011	0.042	0.007	0.006	0.03
Hardness as CaCO3 mg/L	267	299	266	130	144	266	434	265	264	

\* CCME (1999) Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life

\*\* at pH 8 and temp at 5°C

\*\*\* Varies with Hardness: For the hardness of the waters in the study area, the guideline ranges from 0.00004 to 0.00012 mg/L, according to the calculation  $10(0.86[\log(\text{hardness})]-3.2)$

Values in **bold** indicate that the CCME guideline has been exceeded

All sampled waters were cool and slightly alkaline. Sulphate levels ranged from 52 mg/L in the South Klondike River (B4) to 244 mg/L in Lucky Creek (B7).

Ammonia concentrations were very low and met the CCME guideline of 1.37 mg/L.

Alkalinity is a measure of water's ability to neutralize acid. The water bodies sampled in this survey had relatively high values (93 to 202 mg/L as CaCO<sub>3</sub>) and the waters were hard to very hard, providing this region with a relatively good buffering capacity against any alterations in pH.

Conductivity, a measure of the total concentrations of ionic constituents in water, was high at all sites, predominately due to the quantity of calcium and magnesium ions.

Water was somewhat turbid in upper Laura Creek (B3 and B8) with suspended solids readings of 28 and 16 mg/L respectively. Water was very turbid at Lucky Creek, B7, (Photo #1, Appendix A) with a TSS reading of 292 mg/L.

The CCME guideline for mercury was met at all of the sites. The CCME guidelines for the other metals listed in Table 3 were exceeded at B7, Lucky Creek. As the concentration of suspended solids was very high at B7, the total metals concentrations would tend to be relatively high as well, since the analysis was conducted on the suspended sediment as well as the component that was dissolved in the water sample.

The CCME guideline for selenium was slightly exceeded at all of the sites except for the sites on the South Klondike River (B4 and B5).

The CCME guideline for cadmium recommends a concentration of 0.000017 mg/L or the use of the formula  $10\{0.86[\log(\text{hardness})]-3.2\}$ . As the waters sampled in the study area were hard to very hard, the guideline was calculated per site and ranged from 0.00004 to 0.00012 mg/L. Based on these calculations, only B2 and B7 exceeded the guideline.

An anomalous concentration of 0.062 mg/L of lead was documented at Golden Creek, B2, which significantly exceeded the CCME guideline. Based on historic data, this concentration is not typical of this site. Quarterly samples have been collected from B2 since 1991 (Figure 2). Of 42 samples collected to date, 14 samples have had detectable lead levels. Excluding the August 2007 outlier, the mean concentration of these samples is 0.0006 mg/L and values have ranged from 0.00005 to 0.00236 mg/L. Aquatic conditions in Golden Creek at B2 have consistently been well below the lead CCME guideline of 0.004 mg/L for waters with hardness between 120 and 180 mg/L as CaCO<sub>3</sub>. It is concluded therefore, that the high concentration documented at B2 in August 2007 is an anomaly and should be disregarded.

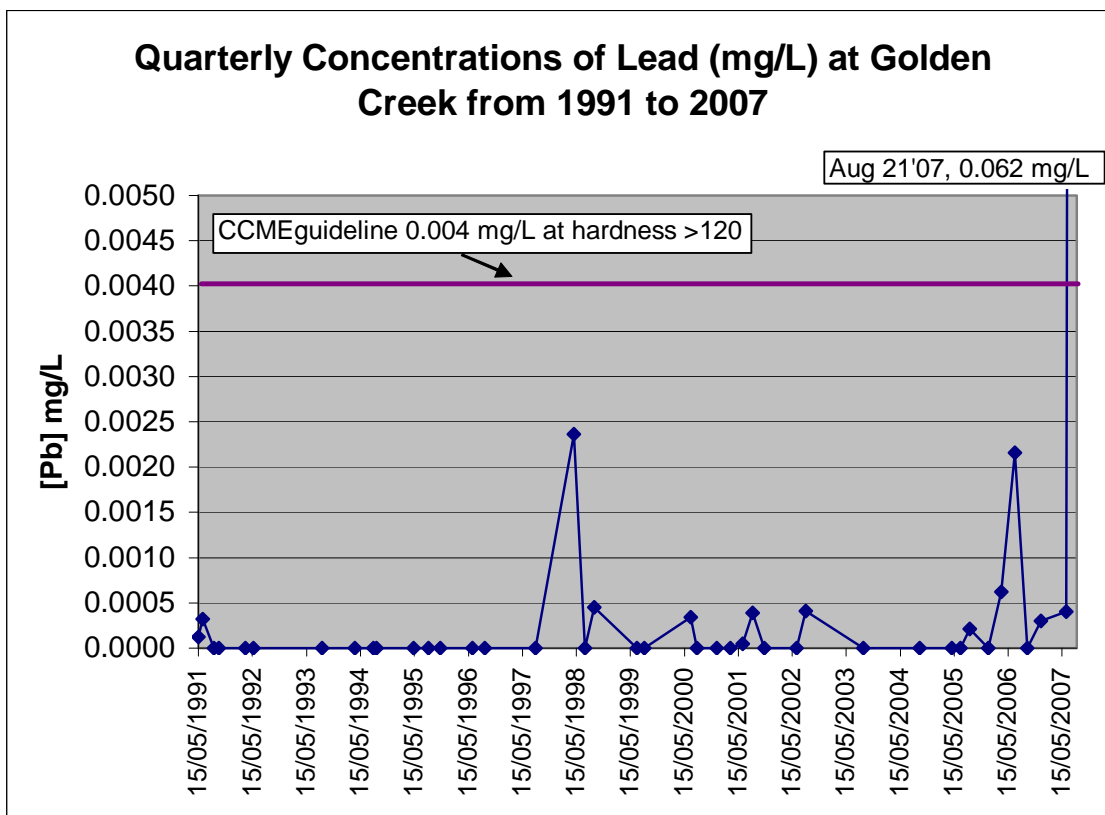


Figure 2 Quarterly Concentrations of Lead (mg/L) at Golden Creek from 1991 to 2007

The guideline for iron was exceeded at the upper Laura Creek sites (B3 and B8) as well as at Lucky Creek (B7). Concentrations of zinc slightly exceeded the CCME guideline at Golden and Lucky Creeks (B2 and B7).

### 4.3 STREAM SEDIMENT QUALITY

The results for the total metals analyses of the samples are presented in Appendix C. Of the 63 metals analyzed, 3 were below the method detection limit, boron, germanium and tantalum.

Seven elements (As, Cd, Cu, Hg, Pb, Se and Zn) were chosen for closer examination as these are either metals of concern in the study area or have the potential to be toxic to the aquatic system. The concentrations of these metals were compared to the CCME (1999) interim freshwater sediment quality guidelines (ISQG) and to the probable effects levels (PEL). Generally, concentrations greater than the PEL have a 50% incidence of creating adverse biological effects (see Table 4).

All sites exceeded the ISQG for arsenic. The concentrations in the stream sediments at the Laura Creek sites (B3, B8, B9), at Golden Creek (B2), the South Klondike River upstream of Golden Creek (B4) and Lucky Creek (B7), also exceeded the PEL. The stream sediments in Laura Creek near the mouth (B9) had the greatest concentration of arsenic (94.6 ppm).

Site #	Station Description	Arsenic ug/g	Cadmium ug/g	Copper ug/g	Lead ug/g	Mercury ug/g	Selenium ug/g	Zinc ug/g
B1	Lee Creek @ Ditch Road	<b>6.2</b>	<b>3.3</b>	<b>60.7</b>	9.5	<b>0.325</b>	2.6	<b>351</b>
B2	Golden Creek	<b>17.1</b>	<b>1.3</b>	33.7	9.9	<b>0.200</b>	1.7	<b>182</b>
B3	Laura Creek u/s Ditch Road	<b>27.7</b>	<b>0.9</b>	23.3	8.8	0.124	1.0	97
B4	S. Klondike R u/s Golden Creek	<b>17.5</b>	<b>1.2</b>	<b>121.3</b>	13.1	0.105	1.0	<b>163</b>
B5	S. Klondike R d/s Lee Creek	<b>13.2</b>	<b>1.2</b>	29.9	10.6	0.140	1.5	<b>166</b>
B6	Lee Creek u/s Pacific Creek	<b>6.5</b>	<b>3.7</b>	<b>65.3</b>	10.1	<b>0.335</b>	2.7	<b>365</b>
B7	Lucky Creek	<b>33.9</b>	<b>1.4</b>	27.1	17.8	<b>0.255</b>	1.2	121
B8	Laura Creek in Wetland	<b>24.6</b>	<b>1.1</b>	27.7	8.8	0.117	2.3	105
B9	Laura Creek u/s S. Klondike River	<b>94.6</b>	<b>2.6</b>	<b>40.9</b>	17.4	<b>0.417</b>	2.2	<b>180</b>
<b>ISQG</b>		5.9	0.6	35.7	35.0	0.170		123
<b>PEL</b>		17.0	3.5	197.0	91.3	0.486		315

Note: ISQG = Interim freshwater Sediment Quality Guidelines, in **bold** where exceeded.  
 PEL = Probable Effects Level (>50% of adverse effects occur above this level), shaded and in **bold** where exceeded.

Concentrations of cadmium in the stream sediments at all sites were greater than the ISQG. The PEL was slightly exceeded at Lee Creek u/s Pacific Creek (B6). The concentration of copper in the stream sediments was below the PEL at all sites. The ISQG was exceeded at the Lee Creek sites (B1 and B6), Laura Creek near the mouth (B9) and at the South Klondike River upstream of Golden Creek (B4), which had the highest level in the study area.

All sites met the PEL for mercury, however the ISQG was exceeded in the stream sediments at the Lee Creek sites (B1 and B6), Golden Creek (B2), Lucky Creek (B7) and Laura Creek near the mouth (B9). Concentrations of lead were very low in the stream sediments at all sites and met the applicable guidelines. The ISQG guideline for zinc was met at two of the Laura Creek sites (B3 and B8) and at Lucky Creek (B7), but exceeded at the rest. The PEL was also exceeded at the Lee Creek sites (B1 and B6).

Selenium has been identified as a metal of concern at the Brewery Creek property. There are no CCME guidelines for selenium in sediment. Concentrations ranged from 1.0 ppm in the stream sediments at the South Klondike River u/s Golden Cr (B4) and at Laura Cr u/s Ditch Road (B3) to 2.7 ppm at Lee Creek upstream of Pacific Creek (B6).

Environment Canada maintains a database on metals in stream sediments from sites around the Yukon. Of 658 analyses where selenium was detected, the mean was 2.4 ppm and concentrations ranged from 0.1 to 38.8 ppm (Davidge and Godin, 2005). The high concentrations were documented in the Mac Pass region. The concentrations reported in the Brewery Creek study area fall close to the average and are fairly representative of concentrations at most of the sites in the Yukon.

Lee Creek appears to lie within a zone of mineralization as the stream sediments collected upstream at B6, a background site, frequently had the greatest concentrations of several metals.

The 2007 stream sediment data was compared to the 1995, 1997, 1999, 2001, 2003 and 2005 data sets (Table 5). The temporal concentrations of arsenic, copper, selenium and zinc are graphed in Figures 3, 4, 5 and 6 respectively. The average for the seven sampling periods has been plotted for each metal in each graph. The detection limit for selenium in 1995 was 50 ppm, and selenium was not detected at any of the sites, hence there are no data represented for 1995 in Figure 5.

The concentrations of some of the metals have generally fluctuated over the years at some of the sites. Although this is a limited database, the following observations were noted:

- The stream sediments at B7 (Lucky Creek) have the highest average concentration of arsenic, but concentrations have steadily decreased since 1999. The concentration of arsenic in the stream sediments at B9 (Laura Creek near the mouth) has been higher than at Lucky Creek for samples collected in 2005 and 2007.
- The Lee Creek sites (B1 and B6) have the lowest average concentration of arsenic. Concentrations in the South Klondike River sites (B4 and B5) have been consistent over time.
- Copper concentrations fluctuated somewhat throughout, with very high concentrations documented at B4 (South Klondike River upstream of Golden Creek), the background site, in 1999 and 2007. There was a wide array of concentrations in the triplicate samples indicating that there may be some copper mineralization in this area.
- The stream sediments at the Lee Creek sites had the greatest mean concentrations of copper, selenium and zinc. The geochemistry of this watershed within the study area appears to be consistent as concentrations of these metals are very similar at B6, Lee Creek upstream of Pacific Creek, and downstream at B1, Lee Creek at the ditch road.

- Selenium concentrations have fluctuated a little over time at the sites, with the lowest concentrations recorded at both South Klondike River sites (B4 and B5).
- Zinc concentrations have been relatively consistent over time at all of the sites.

Metals in sediments are difficult to interpret because levels may vary widely as a function of natural mineralization of local soils in a given watershed.

<b>Metal (ppm)</b>	<b>Year</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>B8</b>	<b>B9</b>
<b>Arsenic</b>	1995	8.3	35.2	21.2	20.9	20.4	6.3	70.6		
	1997	9.4	37.8	66.4	12.2	14.3	10.7	106.6		
	1999		50.5	65.8	21.8	20.9	12.2	191.3		
	2001	11.9	35.0	71.4	22.3	18.4	12.8	158		
	2003	11.8	48.9	47.5	15.9	19.3	11.5	141.5	77.4	
	2005	9.2	36.3	40.9	16.4	13.3	9	69.8	21.8	104
	2007	6.2	17.1	27.7	17.5	13.2	6.5	33.9	24.6	94.6
	Mean	9.5	37.3	48.7	18.1	17.1	9.9	110.2	41.3	99.3
S.D.	2.2	11.0	19.9	3.7	3.4	2.7	56.1	31.3	6.6	
<b>Copper</b>	1995	70.3	61.7	30.6	30	74.7	51.8	33.8		
	1997	66.9	54.8	38.4	23.5	32.1	61.2	34.5		
	1999		95.9	40.93	115.07	52.67	82.73	49.07		
	2001	57.4	43.9	26.8	29.3	30.2	63.4	38.9		
	2003	54.7	48.1	24.8	22.4	26.5	58.3	33.9	47.6	
	2005	48.2	39.7	62.5	25.9	38	53	41	29.5	35.4
	2007	60.7	33.7	23.3	121.3	29.9	65.3	27.1	27.7	40.9
	Mean	59.7	54.0	35.3	52.5	40.6	62.2	36.9	34.9	38.1
S.D.	8.1	20.7	13.7	45.0	17.4	10.3	7.0	11.0	3.9	
<b>Selenium</b>	1995	<50	<50	<50	<50	<50	<50	<50		
	1997	3.2	2.5	3.6	0.4	0.4	3.0	2.0		
	1999		2.67	2.3	0.5	0.7	2.3	2.3		
	2001	2.99	2.6	2.1	1	1.2	3.4	3.1		
	2003	3	3	1.5	0.9	1.2	2.7	2.5	4.0	
	2005	2.3	2.2	3.5	1.0	1.6	2.4	1.9	1.4	3.1
	2007	2.6	1.7	1.0	1.0	1.5	2.7	1.2	2.3	2.2
	Mean	2.8	2.5	2.3	0.8	1.1	2.8	2.2	2.6	2.6
S.D.	0.4	0.4	1.1	0.3	0.5	0.4	0.6	1.3	0.7	
<b>Zinc</b>	1995	395	288	88	145	203	385	216		
	1997	456	306	175	125	162	416	168		
	1999		289	175	163	163	447	237		
	2001	435	297	176	159	184	448	213		
	2003	428	310	142	132	170	431	241	186	
	2005	353	297	192	168	231	335	211	122	218
	2007	351	182	97	163	166	365	121	105	180
	Mean	403	281	149	151	183	404	201	138	199
S.D.	46	60	42	16	30	54	52	43	27	

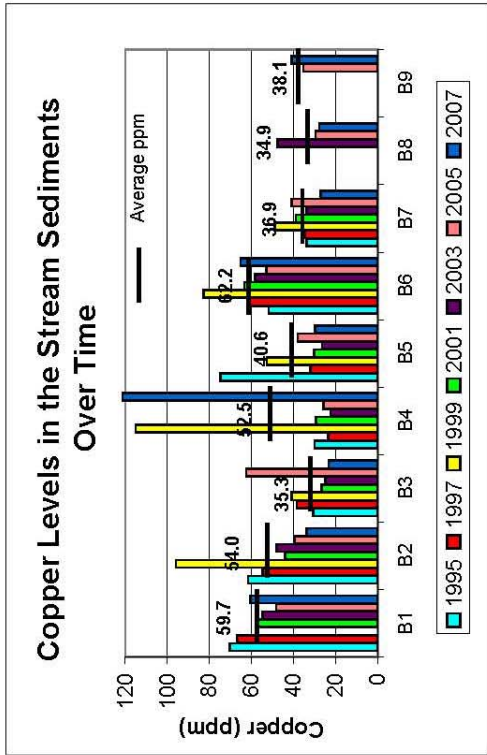


Figure 4

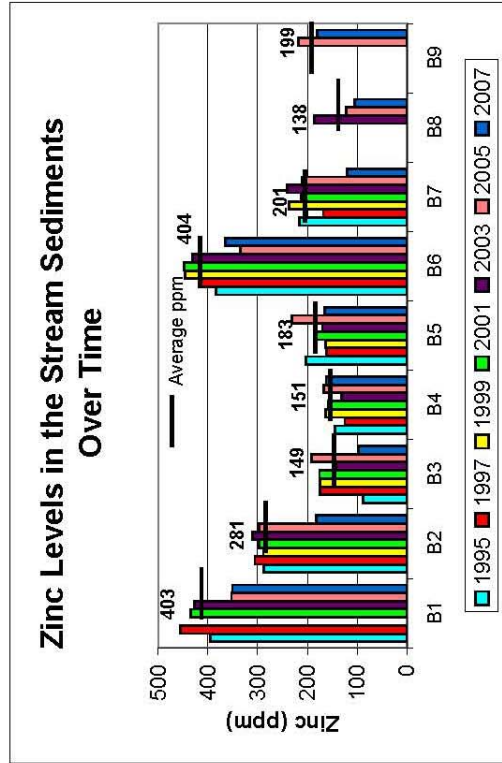


Figure 6

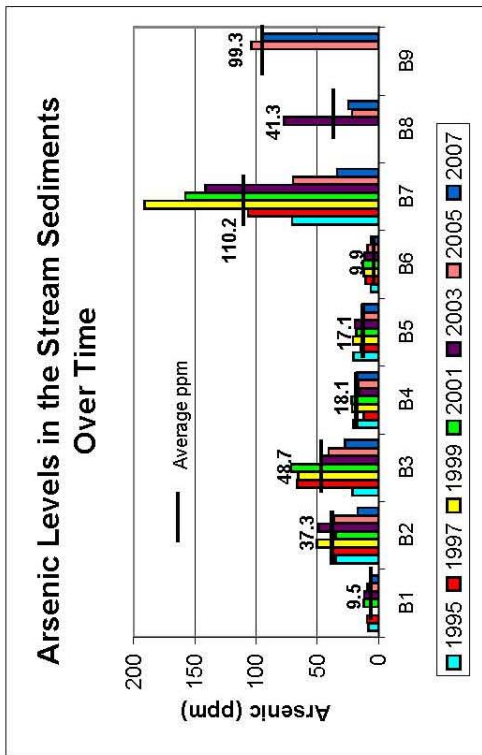


Figure 3

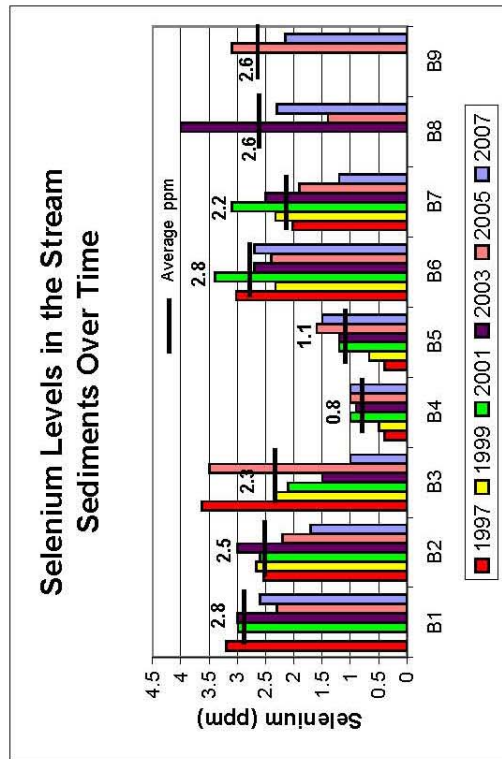


Figure 5



#### 4.4 BENTHIC INVERTEBRATES

Five phyla were found in the study area: Arthropoda, Mollusca, Annelida, Nematoda and Platyhelminthes. A total of 15,792 individual invertebrates, representing 95 different taxonomic groups, were identified within the study area. One slimy sculpin (*Cottus cognatus*) was inadvertently collected at B4, South Klondike River upstream of Golden Creek, during the benthic sampling. These data are presented in Appendix D.

##### 4.4.1 Abundance and Taxonomic Richness

Triplicate samples for benthic invertebrates were collected at each site with attempts made to collect samples representative of each site.

The number of organisms of the triplicates for each site was summed to give a total abundance value for that site. The abundance values ranged from a low of 380 individuals at Laura Creek u/s Ditch Road (B3), to a high of 3,859 individuals downstream on Laura Creek at B8 (Table 6).

<b>SITE</b>	<b>LOCATION</b>	<b>ABUNDANCE</b>	<b>DIVERSITY</b>	<b>TAXONOMIC RICHNESS INDEX</b>
B1	Lee Creek u/s Ditch Road	3,731	47	5.6
B2	Golden Creek	994	40	5.7
B3	Laura Creek u/s Ditch Road	380	30	4.9
B4	S. Klondike R u/s Golden Cr	644	36	5.4
B5	S. Klondike R d/s Lee Creek	2,254	46	5.8
B6	Lee Creek u/s Pacific Creek	1,650	38	5.0
B7	Lucky Creek	1,039	40	5.6
B8	Laura Creek in wetland	3,859	40	4.7
B9	Laura Creek near mouth	1,241	23	3.1

As a measure of community diversity, the number of taxonomic groups identified from species to phylum at each site was tallied. The diversity ranged from 23 different taxonomic groups identified at Laura Creek u/s of the South Klondike River (B9), to 47 at Lee Creek u/s the Ditch Road (B1) (Table 6).

To further characterize the taxonomic wealth of each community, the diversity was related to the population size using the formula: (Diversity –1) divided by the natural log of the population. The richness index ranged from 3.1 at B9, mirroring the documented low diversity, to the highest index, 5.8, at B5, South Klondike River d/s Lee Creek.

Overall, all the communities were diverse and relatively robust.

Densities were calculated for the population data to enable comparisons between the various samplers and dates (Table 7). The population data collected by Norecol were significantly higher than that collected by Environment Protection (EP), studies that were both conducted in July 1991. The high populations at all of the sites documented by Norecol, have also not been duplicated in the ensuing studies. Excluding the Norecol 1991 data, the populations at most of the sites have varied somewhat over the years (Figures 7 and 8). Higher populations have generally occurred at most of the sites in the recent studies conducted in 2007 and 2005. Relatively low populations were recorded at most of the sites in 1997 and 2003. However, populations at B3, Laura Creek, appear depressed since 2003. Generally populations were the densest at B1 (Lee Creek at the Ditch Road) although abundance has fluctuated notably over time. Numbers have ranged considerably in the two South Klondike communities (B4 and B5) as well. Community numbers appear to be moderately stable over time at B6 and B7.

<b>SITE</b>	<b>LES August 2007</b>	<b>LES August 2005</b>	<b>LES Sept. 2003</b>	<b>LES August 2001</b>	<b>LES August 1999</b>	<b>LES August 1997</b>	<b>LES August 1995</b>	<b>LES Sept, 1994</b>	<b>NORE-COL July, 1991</b>	<b>EP July, 1991</b>
B1	13,387	13,574	3,914	6,886	11,310	2,637	5,346	5,532	31,921	9,656
B2	3,567	7,973	2,895	2,781	4,345	1,410	7,244	8,114	19,494	1,726
B3	1,363	2,171	1,406	3,373	4,582	6,390	4,539	3,350	28,506	
B4	2,311	1,973	1,084	2,852	6,179	542	4,449	6,436	44,225	2,883
B5	8,088	18,446	1,909	3,093	7,130	466	7,155	5,946	14,590	3,748
B6	5,920	3,613	1,597	3,147	3,276	2,709	1,988	3,761	20,062	3,712
B7	3,728	3,979	4,026	4,862	2,063	954	2,321	4,646		
B8	13,846	2,386	3,732							
B9	4,453	7,521								

Many variables contribute to invertebrate productivity such as water temperature, air temperature, rainfall, canopy cover, substrate type and size, stream depth and velocity, as well as water and sediment quality.

Figure 7

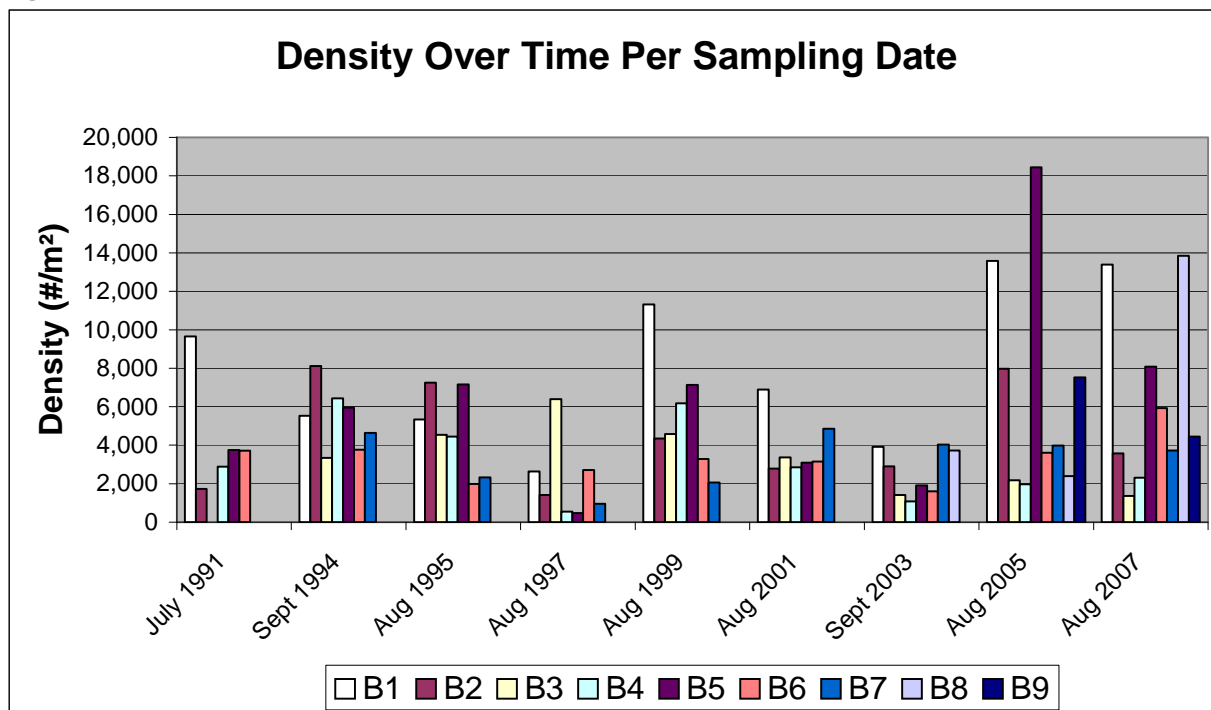
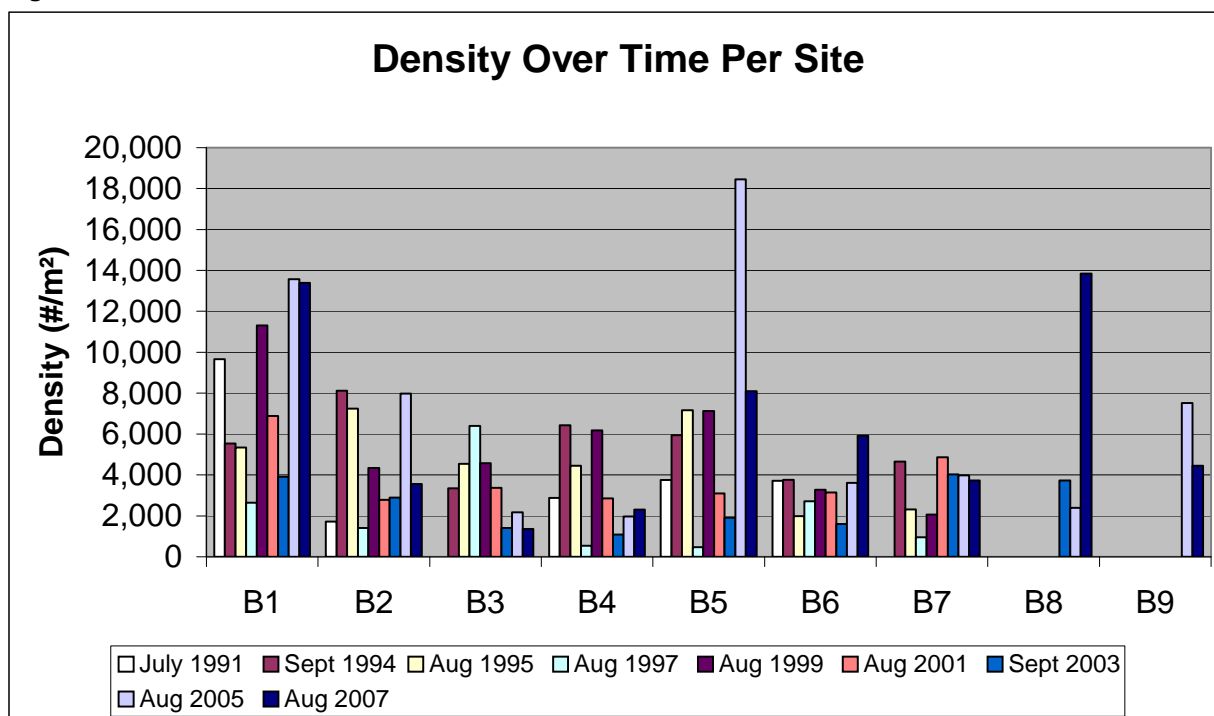


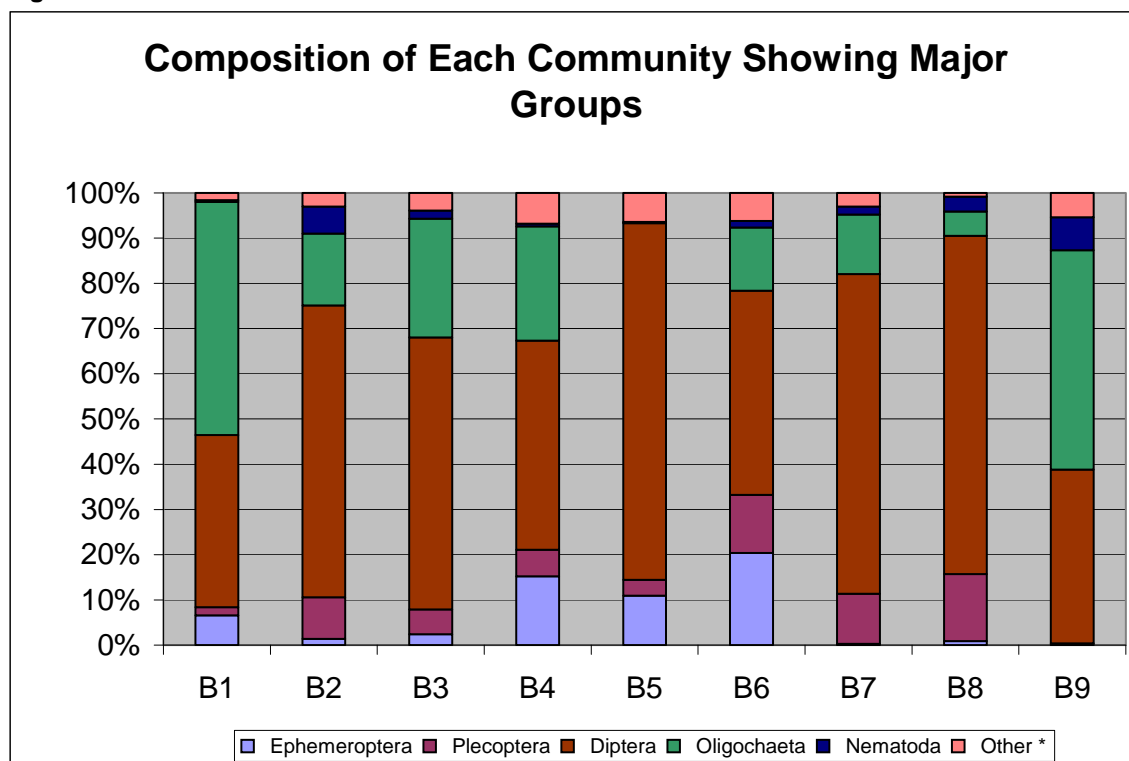
Figure 8



#### 4.4.2 Distribution

The composition of the benthos communities was displayed as a percentage of the major taxonomic groups for each station (Figure 7). Based on this, taxa were classified with respect to their dominance within the community (Table 8).

Figure 9



\* Other groups include one or more of the following; Tricoptera, Ostracoda, Thysanoptera, Platyhelminthes, Copepoda, Homoptera, Colembola, Coleoptera, Hymenoptera, Gastropoda, Hydracarina, Aranae, Amphipoda, Cladocera, unidentified insect.

Diptera (true flies) was the dominant or co-dominant group at all of the sites. The single most abundant group of invertebrates was identified from the Dipteran family Chironomidae, forming 23.9% of the invertebrates collected in the study area (Appendix D). Oligochaeta (aquatic earthworms) shared dominance at B1, B3, B4 and B9. Individuals from the family Enchytraeidae, within the Order Oligochaeta, were also abundant throughout the study area comprising 21.3% of all the invertebrates collected.

Ephemeroptera (mayflies) and/or Plecoptera (stoneflies) were subdominant at B4, B5, B6, B7 and B8. Oligochaeta was the subdominant group at B2 and B6. There were no subdominant groups at

B1, B3 or B9. The insect groups Ephemeroptera and Plecoptera were common at the sites where they were not subdominant, except at B9, Laura Creek near the mouth, where no Mayflies were collected. Nematoda and Other were either common or rare at all of the sites.

SITE	LOCATION	DOMINANT (≥25%)	SUBDOMINANT (10% to 24.9%)	COMMON (1.0% to 9.9%)	RARE (0.1% to 0.9%)
B1	Lee Creek at Klondike Ditch Road	Oligochaeta Diptera		Ephemeroptera Plecoptera Other	Nematoda
B2	Golden Creek	Diptera	Oligochaeta	Plecoptera Nematoda Other Ephemeroptera	
B3	Laura Creek	Diptera Oligochaeta		Plecoptera Other Ephemeroptera Nematoda	
B4	Klondike R u/s Golden Creek	Diptera Oligochaeta	Ephemeroptera	Other Plecoptera	Nematoda
B5	Klondike R d/s Lee Creek	Diptera	Ephemeroptera	Other Plecoptera	Oligochaeta Nematoda
B6	Lee Creek u/s Pacific Creek	Diptera	Ephemeroptera Oligochaeta Plecoptera	Other Nematoda	
B7	Lucky Creek	Diptera	Oligochaeta Plecoptera	Other Nematoda	Ephemeroptera
B8	Laura Creek in Wetland	Diptera	Plecoptera	Oligochaeta Nematoda	Ephemeroptera Other
B9	Laura Cr near mouth	Oligochaeta Diptera		Nematoda Other	Plecoptera

The distribution of the various groups of taxa has been relatively stable at each site over time. (Table 9). Insects, usually Diptera, have dominated the Klondike River sites (B4 and B5), Lucky Creek (B7) and Laura Creek in the wetland (B8). Aquatic earthworms, Oligochaetes, have generally dominated the communities at Golden Creek (B2) and Laura Creek (B3) over time. Dominance has shifted between Oligochaetes and insects at the Lee Creek sites (B1 and B6).

Oligochaetes formed a significant portion of the populations at most of the creek sites, and usually were either dominant or subdominant. The majority of the Oligochaetes at the sites were identified within the family Enchytraeidae. This family is tolerant of cold temperatures, and is often found in cold mountain streams (Pennak, 1978). High numbers of Oligochaetes have been identified throughout the study period and are ubiquitous to this area.

Site	2007	2005	2003	2001	1999	1997	1995	1994
B1	Oligochaeta & Diptera	Oligochaeta & Homoptera	Oligochaeta	Diptera	Oligochaeta	Diptera	Oligochaeta	Oligochaeta
B2	Diptera	Oligochaeta	Oligochaeta & Diptera	Oligochaeta & Nematoda	Diptera & Oligochaeta	Oligochaeta	Oligochaeta	Oligochaeta
B3	Oligochaeta & Diptera	Oligochaeta	Oligochaeta	Oligochaeta	Oligochaeta	Oligochaeta	Oligochaeta	Diptera
B4	Diptera & Oligochaeta	Diptera	Diptera & Ephemeroptera	Diptera	Diptera	Diptera	Diptera & Ephemeroptera	Ephemeroptera & Plecoptera
B5	Diptera	Diptera	Diptera	Diptera	Diptera	Diptera	Diptera	Diptera
B6	Diptera	Plecoptera & Oligochaeta	Oligochaeta & Plecoptera	Oligochaeta Diptera & Plecoptera	Diptera	Diptera & Ephemeroptera	Plecoptera & Oligochaeta	Diptera, Plecoptera & Oligochaeta
B7	Diptera	Diptera	Diptera	Diptera	Diptera	Diptera	Diptera	Diptera
B8	Diptera	Diptera	Diptera					
B9	Oligochaeta & Diptera	Plecoptera						

During the summer of 2004, a wild fire burnt the terrain in regions of the upper watershed of Lee Creek. The site B6 is located within this burn (Photo #2, Appendix A). The strip of unaffected riparian vegetation appears to have maintained the integrity of the habitat of this site. The benthic biota, in terms of numbers and composition, appear unaltered by this change in the surrounding environment.

The physical characteristics of the other sites in the study area remain unchanged over the years. Habitat data and site characteristics are available in past reports that are on file at the Yukon Territory Water Board.

#### **4.5 VEGETATION ASSESSMENT AT B8, LAURA CREEK IN THE WETLAND**

As outlined in the Lower Laura Creek Impact Study Report (Access, 2007), vegetation monitoring is recommended at B8 on a biannual basis. Photos 3 and 4 (in Appendix A) of the site, show little change as documented in the photographic record. The vegetation assessed in 2007 at the Laura Creek benthic monitoring station B8, consists of a tall shrub overstory, a low shrub understory and a riparian ground cover, including:

##### **Overstory**

*Alnus incana*  
*Betula occidentalis*  
*Salix arbusculoides*  
*Salix bebbiana*

River Alder  
Water Birch  
Little-tree Willow  
Bebb's Willow

**Understory**

<i>Betula glandulosa</i>	Dwarf Birch
<i>Picea glauca</i>	White Spruce
<i>Populus balsamifera</i>	Balsam Poplar
<i>Salix arbusculoides</i>	Little-tree Willow
<i>Salix pulchra</i>	Diamond-leaved Willow

**Ground Cover**

<i>Achillea millefolium</i>	Common Yarrow
<i>Agropyron trachycaulus</i>	Slender Wheatgrass
<i>Agrostis scabra</i>	Ticklegrass
<i>Anemone richardsonii</i>	Yellow Anemone
<i>Calamagrostis canadensis</i>	Bluejoint Reedgrass
<i>Carex aquatilis</i>	Water Sedge
<i>Crepis tectorum</i>	Annual Hawk's-beard
<i>Delphinium glaucum</i>	Tall Larkspur
<i>Epilobium angustifolium</i>	Fireweed
<i>Equisetum arvense</i>	Common Horsetail
<i>Euphrasia subarctica</i>	Eyebright
<i>Fragaria virginiana</i>	Strawberry
<i>Geum macrophyllum</i>	Avens
<i>Glyceria pulchella</i>	Manna Grass
<i>Hordeum jubatum</i>	Foxtail Barley
<i>Juncus castaneus</i>	Chestnut Rush
<i>Ledum groenlandicum</i>	Labrador Tea
<i>Matricaria matricarioides</i>	Pineappleweed
<i>Plantago major</i>	Common Plantain
<i>Poa arctica</i>	Arctic Bluegrass
<i>Poa palustris</i>	Fowl Bluegrass
<i>Polemonium acutiflorum</i>	Tall Jacob's-ladder
<i>Potentilla fruticosa</i>	Shrubby Cinquefoil
<i>Potentilla palustris</i>	Marsh Fivefinger
<i>Rorippa palustris</i>	Yellow Cress
<i>Senecio</i> sp.	Groundsel
<i>Stellaria</i> sp.	Chickweed
<i>Thalictrum sparsiflorum</i>	Meadow Rue
<i>Viola</i> sp.	Violet

## 5.0 SUMMARY

Overall, the water samples collected at the sites in this study indicated good water quality for the support of aquatic life. The CCME guidelines for the protection of freshwater aquatic life were slightly exceeded for one or more parameters at several sites. Lucky Creek was fairly turbid at the time of sampling and the CCME guidelines for several metals were exceeded in the total metals sample. An anomalous lead concentration was recorded at Golden Creek that significantly exceeded the guideline. The consistent low concentrations documented in the historic data indicate that the value recorded in August 2007 is atypical of this site and was likely a sampling or lab error.

There has been little change in the concentrations of metals in the stream sediments. Arsenic concentrations remain high in the stream sediments at all of the sites, often exceeding the concentrations that have the potential to adversely affect biotic life. However the benthic communities at all sites appear healthy and robust. Concentrations of several of the metals exceeded the ISQG and the PEL at the background sites B4 (South Klondike River upstream Golden Creek) and at B6 (Lee Creek upstream of Pacific Creek) indicating that the study area lies within a zone of mineralization.

All benthic communities were diverse with good representation from the major groups of organisms that are usually present in lotic waters. Most of the creeks supported naturally occurring high populations of Oligochaeta (aquatic earthworms). High numbers of Diptera (true flies) were documented in all of the populations. Over the years (1991, 1994, 1995, 1997, 1999, 2001, 2003, 2005 and 2007) the composition of the benthic communities has been relatively similar but there has been variation in abundance at each site.



## 6.0 REFERENCES

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**APPENDIX A**  
**PHOTOGRAPHS, 2007**



Photo #1. Turbid conditions in B7, Lucky Creek, August 21, 2007.



Photo #2. B6, Lee Creek upstream of Pacific Creek lies within a burn zone, August 21, 2007.



Photo #3. B8, Laura Creek in the wetland looking downstream, August 21, 2007.



Photo #4. B8, Laura Creek looking upstream, August 21, 2007.

**APPENDIX B**

**WATER QUALITY RESULTS, BREWERY CREEK, 2007**

Benthic Site Number	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	Detection Limit	Units
Lab Reference Number	569512-18	569512-15	569512-1	569512-22	569512-6	569512-17	569512-4	569512-25	569512-23		
Station	BC34	BC31	BC1	BC38	BC6	BC33	BC4	BC53	BC39		
Date	21-Aug-07	21-Aug-07	22-Aug-07	21-Aug-07	21-Aug-07	21-Aug-07	21-Aug-07	21-Aug-07	22-Aug-07		
Discharge	0.562	0.372525	0.11102	nm	nm	0.96638	0.0316	0.043665	0.032025		m, m <sup>3</sup> /sec
pH (field LES)	7.97	7.76	7.51	7.02	6.9	7.82	7.59	6.95	8.17		pH units
pH (field Alexco)	7.78	8.22	8.28	7.82	7.76	8.29	7.82	8.22	7.82		pH units
pH (lab)	8.3	8.11	8.18	7.93	7.96	8.21	8.09	8.23	8.31		pH units
Conductivity (field LES)	476	540	483	266	287	472	706	465	492		uS/cm
Conductivity (field Alexco)	424	472	435	222	240	421	639	432	428		uS/cm
Conductivity (lab)	509	559	512	268	287	500	744	506	504		uS/cm
Temperature (field LES)	9.3	5.2	6.2	8.2	8.6	8.0	4.4	9.4	11.8		°C
Temperature (field Alexco)	7	4.3	4.1	8.6	8.2	5.6	2.9	5.1	9.9		°C
Hardness	267	299	266	130	144	266	434	265	264		mg CaCO <sub>3</sub> /L
Alkalinity	155	184	162	93	97	152	202	157	156		mg CaCO <sub>3</sub> /L
Total Dissolved Solids	412	458	422	206	228	418	664	358	402		mg/L
Total Suspended Solids	<2	<2	28	<2	4	<2	292	16	<2		mg/L
Chloride	0.1	0.1	0.4	0.1	0.1	0.1	0.2	0.4	0.4		mg/L
Sulfate	133	140	133	52	60	133	244	133	133		mg/L
Ammonia	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01		mg/L
Nitrate	<0.1	<0.1	0.2	0.1	0.1	<0.01	0.2	0.2	<0.1		mg/L
Total Cyanide			0.001	<0.001	<0.001	<0.001		0.001			mg/L
WAD Cyanide	<0.002		<0.002	<0.002	<0.002	<0.002		<0.002			mg/L
<b>TOTAL METALS</b>											
Aluminum	0.196	0.049	0.906	0.025	0.015	0.017	4.13	0.572	0.05		mg/L
Antimony	0.0003	0.0025	0.0032	<0.0002	<0.0002	0.0002	0.0046	0.0032	0.003		mg/L
Arsenic	0.0002	0.0027	0.0052	0.0004	0.0004	0.0002	0.0136	0.0047	0.0035		mg/L
Barium	0.053	0.06	0.09	0.059	0.058	0.046	0.193	0.08	0.068		mg/L
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		mg/L
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		mg/L
Boron	0.007	0.009	0.009	0.006	0.006	0.007	0.01	0.008	0.009		mg/L
Cadmium	0.0001	0.0006	0.00006	0.00003	0.00005	0.00007	0.00039	0.00004	0.00002		mg/L
Calcium	67.1	71.5	66.1	37.5	39.6	67	106	65.9	65.6		mg/L
Chromium	0.001	0.0009	0.0021	0.0007	<0.0005	0.0017	0.0076	0.0027	<0.0005		mg/L
Cobalt	0.0001	<0.0001	0.0009	<0.0001	<0.0001	<0.0001	0.0034	0.0007	0.0003		mg/L
Copper	0.002	0.003	0.003	<0.001	<0.001	0.001	0.009	0.002	0.001		mg/L
Iron	0.2	0.3	1.2	<0.1	<0.1	<0.1	6.1	0.8	0.1		mg/L
Lead	0.0006	0.062	0.0005	0.0002	0.0002	0.0007	0.0067	0.0007	0.0003		mg/L
Lithium	0.004	0.007	0.014	0.003	0.003	0.003	0.012	0.014	0.014		mg/L
Magnesium	24.1	29.3	24.6	9.7	10.9	24.1	41.4	24.4	24.2		mg/L
Manganese	0.016	0.19	0.07	0.027	0.005	0.006	0.262	0.058	<0.005		mg/L
Mercury	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		ug/L
Molybdenum	0.001	0.002	0.003	<0.001	<0.001	0.001	0.002	0.003	0.003		mg/L
Nickel	0.0024	0.0019	0.003	0.0005	<0.0005	0.0017	0.0114	0.002	0.001		mg/L
Phosphorus											mg/L
Potassium	0.8	0.9	1.4	0.5	0.5	0.7	1.8	1.4	1.3		mg/L
Selenium	0.0015	0.0014	0.0013	0.0004	0.0004	0.0017	0.0027	0.0012	0.0012		mg/L
Silicon	2.81	3.41	6.7	2.83	2.69	2.81	10.2	6.23	4.36		mg/L
Silver	<0.0001	0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		mg/L
Sodium	1.8	2.4	5.1	2.5	2.7	1.8	2.4	4.9	5.1		mg/L
Strontium	0.296	0.366	0.346	0.243	0.242	0.294	0.565	0.35	0.343		mg/L
Sulphur	41.9	43.9	42.2	17.3	19.4	42	75.9	41.8	41.8		mg/L
Thallium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005		mg/L
Tin	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		mg/L
Titanium	0.0082	0.0034	0.0386	0.0018	0.0015	0.0029	0.193	0.028	0.0041		mg/L
Uranium	0.0019	0.0006	0.0026	0.0006	0.0008	0.0018	0.0044	0.0025	0.0028		mg/L
Vanadium	0.0028	0.0009	0.0046	0.0002	0.0003	0.0011	0.0152	0.0034	0.0013		mg/L
Zinc	0.015	0.042	0.01	0.006	0.007	0.011	0.042	0.007	0.006		mg/L

**APPENDIX C**

**STREAM SEDIMENT RESULTS, BREWERY CREEK, 2007**

	pH	Aluminum ug/g	Antimony ug/g	Arsenic ug/g	Barium ug/g	Beryllium ug/g	Bismuth ug/g	Cadmium ug/g	Calcium ug/g	Chromium ug/g	Cobalt ug/g	Copper ug/g	Iron ug/g	Lead ug/g	Lithium ug/g	Magnesium ug/g	Manganese ug/g
B1	7.8	9910	3	5.9	629	0.5	0.9	2.3	7610	23.1	10.3	47.4	27300	8.4	13.7	5500	533
B1	8.2	10300	4.2	7.6	548	0.64	1.1	4.2	8400	25.2	13.3	73.4	26600	9.9	14.4	5780	843
B1	8	11100	3.5	5.2	627	0.62	0.8	3.5	8400	25.5	12.1	61.2	27200	10.1	14.8	6000	703
<b>Mean</b>	<b>8.0</b>	<b>10437</b>	<b>3.6</b>	<b>6.2</b>	<b>601</b>	<b>0.6</b>	<b>0.9</b>	<b>3.3</b>	<b>8137</b>	<b>24.6</b>	<b>11.9</b>	<b>60.7</b>	<b>27033</b>	<b>9.5</b>	<b>14.3</b>	<b>5760</b>	<b>693</b>
<b>S.D.</b>	<b>0.2</b>	<b>607</b>	<b>0.6</b>	<b>1.2</b>	<b>46</b>	<b>0.1</b>	<b>0.2</b>	<b>1.0</b>	<b>456</b>	<b>1.3</b>	<b>1.5</b>	<b>13.0</b>	<b>379</b>	<b>0.9</b>	<b>0.6</b>	<b>251</b>	<b>155</b>
B2	7.9	9620	4	16.7	738	0.46	1.7	1.2	6140	21.2	9.23	31.2	26200	9.9	16.4	4640	401
B2	7.9	10200	4.8	18.5	778	0.55	1.7	1.6	6780	22.4	10.4	37.9	26500	10.1	17.3	4930	520
B2	7.9	10200	4.6	16.2	773	0.52	0.9	1.2	6300	22.2	9.71	31.9	26100	9.7	17.2	4920	416
<b>Mean</b>	<b>7.9</b>	<b>10007</b>	<b>4.5</b>	<b>17.1</b>	<b>763</b>	<b>0.5</b>	<b>1.4</b>	<b>1.3</b>	<b>6407</b>	<b>21.9</b>	<b>9.8</b>	<b>33.7</b>	<b>26267</b>	<b>9.9</b>	<b>17.0</b>	<b>4830</b>	<b>446</b>
<b>S.D.</b>	<b>0.0</b>	<b>335</b>	<b>0.4</b>	<b>1.2</b>	<b>22</b>	<b>0.0</b>	<b>0.5</b>	<b>0.2</b>	<b>333</b>	<b>0.6</b>	<b>0.6</b>	<b>3.7</b>	<b>208</b>	<b>0.2</b>	<b>0.5</b>	<b>165</b>	<b>65</b>
B3	7.9	9180	7.6	27.1	561	0.45	<0.5	0.98	5030	19.5	7.72	19.3	22400	8.4	13.8	4070	334
B3	7.6	11400	7.2	24.6	498	0.55	0.8	0.87	6310	22.7	9.14	25.2	24700	8.3	16.3	5020	354
B3	7.9	10000	9.2	31.3	464	0.54	0.8	0.85	5310	20.9	8.35	25.4	23600	9.7	15.4	4480	393
<b>Mean</b>	<b>7.8</b>	<b>10193</b>	<b>8.0</b>	<b>27.7</b>	<b>508</b>	<b>0.5</b>	<b>0.8</b>	<b>0.9</b>	<b>5550</b>	<b>21.0</b>	<b>8.4</b>	<b>23.3</b>	<b>23567</b>	<b>8.8</b>	<b>15.2</b>	<b>4523</b>	<b>360</b>
<b>S.D.</b>	<b>0.2</b>	<b>1123</b>	<b>1.1</b>	<b>3.4</b>	<b>49</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>673</b>	<b>1.6</b>	<b>0.7</b>	<b>3.5</b>	<b>1150</b>	<b>0.8</b>	<b>1.3</b>	<b>476</b>	<b>30</b>
B4	7.4	9250	1.5	9.2	472	0.4	1.2	1.1	4430	16.4	9.18	23.8	22800	10	18.6	4010	552
B4	7.6	10700	2.3	20.8	399	0.66	1.5	1.6	4230	19.1	13.2	121	32500	13.6	21.4	5370	892
B4	8	10500	1.9	22.4	503	0.65	0.9	1	4160	18.6	12.1	219	33900	15.6	21.7	5440	639
<b>Mean</b>	<b>7.7</b>	<b>10150</b>	<b>1.9</b>	<b>17.5</b>	<b>458</b>	<b>0.6</b>	<b>1.2</b>	<b>1.2</b>	<b>4273</b>	<b>18.0</b>	<b>11.5</b>	<b>121.3</b>	<b>29733</b>	<b>13.1</b>	<b>20.6</b>	<b>4940</b>	<b>694</b>
<b>S.D.</b>	<b>0.3</b>	<b>786</b>	<b>0.4</b>	<b>7.2</b>	<b>53</b>	<b>0.1</b>	<b>0.3</b>	<b>0.3</b>	<b>140</b>	<b>1.4</b>	<b>2.1</b>	<b>97.6</b>	<b>6045</b>	<b>2.8</b>	<b>1.7</b>	<b>806</b>	<b>177</b>
B5	7.6	10000	2.3	14.7	562	0.47	1.9	1.4	5190	18.7	9.66	28.9	26000	11	19.5	4590	552
B5	7.8	9840	1.9	11.8	522	0.5	1.1	1.1	4630	18.4	9.72	28.1	24800	10.2	19.2	4690	482
B5	7.4	10400	2	13	444	0.52	0.8	1.1	4740	19.2	9.79	32.7	25600	10.5	19.9	4770	493
<b>Mean</b>	<b>7.6</b>	<b>10080</b>	<b>2.1</b>	<b>13.2</b>	<b>509</b>	<b>0.5</b>	<b>1.3</b>	<b>1.2</b>	<b>4853</b>	<b>18.8</b>	<b>9.7</b>	<b>29.9</b>	<b>25467</b>	<b>10.6</b>	<b>19.5</b>	<b>4683</b>	<b>509</b>
<b>S.D.</b>	<b>0.2</b>	<b>288</b>	<b>0.2</b>	<b>1.5</b>	<b>60</b>	<b>0.0</b>	<b>0.6</b>	<b>0.2</b>	<b>297</b>	<b>0.4</b>	<b>0.1</b>	<b>2.5</b>	<b>611</b>	<b>0.4</b>	<b>0.4</b>	<b>90</b>	<b>38</b>
B6	8.1	10400	3.5	7.5	613	0.54	0.9	3.5	8710	24.1	10.2	58	28300	9.8	13.9	5650	515
B6	8.2	11300	2.6	5.6	718	0.63	0.7	3.9	8090	26.4	11.4	64.6	28900	9.4	15	6210	602
B6	8.3	11900	3.6	6.4	700	0.72	1	3.8	9280	29.4	14.3	73.2	30700	11.1	16.6	6660	822
<b>Mean</b>	<b>8.2</b>	<b>11200</b>	<b>3.2</b>	<b>6.5</b>	<b>677</b>	<b>0.6</b>	<b>0.9</b>	<b>3.7</b>	<b>8693</b>	<b>26.6</b>	<b>12.0</b>	<b>65.3</b>	<b>29300</b>	<b>10.1</b>	<b>15.2</b>	<b>6173</b>	<b>646</b>
<b>S.D.</b>	<b>0.1</b>	<b>755</b>	<b>0.6</b>	<b>1.0</b>	<b>56</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>595</b>	<b>2.7</b>	<b>2.1</b>	<b>7.6</b>	<b>1249</b>	<b>0.9</b>	<b>1.4</b>	<b>506</b>	<b>158</b>
B7	7.8	10700	5.5	34.1	422	0.42	1.3	1.7	11400	22.1	10.6	31.4	27600	21	15.2	6450	518
B7	8.1	10500	6.4	32.8	344	0.41	1	1.4	9840	21	10.5	27.8	26400	18.5	15.1	6270	618
B7	8.1	8810	6.9	34.7	625	0.37	1	1.1	7700	18.5	8.52	22	23500	13.8	13.3	4960	519
<b>Mean</b>	<b>8.0</b>	<b>10003</b>	<b>6.3</b>	<b>33.9</b>	<b>464</b>	<b>0.4</b>	<b>1.1</b>	<b>1.4</b>	<b>9647</b>	<b>20.5</b>	<b>9.9</b>	<b>27.1</b>	<b>25833</b>	<b>17.8</b>	<b>14.5</b>	<b>5893</b>	<b>552</b>
<b>S.D.</b>	<b>0.2</b>	<b>1038</b>	<b>0.7</b>	<b>1.0</b>	<b>145</b>	<b>0.0</b>	<b>0.2</b>	<b>0.3</b>	<b>1858</b>	<b>1.8</b>	<b>1.2</b>	<b>4.7</b>	<b>2108</b>	<b>3.7</b>	<b>1.1</b>	<b>813</b>	<b>57</b>
B8	7.4	8820	6.1	19.6	485	0.39	1	1.1	8580	17.6	7.75	19.7	20300	7.2	12.3	3910	330
B8	7.8	11400	9.1	23.8	421	0.53	0.8	0.98	6440	22.5	10.3	33.1	25600	9.7	16.4	4950	469
B8	7.5	11800	9.8	30.5	434	0.63	0.8	1.2	7110	23.1	10.8	30.4	26300	9.6	17.3	5190	466
<b>Mean</b>	<b>7.6</b>	<b>10673</b>	<b>8.3</b>	<b>24.6</b>	<b>447</b>	<b>0.5</b>	<b>0.9</b>	<b>1.1</b>	<b>7377</b>	<b>21.1</b>	<b>9.6</b>	<b>27.7</b>	<b>24067</b>	<b>8.8</b>	<b>15.3</b>	<b>4683</b>	<b>422</b>
<b>S.D.</b>	<b>0.2</b>	<b>1617</b>	<b>2.0</b>	<b>5.5</b>	<b>34</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>1095</b>	<b>3.0</b>	<b>1.6</b>	<b>7.1</b>	<b>3281</b>	<b>1.4</b>	<b>2.7</b>	<b>680</b>	<b>79</b>
B9	7.4	13300	19.5	96.5	571	0.75	2.5	2.9	6590	23.7	12.4	33.7	35000	16.9	23.6	4730	1260
B9	7.9	12800	12.4	63.3	515	0.73	1.8	1.7	6090	22.4	12.3	36.5	32200	14.8	24.4	4770	1220
B9	7.5	17500	11.7	124	691	1.08	1.9	3.1	9990	29.7	14.7	52.4	41600	20.4	30.1	6080	937
<b>Mean</b>	<b>7.6</b>	<b>14533</b>	<b>14.5</b>	<b>94.6</b>	<b>592</b>	<b>0.9</b>	<b>2.1</b>	<b>2.6</b>	<b>7557</b>	<b>25.3</b>	<b>13.1</b>	<b>40.9</b>	<b>36267</b>	<b>17.4</b>	<b>26.0</b>	<b>5193</b>	<b>1139</b>



## APPENDIX C

## CONCENTRATIONS OF METALS IN STREAM SEDIMENTS, BREWERY CREEK AUGUST 2007

pH	Aluminum ug/g	Antimony ug/g	Arsenic ug/g	Barium ug/g	Beryllium ug/g	Bismuth ug/g	Cadmium ug/g	Calcium ug/g	Chromium ug/g	Cobalt ug/g	Copper ug/g	Iron ug/g	Lead ug/g	Lithium ug/g	Magnesium ug/g	Manganese ug/g
<b>S.D.</b>	<b>0.3</b>	<b>4.3</b>	<b>30.4</b>	<b>90</b>	<b>0.2</b>	<b>0.4</b>	<b>0.8</b>	<b>2122</b>	<b>3.9</b>	<b>1.4</b>	<b>10.1</b>	<b>4826</b>	<b>2.8</b>	<b>3.5</b>	<b>768</b>	<b>176</b>

	Mercury ug/g	Molybdenum ug/g	Nickel ug/g	Phosphorus ug/g	Potassium ug/g	Selenium ug/g	Silicon ug/g	Silver ug/g	Sodium ug/g	Strontium ug/g	Thallium ug/g	Tin ug/g	Titanium ug/g	Vanadium ug/g	Zinc ug/g	Zirconium ug/g
B1	0.266	3.6	59.3	1470	974	2.6	220	<0.2	76	64.3	0.4	0.3	136	83.5	302	3.3
B1	0.400	4	74.3	1250	1120	<0.3	67	<0.2	80	69.8	0.3	1.2	126	103	385	3.3
B1	0.308	3.9	61.4	1180	1140	<0.3	50	<0.2	88	68.8	0.6	1.2	186	102	366	4
<b>Mean</b>	<b>0.325</b>	<b>3.8</b>	<b>65.0</b>	<b>1300</b>	<b>1078</b>	<b>2.6</b>	<b>112</b>		<b>81.3</b>	<b>67.6</b>	<b>0.4</b>	<b>0.9</b>	<b>149.3</b>	<b>96.2</b>	<b>351.0</b>	<b>3.5</b>
<b>S.D.</b>	<b>0.069</b>	<b>0.2</b>	<b>8.1</b>	<b>151</b>	<b>91</b>		<b>94</b>		<b>6.1</b>	<b>2.9</b>	<b>0.2</b>	<b>0.5</b>	<b>32.1</b>	<b>11.0</b>	<b>43.5</b>	<b>0.4</b>
B2	0.155	2.1	39.7	1020	757	1.7	320	<0.2	76	54.2	0.5	0.3	83.5	57.2	177	2.6
B2	0.237	2.1	41.9	975	902	<0.3	61	<0.2	83	60.9	0.5	0.6	83.3	63	192	2.5
B2	0.208	1.9	36.6	996	880	<0.3	76	<0.2	84	58.4	<0.3	0.5	101	61	178	2.5
<b>Mean</b>	<b>0.200</b>	<b>2.0</b>	<b>39.4</b>	<b>997</b>	<b>846</b>	<b>1.7</b>	<b>152</b>		<b>81.0</b>	<b>57.8</b>	<b>0.5</b>	<b>0.5</b>	<b>89.3</b>	<b>60.4</b>	<b>182.3</b>	<b>2.5</b>
<b>S.D.</b>	<b>0.042</b>	<b>0.1</b>	<b>2.7</b>	<b>23</b>	<b>78</b>		<b>145</b>		<b>4.4</b>	<b>3.4</b>	<b>0.0</b>	<b>0.2</b>	<b>10.2</b>	<b>2.9</b>	<b>8.4</b>	<b>0.1</b>
B3	0.135	1.3	23.3	830	696	1	352	<0.2	108	43.8	0.5	0.3	185	43	94	3.8
B3	0.110	1.1	27.8	741	788	<0.3	101	<0.2	135	51.8	0.2	0.4	234	46.2	94.9	4.8
B3	0.128	1.3	25	802	800	<0.3	87	<0.2	112	49.1	<0.3	1.4	181	47.2	102	3.6
<b>Mean</b>	<b>0.124</b>	<b>1.2</b>	<b>25.4</b>	<b>791</b>	<b>761</b>	<b>1.0</b>	<b>180</b>		<b>118.3</b>	<b>48.2</b>	<b>0.4</b>	<b>0.7</b>	<b>200.0</b>	<b>45.5</b>	<b>97.0</b>	<b>4.1</b>
<b>S.D.</b>	<b>0.013</b>	<b>0.1</b>	<b>2.3</b>	<b>46</b>	<b>57</b>		<b>149</b>		<b>14.6</b>	<b>4.1</b>	<b>0.2</b>	<b>0.6</b>	<b>29.5</b>	<b>2.2</b>	<b>4.4</b>	<b>0.6</b>
B4	0.084	0.87	29.8	733	652	1	245	<0.2	90	37.5	0.4	0.4	79.4	29.2	138	3
B4	0.131	2.3	42.9	929	1180	<0.3	146	<0.2	88	43.6	<0.3	6.8	47.2	47	179	4.5
B4	0.101	2	39.6	1440	1300	<0.3	203	<0.2	82	42.2	<0.3	14.6	31.9	43.6	172	6.48
<b>Mean</b>	<b>0.105</b>	<b>1.7</b>	<b>37.4</b>	<b>1034</b>	<b>1044</b>	<b>1.0</b>	<b>198</b>		<b>86.7</b>	<b>41.1</b>	<b>0.4</b>	<b>7.3</b>	<b>52.8</b>	<b>39.9</b>	<b>163.0</b>	<b>4.7</b>
<b>S.D.</b>	<b>0.024</b>	<b>0.8</b>	<b>6.8</b>	<b>365</b>	<b>345</b>		<b>50</b>		<b>4.2</b>	<b>3.2</b>	<b>0.2</b>	<b>7.1</b>	<b>24.2</b>	<b>9.4</b>	<b>21.9</b>	<b>1.7</b>
B5	0.131	1.6	35.5	851	782	1.5	189	<0.2	104	45.6	0.3	0.3	88.2	43.1	163	3
B5	0.135	1.4	32.2	820	796	<0.3	110	<0.2	96	42.9	<0.3	0.4	83.2	43.8	168	2.8
B5	0.154	1.4	32.4	824	889	<0.3	89	<0.2	99	44	<0.3	0.8	102	45.8	166	3
<b>Mean</b>	<b>0.140</b>	<b>1.5</b>	<b>33.4</b>	<b>832</b>	<b>822</b>	<b>1.5</b>	<b>129</b>		<b>99.7</b>	<b>44.2</b>	<b>0.3</b>	<b>0.5</b>	<b>91.1</b>	<b>44.2</b>	<b>165.7</b>	<b>2.9</b>
<b>S.D.</b>	<b>0.012</b>	<b>0.1</b>	<b>1.9</b>	<b>17</b>	<b>58</b>		<b>53</b>		<b>4.0</b>	<b>1.4</b>	<b>0.3</b>	<b>0.3</b>	<b>9.7</b>	<b>1.4</b>	<b>2.5</b>	<b>0.1</b>
B6	0.297	4.4	68.3	1310	983	2.7	258	<0.2	85	70.4	0.6	0.5	148	91.9	336	3.8
B6	0.345	3.8	62.2	1510	1210	<0.3	94	<0.2	80	72.5	<0.3	1.2	174	102	346	3.9
B6	0.363	4.2	76.6	1570	1360	<0.3	80	<0.2	83	80.4	0.4	1.4	173	118	413	3.8
<b>Mean</b>	<b>0.335</b>	<b>4.1</b>	<b>69.0</b>	<b>1463</b>	<b>1184</b>	<b>2.7</b>	<b>144</b>		<b>82.7</b>	<b>74.4</b>	<b>0.5</b>	<b>1.0</b>	<b>165.0</b>	<b>104.0</b>	<b>365.0</b>	<b>3.8</b>
<b>S.D.</b>	<b>0.034</b>	<b>0.3</b>	<b>7.2</b>	<b>136</b>	<b>190</b>		<b>99</b>		<b>2.5</b>	<b>5.3</b>	<b>0.1</b>	<b>0.5</b>	<b>14.7</b>	<b>13.2</b>	<b>41.9</b>	<b>0.1</b>
B7	0.295	1.1	37.8	704	878	1.2	196	<0.2	152	54.9	0.5	0.4	222	43	122	4.6
B7	0.223	0.94	32.6	672	853	<0.3	111	<0.2	156	51.9	<0.3	0.4	227	42.2	122	4.1
B7	0.246	1.2	26.7	726	732	<0.3	113	<0.2	120	48.6	<0.3	0.6	183	43	118	3.2
<b>Mean</b>	<b>0.255</b>	<b>1.1</b>	<b>32.4</b>	<b>701</b>	<b>821</b>	<b>1.2</b>	<b>140</b>		<b>142.7</b>	<b>51.8</b>	<b>0.5</b>	<b>0.5</b>	<b>210.7</b>	<b>42.7</b>	<b>120.7</b>	<b>4.0</b>
<b>S.D.</b>	<b>0.037</b>	<b>0.1</b>	<b>5.6</b>	<b>27</b>	<b>78</b>		<b>49</b>		<b>19.7</b>	<b>3.2</b>	<b>0.3</b>	<b>0.1</b>	<b>24.1</b>	<b>0.5</b>	<b>2.3</b>	<b>0.7</b>
B8	0.090	0.92	25.6	850	614	2.3	354	<0.2	111	55.9	1	<0.2	188	35.8	84.7	3.5
B8	0.118	1	30	792	794	<0.3	95	<0.2	130	51.6	<0.3	1	207	45.8	114	4.5
B8	0.143	1.2	32.4	736	860	<0.3	41	<0.2	129	57.2	0.6	0.3	195	47.8	116	4.7
<b>Mean</b>	<b>0.117</b>	<b>1.0</b>	<b>29.3</b>	<b>793</b>	<b>756</b>	<b>2.3</b>	<b>163</b>		<b>123.3</b>	<b>54.9</b>	<b>0.8</b>	<b>0.7</b>	<b>196.7</b>	<b>43.1</b>	<b>104.9</b>	<b>4.2</b>
<b>S.D.</b>	<b>0.027</b>	<b>0.1</b>	<b>3.4</b>	<b>57</b>	<b>127</b>		<b>167</b>		<b>10.7</b>	<b>2.9</b>	<b>0.3</b>	<b>0.5</b>	<b>9.6</b>	<b>6.4</b>	<b>17.5</b>	<b>0.6</b>
B9	0.375	3	41.6	990	1120	3.7	395	<0.2	96	57.8	<0.3	0.6	51.5	66.8	168	2.8
B9	0.318	2.3	33.1	796	1040	<0.3	96	<0.2	86	54.3	<0.3	1	39.3	59.8	149	2
B9	0.559	2.8	47.8	1210	1680	0.6	106	<0.2	128	86	0.8	1.1	49.4	83.3	224	3.8
<b>Mean</b>	<b>0.417</b>	<b>2.7</b>	<b>40.8</b>	<b>999</b>	<b>1280</b>	<b>2.2</b>	<b>199</b>		<b>103.3</b>	<b>66.0</b>	<b>0.8</b>	<b>0.9</b>	<b>46.7</b>	<b>70.0</b>	<b>180.3</b>	<b>2.9</b>

CONCENTRATIONS OF METALS IN STREAM SEDIMENTS, BREWERY CREEK AUGUST 2007

APPENDIX C

	Mercury ug/g	Molybdenum ug/g	Nickel ug/g	Phosphorus ug/g	Potassium ug/g	Selenium ug/g	Silicon ug/g	Silver ug/g	Sodium ug/g	Strontium ug/g	Thallium ug/g	Tin ug/g	Titanium ug/g	Vanadium ug/g	Zinc ug/g	Zirconium ug/g
<b>S.D.</b>	<b>0.126</b>	<b>0.4</b>	<b>7.4</b>	<b>207</b>	<b>349</b>	<b>2.2</b>	<b>170</b>		<b>21.9</b>	<b>17.4</b>		<b>0.3</b>	<b>6.5</b>	<b>12.1</b>	<b>39.0</b>	<b>0.9</b>

**APPENDIX D**  
**BENTHIC INVERTEBRATE DATA, 2007**

**APPENDIX D**

**BENTHIC INVERTEBRATE DATA, BREWERY CREEK 2007**

	B1A	B1B	B1C	B2A	B2B	B2C	B3A	B3B	B3C	B4A	B4B	B4C	B5A	B5B	B5C	
Fines split to:	half	half	half													
<b>PHYLUM ARTHROPODA</b>																
<b>Class Insecta</b>																
unidentified juvenile									1							
unidentified adult																
Order Ephemeroptera																
Ephemeroptera A			2													
Family Siphonuridae																
Ameletus sp		2											5		2	
Family Baetidae																
Baetis sp	7	1	4	1	1					4	1	1	1	1		
Family Heptageniidae																
Heptageniidae J													46	37	37	
Cinygmula sp		6											14	9	8	
Epeorus	67	67	72	4	3	4	9			33	34	25	6	3	1	
Heptagenia																1
Family Ephemerellidae																
Ephemerellidae J	2	7	2		1											2
Drunella doddsi	2	6											6	10	6	
Drunella flavilinia													3	5	2	
Drunella grandis													11	11	19	
Order Plecoptera																
Plecoptera J	6		14	1	5		2	1	3	1	5		5	4	5	
Family Capniidae																
Capnia sp	6		1	1	2		5			1						22
Family Nemouridae																
Podmosta sp			2				1		4	2	2					
Zapada sp	4		1	29	15	25									1	2
Family Perlodidae																
Skwala curvata															1	1
Skwala parallela			1	2	4	1	3	1	1				5		3	
Sweltsa Grp	3	16	12	1	4	1				7	8	12	17	14		
Order Trichoptera																
Trichoptera P																
Family Limnephilidae																
Limnophilidae J	2	1	1	2	1											
Apatania													4	4	8	
Ecclysomyia	4															
Family Leptoceridae																
Ceraclea											1	1				
Family Glossomatidae																
Glossosoma													1	2	2	
Family Rhyacophilidae																
Rhyacophila sp			1													
Rhyacophila J		1	1													
Rhyacophila acropedes or vao	8	6	2	1												
Order Diptera																
Diptera A		1				1										
Diptera L						1										
Family Chironomidae																
Chironomidae A		2	12	2	2		1	1			1		2	2	1	
Chironomidae J	59	89	80	13	8	46	21	7	2	43	35	17	38	31	33	
Chironomidae P	14	34	22	28	4	22	16	18	3		5	6	11	2	7	
Cardiocladius sp	92	221	84	6	1	1				7	2	1	4	3	7	
Corynoneura sp	20	74	18	15		6				2	2	1	7	7	20	
Cricotopus sp	90	100	133	116	16	143				7	58	58	414	357	670	
Diamesa sp	3	1			8	14	48	64	12	2						
Eukiefferiella sp	11	32	12			31	1	1			2	1	11	1	6	

A = adult L = larvae P = pupae J = juvenile

## APPENDIX D

## BENTHIC INVERTEBRATE DATA, BREWERY CREEK 2007

Fines split to:	B1A half	B1B half	B1C half	B2A	B2B	B2C	B3A	B3B	B3C	B4A	B4B	B4C	B5A	B5B	B5C
Euryhapsis sp				2				1							
Limnophyes															
Monodiamesa sp						1									
Parorthocladius															
Phaenopsectra															
Psectrocladius															
Rheocricotopus sp			3												1
Synorthocladius sp	25		5		7	59	17		1	1					2
Thienemannimyia											1				
Family Ceratopogonidae															
Bezzia or Palpomyia											5	5	6	5	17
Family Empididae															
Chelifera sp	3	15		22	9	6	1			1	2		1	1	1
Family Muscidae															
Limnophora sp															
Family Simuliidae															
Simuliidae A			2												
Cnephia L	4		4					2				1			
Cnephia P	16		53	2	7	3									
Prosimulium L	10	4	49		13	12	1				2		2		1
Prosimulium P															5
Simulium sp L		6	6							1		1		2	1
Simulium sp P	5		3			1			8						
Family Tipulidae															
Tipulidae (unidentified)							2								
Cryptolabis												1	1	1	
Dicronata sp			1									1	4	4	
Hexatoma													3	1	
Ormosia															
Pericoma	2		2	6	5	2				5	15	5	34	18	30
Rhabdomastix											1				
Tipula sp							1								
Order Collembola															
Collembola J						2									
Isotomurus sp					1	1	1		1						
Order Hymenoptera A			4	1								1			
Order Homoptera															
Homoptera A		2													
Homoptera Nymph															
Order Coleoptera									1						
Carabidae A (terr)															
Staphylinidae A (terr)															
Order Thysanoptera (terr)					1										
<b>Class Arachnida</b>															
Order Aranaea						1	1		1						
Order Hydracarina															
Hydracarina Unid J									1		4	1	2	2	3
Atractides											8	1	4	2	1
Lebertia													1	3	
Neumania				2							1		3		
Oribatei			2												
Sperchon	1	1		1	1					2	4	2	8	7	8
Unioncola sp		11	6	13		2				1	5	9	24	13	41

**Class Crustacea**

A = adult L = larvae P = pupae J = juvenile

**APPENDIX D**

**BENTHIC INVERTEBRATE DATA, BREWERY CREEK 2007**

	B1A	B1B	B1C	B2A	B2B	B2C	B3A	B3B	B3C	B4A	B4B	B4C	B5A	B5B	B5C
Fines split to:	half	half	half												
Order Amphipoda															
Hyaella azteca								3	1						
Order Cladocera															
Alona												1			
Sub class Copepoda															
Harpacticoida			2						1			1			
Sub class Ostracoda															
Candona sp														1	
<b>PHYLUM MOLLUSCA</b>															
<b>Class Gastropoda</b>															
Psocoptera															1
Pupillidae (terr)															
Valvata sincera								1							
<b>PHYLUM ANNELIDA</b>															
<b>Class Oligochaeta</b>															
Family Enchytraeidae J	470	775	671	18	39	89	80	2		70	44	49	2	3	
Family Lumbriculidae															
Lumbriculidae J		8			2	5	17	1							
Kincaidiana hexatheca				1		4									
<b>PHYLUM NEMATODA</b>	5	7	4	4	28	28	6		1	2	1	1	2		1
<b>PHYLUM PLATYHELMINTHES</b>															
								1							
<b>VERTEBRATES</b>															
Cottus cognatus												1			
Total per sample	941	1499	1291	294	188	512	234	104	42	192	252	200	710	567	977
Total per site	3731			994			380			644			2254		
Tax Richness per sample	28	30	35	26	26	28	20	14	16	19	29	22	37	33	36
Tax Richness per site	47			40			30			36			46		

A = adult    L = larvae    P = pupae    J = juvenile

## APPENDIX D

## BENTHIC INVERTEBRATE DATA, BREWERY CREEK 2007

Fines split to:	B6A	B6B	B6C	B7A	B7B	B7C	B8A	B8B	B8C	B9A	B9B	B9C	Totals	%
									8th	half	half	half		
<b>PHYLUM ARTHROPODA</b>														
<b>Class Insecta</b>														
unidentified juvenile													1	0.01
unidentified adult											1		1	0.01
Order Ephemeroptera														
Ephemeroptera A													2	0.01
Family Siphonuridae														
Ameletus sp					1				1				11	0.07
Family Baetidae														
Baetis sp	10	31	23	1				2	21				110	0.70
Family Heptageniidae														
Heptageniidae J	1	4	1	1				1					128	0.81
Cinygmula sp	22	8	5				1	2	4				79	0.50
Epeorus	68	78	91				2						567	3.59
Heptagenia													1	0.01
Family Ephemerellidae														
Ephemerellidae J													14	0.09
Drunella doddsi			3										33	0.21
Drunella flavilinia			1										11	0.07
Drunella grandis	1	1											43	0.27
Order Plecoptera														
Plecoptera J	11	4	3				65	17	200		4		356	2.25
Family Capniidae														
Capnia sp	43	77	49	85	14	13	1	46	177				543	3.44
Family Nemouridae														
Podmosta sp				3			6	6				1	27	0.17
Zapada sp	7	13	7										104	0.66
Family Perlodidae														
Skwala curvata													2	0.01
Skwala parallela	2	1	2				12	9	31				78	0.49
Sweltsa Grp													95	0.60
Order Trichoptera														
Trichoptera P				1									1	0.01
Family Limnephilidae														
Limnophilidae J													7	0.04
Apatania													16	0.10
Ecclysomyia				3	3	1							11	0.07
Family Leptoceridae														
Ceraclea													2	0.01
Family Glossomatidae														
Glossosoma	1												6	0.04
Family Rhyacophilidae														
Rhyacophila sp														
Rhyacophila J	1	2	1										6	0.04
Rhyacophila acropedes or vao	3	11	4				1							
Order Diptera														
Diptera A				2			1		1	3	1		10	0.06
Diptera L				6	4						1	2	14	0.09
Family Chironomidae														
Chironomidae A		1			2	2							31	0.20
Chironomidae J	50	14	13	15	23	14	868	504	1,293	280	40	139	3775	23.90
Chironomidae P	12	3	3	5	5	14	12	19	14				279	1.77
Cardiocladius sp	81	36	48					1					595	3.77
Corynoneura sp				1			3	2	8				186	1.18
Cricotopus sp	41	31	57	2	3		5	8	12				2321	14.70
Diamesa sp				112	30	71		16	10				391	2.48
Eukiefferiella sp	40	51	50	4	2		14	2					272	1.72

A = adult L = larvae P = pupae J = juvenile



## APPENDIX D

## BENTHIC INVERTEBRATE DATA, BREWERY CREEK 2007

Fines split to:	B6A	B6B	B6C	B7A	B7B	B7C	B8A	B8B	B8C	B9A	B9B	B9C	Totals	%
								8th		half	half	half		
Euryhopsis sp				3		1	2	2					11	0.07
Limnophyes				2									2	0.01
Monodiamesa sp													1	0.01
Parorthocladius							2						2	0.01
Phaenopsectra				1									1	0.01
Psectrocladius							7	7					14	0.09
Rheocricotopus sp				238	29	80		9	8	1	1		370	2.34
Synorthocladius sp	11		4	3		7		21	13	2	3		181	1.15
Thienemannimyia													1	0.01
Family Ceratopogonidae														
Bezzia or Palpomyia													38	0.24
Family Empididae														
Chelifera sp	6	1	3				1						73	0.46
Family Muscidae														
Limnophora sp			1		1		1		1				4	0.03
Family Simuliidae														
Simuliidae A													2	0.01
Cnephia L													11	0.07
Cnephia P													81	0.51
Prosimulium L	8	115	45	12	1	5	1		2				283	1.79
Prosimulium P	12	7		1									25	0.16
Simulium sp L		4	3	1					13				38	0.24
Simulium sp P									1				18	0.11
Family Tipulidae														
Tipulidae (unidentified)							1						3	0.02
Cryptolabis													3	0.02
Dicronata sp			1	5		5		3	3				28	0.18
Hexatoma													4	0.03
Ormosia				2							1	1	4	0.03
Pericoma	4	7	2	15	1	8	1					1	163	1.03
Rhabdomastix													1	0.01
Tipula sp					1					2			4	0.03
Order Collembola														
Collembola J			1							2			5	0.03
Isotomurus sp						2				13		2	21	0.13
Order Hymenoptera A						1							7	0.04
Order Homoptera														
Homoptera A				1	3						1	1	8	0.05
Homoptera Nymph							1						1	0.01
Order Coleoptera													1	0.01
Carabidae A (terr)										1			1	0.01
Staphylinidae A (terr)											1	2	3	0.02
Order Thysanoptera (terr)						1							2	0.01
<b>Class Arachnida</b>														
Order Aranaea			1						1				5	0.03
Order Hydracarina														
Hydracarina Unid J			1										14	0.09
Atractides													16	0.10
Lebertia													4	0.03
Neumania						1							7	0.04
Oribatei					2	2					2		8	0.05
Sperchon	3	1											39	0.25
Unioncola sp	8	10	1	2			1						147	0.93

**Class Crustacea**

A = adult L = larvae P = pupae J = juvenile

**APPENDIX D**

**BENTHIC INVERTEBRATE DATA, BREWERY CREEK 2007**

Fines split to:	B6A	B6B	B6C	B7A	B7B	B7C	B8A	B8B	B8C 8th	B9A half	B9B half	B9C half	Totals	%
Order Amphipoda														
Hyaella azteca													4	0.03
Order Cladocera														
Alona													1	0.01
Sub class Copepoda														
Harpacticoida				3	5		11	7		14	6	12	62	0.39
Sub class Ostracoda														
Candona sp									8		1	5	15	0.09
<b>PHYLUM MOLLUSCA</b>														
<b>Class Gastropoda</b>														
Psocoptera														1 0.01
Pupillidae (terr)											1		1	0.01
Valvata sincera													1	0.01
<b>PHYLUM ANNELIDA</b>														
<b>Class Oligochaeta</b>														
Family Enchytraeidae J	10	47	182	37	11	16	13	24	102	143	262	197	3356	21.25
Family Lumbriculidae														
Lumbriculidae J				54	2		9	1	32		1		132	0.84
Kincaidiana hexatheca				14	3			3	23				48	0.30
<b>PHYLUM NEMATODA</b>	5	7	12	9	4	6	2	4	120	32	32	26	349	2.21
<b>PHYLUM PLATYHELMINTHES</b>														
													1	0.01
<b>VERTEBRATES</b>														
Cottus cognatus														1 0.01
Total per sample	461	570	619	643	148	248	1044	716	2099	493	359	389	15792	
Total per site	1650			1039			3859			1241				
Tax Richness per sample	26	31	27	34	21	17	27	24	25	11	17	12	90	
Tax Richness per site	38			40			40			23				

A = adult    L = larvae    P = pupae    J = juvenile

**Appendix E**  
**STREAM SEDIMENT**  
**QUALITY**



## Brewery Creek Mine

## Stream Sediment Analysis: 35 Element Ultratrace ICP Scan - August 2007

Sed. Stn. BC Stn.		W05: Laura Ck. above Ditch Rd. BC-1					W15: Carolyn Ck. above Laura Ck. BC-2					W04B: Laura Ck. above Carolyn Ck. BC-3				
		A	B	C	Mean	St. dev.	A	B	C	Mean	St. dev.	A	B	C	Mean	St. dev.
Ag	ppm	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2			<0.2	<0.2	<0.2		
Al	%	9180.00	11400.00	10000.00	10193.33	1122.56	7330.00	8620.00	8020.00	7990.00	645.52	8520.00	8900.00	10400.00	9273.33	994.05
As	ppm	27.10	24.60	31.30	27.67	3.39	4.50	4.70	4.20	4.47	0.25	20.20	31.30	41.60	31.03	10.70
Au	ppb															
B	ppm															
Ba	ppm	561.00	498.00	464.00	507.67	49.22	240.00	224.00	177.00	213.67	32.75	456.00	344.00	415.00	405.00	56.67
Bi	ppm	<0.5	0.80	0.80	0.80	0.00	0.70	<0.5	<0.5	0.70		<0.5	<0.5	0.90	0.90	
Ca	%	5030.00	6310.00	5310.00	5550.00	672.90	3420.00	3780.00	3350.00	3516.67	230.72	5740.00	6590.00	7180.00	6503.33	723.90
Cd	ppm	0.98	0.87	0.85	0.90	0.07	0.20	0.20	0.20	0.20	0.00	0.99	1.30	1.50	1.26	0.26
Co	ppm	7.72	9.14	8.35	8.40	0.71	5.74	6.58	5.78	6.03	0.47	8.77	11.60	13.00	11.12	2.15
Cr	ppm	19.50	22.70	20.90	21.03	1.60	13.20	15.00	14.00	14.07	0.90	21.00	18.70	22.30	20.67	1.82
Cu	ppm	19.30	25.20	25.40	23.30	3.47	11.40	12.60	12.10	12.03	0.60	19.40	22.30	30.10	23.93	5.53
Fe	%	22400.00	24700.00	23600.00	23566.67	1150.36	16100.00	17800.00	16600.00	16833.33	873.69	21200.00	22000.00	25500.00	22900.00	2286.92
Hg	ppb	0.14	0.11	0.13	0.12	0.01	0.03	0.04	0.03	0.03	0.00	0.15	0.15	0.22	0.17	0.04
K	%	696.00	788.00	800.00	761.33	56.90	480.00	561.00	533.00	524.67	41.14	695.00	799.00	955.00	816.33	130.86
La	ppm															
Mg	%	4070.00	5020.00	4480.00	4523.33	476.48	2800.00	3210.00	3230.00	3080.00	242.69	4030.00	4400.00	4840.00	4423.33	405.50
Mn	ppm	334.00	354.00	393.00	360.33	30.01	191.00	234.00	196.00	207.00	23.52	278.00	712.00	845.00	611.67	296.52
Mo	ppm	1.30	1.10	1.30	1.23	0.12	0.30	0.30	0.30	0.30	0.00	0.93	1.10	1.20	1.08	0.14
Na	%	108.00	135.00	112.00	118.33	14.57	96.00	111.00	112.00	106.33	8.96	93.00	105.00	119.00	105.67	13.01
Ni	ppm	23.30	27.80	25.00	25.37	2.27	13.30	14.60	13.50	13.80	0.70	26.80	30.30	35.50	30.87	4.38
P	%	830.00	741.00	802.00	791.00	45.51	577.00	610.00	576.00	587.67	19.35	803.00	715.00	799.00	772.33	49.69
Pb	ppm	8.40	8.30	9.70	8.80	0.78	7.20	6.70	5.90	6.60	0.66	9.40	8.30	12.50	10.07	2.18
Sb	ppm	7.60	7.20	9.20	8.00	1.06	2.40	1.50	1.80	1.90	0.46	8.50	12.60	15.30	12.13	3.42
Se	ppm	1.00	<0.3	<0.3	1.00		0.40	<0.3	<0.3	0.40		1.30	<0.3	<0.3	1.30	
Sr	ppm	43.80	51.80	49.10	48.23	4.07	21.10	24.70	22.10	22.63	1.86	44.20	50.00	57.90	50.70	6.88
Th	ppm															
Ti	%	185.00	234.00	181.00	200.00	29.51	121.00	170.00	181.00	157.33	31.94	174.00	158.00	193.00	175.00	17.52
Tl	ppm	0.50	0.20	<0.3	0.10	0.21	0.30	<0.3	<0.3	0.30		0.50	0.40	0.30	0.40	0.10
U	ppm															
V	ppm	43.00	46.20	47.20	45.47	2.19	24.00	28.00	25.20	25.73	2.05	41.20	37.80	45.80	41.60	4.01
W	ppm															
Zn	ppm	94.00	94.90	102.00	96.97	4.38	43.20	47.30	45.10	45.20	2.05	111.00	110.00	128.00	116.33	10.12
LOI	%	4.39	6.98	5.11	5.49	1.34	3.51	4.10	2.31	3.31	0.91	5.50	7.07	7.83	6.80	1.19

LOI Loss On Ignition

Brewery Creek Mine

Sed. Stn. BC Stn.		W13: Lucky Ck. downstream of Lucky Pit BC-4					W11: Pacific Ceeek upstream from Lee Creek BC-5					W09: South Klondike down from confluence with Lee Creek: BC-6				
		A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.
Ag	ppm	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2			<0.2	<0.2	<0.2		
Al	%	10700	10500	8810	10003.33	1038.28	10100.00	9000.00	11500.00	10200.00	1253.00	10000.00	9840.00	10400.00	10080.00	288.44
As	ppm	34.1	32.8	34.7	33.87	0.97	7.00	7.20	7.50	7.23	0.25	14.70	11.80	13.00	13.17	1.46
Au	ppb															
B	ppm															
Ba	ppm	422	344	625	463.67	145.06	629.00	535.00	715.00	626.33	90.03	562.00	522.00	444.00	509.33	60.01
Bi	ppm	1.3	1	1	1.10	0.17	1.40	0.80	1.40	1.20	0.35	1.90	1.10	0.80	1.27	0.57
Ca	%	11400	9840	7700	9646.67	1857.56	7390.00	6970.00	8280.00	7546.67	668.90	5190.00	4630.00	4740.00	4853.33	296.70
Cd	ppm	1.7	1.4	1.1	1.40	0.30	2.40	2.10	3.00	2.50	0.46	1.40	1.10	1.10	1.20	0.17
Co	ppm	10.6	10.5	8.52	9.87	1.17	9.58	9.34	11.30	10.07	1.07	9.66	9.72	9.79	9.72	0.07
Cr	ppm	22.1	21	18.5	20.53	1.84	21.40	19.50	24.80	21.90	2.69	18.70	18.40	19.20	18.77	0.40
Cu	ppm	31.4	27.8	22	27.07	4.74	38.60	36.60	48.90	41.37	6.60	28.90	28.10	32.70	29.90	2.46
Fe	%	27600	26400	23500	25833.33	2107.92	24700.00	22600.00	26900.00	24733.33	2150.19	26000.00	24800.00	25600.00	25466.67	611.01
Hg	ppb	0.295	0.223	0.246	0.25	0.04	0.26	0.34	0.34	0.31	0.05	0.13	0.14	0.15	0.14	0.01
K	%	878	853	732	821.00	78.08	759.00	785.00	1030.00	858.00	149.52	782.00	796.00	889.00	822.33	58.16
La	ppm															
Mg	%	6450	6270	4960	5893.33	813.29	4560.00	4460.00	5440.00	4820.00	539.26	4590.00	4690.00	4770.00	4683.33	90.18
Mn	ppm	518	618	519	551.67	57.45	463.00	831.00	1020.00	771.33	283.25	552.00	482.00	493.00	509.00	37.64
Mo	ppm	1.1	0.94	1.2	1.08	0.13	2.10	2.00	2.40	2.17	0.21	1.60	1.40	1.40	1.47	0.12
Na	%	152	156	120	142.67	19.73	87.00	76.00	94.00	85.67	9.07	104.00	96.00	99.00	99.67	4.04
Ni	ppm	37.8	32.6	26.7	32.37	5.55	51.00	43.90	56.70	50.53	6.41	35.50	32.20	32.40	33.37	1.85
P	%	704	672	726	700.67	27.15	1040.00	949.00	1140.00	1043.00	95.54	851.00	820.00	824.00	831.67	16.86
Pb	ppm	21	18.5	13.8	17.77	3.66	7.40	6.60	7.60	7.20	0.53	11.00	10.20	10.50	10.57	0.40
Sb	ppm	5.5	6.4	6.9	6.27	0.71	2.00	2.40	2.80	2.40	0.40	2.30	1.90	2.00	2.07	0.21
Se	ppm	1.2	<0.3	<0.3	1.20		2.50	<0.3	<0.3	2.50		1.50	<0.3	<0.3	1.50	
Sr	ppm	54.9	51.9	48.6	51.80	3.15	52.10	51.40	63.30	55.60	6.68	45.60	42.90	44.00	44.17	1.36
Th	ppm															
Ti	%	222	227	183	210.67	24.09	151.00	102.00	161.00	138.00	31.58	88.20	83.20	102.00	91.13	9.74
Tl	ppm	0.5	<0.3	<0.3	0.50		0.70	<0.3	<0.3	0.70		0.30	<0.3	<0.3	0.30	
U	ppm															
V	ppm	43	42.2	43	42.73	0.46	64.00	61.50	80.10	68.53	10.09	43.10	43.80	45.80	44.23	1.40
W	ppm															
Zn	ppm	122	122	118	120.67	2.31	281.00	277.00	354.00	304.00	43.35	163.00	168.00	166.00	165.67	2.52
LOI	%	6.30	6.01	4.09	5.46	1.20	9.23	10.71	9.65	9.86	0.76	6.99	6.33	6.72	6.68	0.33

LOI Loss On Ignition

## Brewery Creek Mine

## Stream Sediment Analysis: 35 Element Ultratrace ICP Scan - August 2007

Sed. Stn. BC Stn.		W02: Golden Ck. above the Klondike BC-31					W03: Laura Ck. below Exploration Camp BC-32					W06A: Lee Ck. above Pacific Ck. BC-33				
		A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.
Ag	ppm	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2			<0.2	<0.2	<0.2		
Al	%	9620.00	10200.00	10200.00	10006.67	334.86	6640.00	6860.00	7880.00	7126.67	661.61	10400.00	11300.00	11900.00	11200.00	754.98
As	ppm	16.70	18.50	16.20	17.13	1.21	94.00	108.00	110.00	104.00	8.72	7.50	5.60	6.40	6.50	0.95
Au	ppb															
B	ppm															
Ba	ppm	738.00	778.00	773.00	763.00	21.79	612.00	642.00	758.00	670.67	77.11	613.00	718.00	700.00	677.00	56.15
Bi	ppm	1.70	1.70	0.90	1.43	0.46	1.70	1.10	1.60	1.47	0.32	0.90	0.70	1.00	0.87	0.15
Ca	%	6140.00	6780.00	6300.00	6406.67	333.07	4880.00	4680.00	5420.00	4993.33	382.80	8710.00	8090.00	9280.00	8693.33	595.18
Cd	ppm	1.20	1.60	1.20	1.33	0.23	3.30	2.70	2.70	2.90	0.35	3.50	3.90	3.80	3.73	0.21
Co	ppm	9.23	10.40	9.71	9.78	0.59	9.02	9.13	9.60	9.25	0.31	10.20	11.40	14.30	11.97	2.11
Cr	ppm	21.20	22.40	22.20	21.93	0.64	14.00	14.30	16.70	15.00	1.48	24.10	26.40	29.40	26.63	2.66
Cu	ppm	31.20	37.90	31.90	33.67	3.68	31.90	37.90	41.90	37.23	5.03	58.00	64.60	73.20	65.27	7.62
Fe	%	26200.00	26500.00	26100.00	26266.67	208.17	25900.00	26700.00	26700.00	26433.33	461.88	28300.00	28900.00	30700.00	29300.00	1249.00
Hg	ppb	0.16	0.24	0.21	0.20	0.04	0.52	0.68	0.69	0.63	0.10	0.30	0.35	0.36	0.34	0.03
K	%	757.00	902.00	880.00	846.33	78.14	808.00	986.00	951.00	915.00	94.30	983.00	1210.00	1360.00	1184.33	189.81
La	ppm															
Mg	%	4640.00	4930.00	4920.00	4830.00	164.62	2410.00	2400.00	2980.00	2596.67	332.01	5650.00	6210.00	6660.00	6173.33	506.00
Mn	ppm	401.00	520.00	416.00	445.67	64.81	523.00	629.00	578.00	576.67	53.01	515.00	602.00	822.00	646.33	158.23
Mo	ppm	2.10	2.10	1.90	2.03	0.12	4.20	4.80	4.00	4.33	0.42	4.40	3.80	4.20	4.13	0.31
Na	%	76.00	83.00	84.00	81.00	4.36	61.00	62.00	68.00	63.67	3.79	85.00	80.00	83.00	82.67	2.52
Ni	ppm	39.70	41.90	36.60	39.40	2.66	39.80	35.10	39.10	38.00	2.54	68.30	62.20	76.60	69.03	7.23
P	%	1020.00	975.00	996.00	997.00	22.52	674.00	631.00	697.00	667.33	33.50	1310.00	1510.00	1570.00	1463.33	136.14
Pb	ppm	9.90	10.10	9.70	9.90	0.20	16.10	16.40	15.10	15.87	0.68	9.80	9.40	11.10	10.10	0.89
Sb	ppm	4.00	4.80	4.60	4.47	0.42	46.00	55.30	52.20	51.17	4.74	3.50	2.60	3.60	3.23	0.55
Se	ppm	1.70	<0.3	<0.3	1.70		3.20	<0.3	<0.3	3.20		2.70	<0.3	<0.3	2.70	
Sr	ppm	54.20	60.90	58.40	57.83	3.39	56.20	63.70	65.90	61.93	5.09	70.40	72.50	80.40	74.43	5.27
Th	ppm															
Ti	%	83.50	83.30	101.00	89.27	10.16	32.00	32.40	45.50	36.63	7.68	148.00	174.00	173.00	165.00	14.73
Tl	ppm	0.50	0.50	<0.3	0.50	0.00	1.00	0.40	0.30	0.57	0.38	0.60	<0.3	0.40	0.50	0.14
U	ppm															
V	ppm	57.20	63.00	61.00	60.40	2.95	45.00	48.80	49.50	47.77	2.42	91.90	102.00	118.00	103.97	13.16
W	ppm															
Zn	ppm	177.00	192.00	178.00	182.33	8.39	176.00	171.00	187.00	178.00	8.19	336.00	346.00	413.00	365.00	41.87
LOI	%	6.45	8.61	6.90	7.32	1.14	1.75	5.98	7.02	4.92	2.79	9.79	7.73	10.56	9.36	1.46

LOI Loss On Ignition

## Brewery Creek Mine

## Stream Sediment Analysis: 35 Element Ultratrace ICP Scan - August 2007

Sed. Stn. BC Stn.		W07: Lee Ck. at the Ditch Rd. BC-34					W14: Pacific Ck. below Mine Camp BC-35					W16: Golden Ck. above Lucky Ck. BC-36				
		A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.
Ag	ppm	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2			<0.2	<0.2	<0.2		
Al	%	9910.00	10300.00	11100.00	10436.67	606.66	10100.00	10000.00	10600.00	10233.33	321.46	9550.00	9500.00	9030.00	9360.00	286.88
As	ppm	5.90	7.60	5.20	6.23	1.23	18.20	17.90	20.20	18.77	1.25	4.80	5.70	5.70	5.40	0.52
Au	ppb															
B	ppm															
Ba	ppm	629.00	548.00	627.00	601.33	46.20	775.00	755.00	829.00	786.33	38.28	466.00	334.00	308.00	369.33	84.72
Bi	ppm	0.90	1.10	0.80	0.93	0.15	1.40	1.20	1.40	1.33	0.12	1.60	1.00	0.80	1.13	0.42
Ca	%	7610.00	8400.00	8400.00	8136.67	456.11	8220.00	7040.00	8460.00	7906.67	760.09	6120.00	6060.00	5620.00	5933.33	273.01
Cd	ppm	2.30	4.20	3.50	3.33	0.96	2.90	2.00	2.80	2.57	0.49	1.20	1.40	1.40	1.33	0.12
Co	ppm	10.30	13.30	12.10	11.90	1.51	11.30	12.20	12.50	12.00	0.62	7.56	8.00	7.90	7.82	0.23
Cr	ppm	23.10	25.20	25.50	24.60	1.31	26.20	26.00	27.30	26.50	0.70	18.70	19.10	18.40	18.73	0.35
Cu	ppm	47.40	73.40	61.20	60.67	13.01	25.60	24.00	32.10	27.23	4.29	37.40	37.70	37.30	37.47	0.21
Fe	%	27300.00	26600.00	27200.00	27033.33	378.59	25200.00	26200.00	26900.00	26100.00	854.40	22800.00	23200.00	22400.00	22800.00	400.00
Hg	ppb	0.27	0.40	0.31	0.32	0.07	0.60	0.47	0.65	0.57	0.09	0.14	0.18	0.16	0.16	0.02
K	%	974.00	1120.00	1140.00	1078.00	90.62	672.00	704.00	802.00	726.00	67.73	849.00	972.00	917.00	912.67	61.61
La	ppm															
Mg	%	5500.00	5780.00	6000.00	5760.00	250.60	5050.00	5290.00	5460.00	5266.67	205.99	4280.00	4400.00	4170.00	4283.33	115.04
Mn	ppm	533.00	843.00	703.00	693.00	155.24	656.00	638.00	619.00	637.67	18.50	284.00	428.00	389.00	367.00	74.48
Mo	ppm	3.60	4.00	3.90	3.83	0.21	1.10	1.00	1.20	1.10	0.10	2.50	2.90	2.90	2.77	0.23
Na	%	76.00	80.00	88.00	81.33	6.11	88.00	87.00	89.00	88.00	1.00	75.00	79.00	74.00	76.00	2.65
Ni	ppm	59.30	74.30	61.40	65.00	8.12	66.00	50.10	57.20	57.77	7.97	36.80	37.60	36.30	36.90	0.66
P	%	1470.00	1250.00	1180.00	1300.00	151.33	832.00	863.00	840.00	845.00	16.09	1010.00	1020.00	990.00	1006.67	15.28
Pb	ppm	8.40	9.90	10.10	9.47	0.93	6.10	5.40	6.20	5.90	0.44	7.20	7.00	6.70	6.97	0.25
Sb	ppm	3.00	4.20	3.50	3.57	0.60	4.10	4.00	5.00	4.37	0.55	1.50	2.20	2.50	2.07	0.51
Se	ppm	2.60	<0.3	<0.3	2.60		2.10	<0.3	<0.3	2.10		1.90	<0.3	<0.3	1.90	
Sr	ppm	64.30	69.80	68.80	67.63	2.93	59.00	53.30	62.00	58.10	4.42	49.10	53.50	50.40	51.00	2.26
Th	ppm															
Ti	%	136.00	126.00	186.00	149.33	32.15	102.00	114.00	117.00	111.00	7.94	91.30	92.90	95.20	93.13	1.96
Tl	ppm	0.40	0.30	0.60	0.43	0.15	0.60	0.30	0.30	0.40	0.17	0.80	0.40	<0.3	0.60	0.28
U	ppm															
V	ppm	83.50	103.00	102.00	57.81	10.98	50.80	51.40	56.40	52.87	3.07	61.60	70.40	69.90	67.30	4.94
W	ppm															
Zn	ppm	302.00	385.00	366.00	351.00	43.49	395.00	347.00	403.00	381.67	30.29	189.00	222.00	208.00	206.33	16.56
LOI	%	2.91	12.04	9.86	8.27	4.77	10.40	7.65	10.05	9.37	1.50	7.33	6.47	6.08	6.63	0.64

LOI Loss On Ignition



## Brewery Creek Mine

## Stream Sediment Analysis: 35 Element Ultratrace ICP Scan - August 2007

Sed. Stn. BC Stn.		W05A: Laura Ck. at the Ditch Rd. BC-37					W08: Klondike above Golden Ck. BC-38				
		A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.
Ag	ppm	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2		
Al	%	10300.00	10000.00	11800.00	10700.00	964.37	9250.00	10700.00	10500.00	10150.00	785.81
As	ppm	25.90	20.40	24.70	23.67	2.89	9.20	20.80	22.40	17.47	7.20
Au	ppb										
B	ppm										
Ba	ppm	490.00	368.00	394.00	417.33	64.26	472.00	399.00	503.00	458.00	53.39
Bi	ppm	1.20	<0.5	<0.5	1.20		1.20	1.50	0.90	1.20	0.30
Ca	%	6730.00	5690.00	6220.00	6213.33	520.03	4430.00	4230.00	4160.00	4273.33	140.12
Cd	ppm	1.20	0.98	0.89	1.02	0.16	1.10	1.60	1.00	1.23	0.32
Co	ppm	9.20	8.62	9.35	9.06	0.39	9.18	13.20	12.10	11.49	2.08
Cr	ppm	21.40	19.80	22.50	21.23	1.36	16.40	19.10	18.60	18.03	1.44
Cu	ppm	28.40	21.10	25.60	25.03	3.68	23.80	121.00	219.00	121.27	97.60
Fe	%	23300.00	22100.00	25000.00	23466.67	1457.17	22800.00	32500.00	33900.00	29733.33	6045.11
Hg	ppb	0.11	0.09	0.13	0.11	0.02	0.08	0.13	0.10	0.11	0.02
K	%	711.00	754.00	806.00	757.00	47.57	652.00	1180.00	1300.00	1044.00	344.74
La	ppm										
Mg	%	4490.00	4510.00	5090.00	4696.67	340.78	4010.00	5370.00	5440.00	4940.00	806.16
Mn	ppm	418.00	442.00	367.00	409.00	38.30	552.00	892.00	639.00	694.33	176.62
Mo	ppm	1.20	0.93	0.99	1.04	0.14	0.87	2.30	2.00	1.72	0.75
Na	%	118.00	125.00	137.00	126.67	9.61	90.00	88.00	82.00	86.67	4.16
Ni	ppm	29.20	25.70	28.00	27.63	1.78	29.80	42.90	39.60	37.43	6.81
P	%	689.00	753.00	694.00	712.00	35.59	733.00	929.00	1440.00	1034.00	365.01
Pb	ppm	11.60	7.50	8.40	9.17	2.15	10.00	13.60	15.60	13.07	2.84
Sb	ppm	7.60	7.30	7.70	7.53	0.21	1.50	2.30	1.90	1.90	0.40
Se	ppm	1.50	<0.3	<0.3	1.50		1.00	<0.3	<0.3	1.00	
Sr	ppm	50.50	45.30	50.20	48.67	2.92	37.50	43.60	42.20	41.10	3.20
Th	ppm										
Ti	%	186.00	220.00	220.00	208.67	19.63	79.40	47.20	31.90	52.83	24.25
Tl	ppm	0.30	<0.3	<0.3	0.30		0.40	<0.3	<0.3	0.40	
U	ppm										
V	ppm	41.40	41.90	44.00	42.43	1.38	29.20	47.00	43.60	39.93	9.45
W	ppm										
Zn	ppm	125.00	90.80	94.60	103.47	18.74	138.00	179.00	172.00	163.00	21.93
LOI	%	1.51	5.35	3.46	3.44	1.92	6.60	5.48	18.92	10.33	7.46

LOI      Loss On Ignition

## Brewery Creek Mine

## Stream Sediment Analysis: 35 Element Ultratrace ICP Scan - August 2007

Sed. Stn. BC Stn.		W39: Laura Ck. at Confluence of South Klondike BC-39					W53: Laura Creek 100m downstream of Ditch Road BC-53				
		A	B	C	Mean	Std. dev.	A	B	C	Mean	Std. dev.
Ag	ppm	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2		
Al	%	13300.00	12800.00	17500.00	14533.33	2581.34	8820.00	11400.00	11800.00	10673.33	1617.45
As	ppm	96.50	63.30	124.00	94.60	30.39	19.60	23.80	30.50	24.63	5.50
Au	ppb										
B	ppm										
Ba	ppm	571.00	515.00	691.00	592.33	89.92	485.00	421.00	434.00	446.67	33.83
Bi	ppm	2.50	1.80	1.90	2.07	0.38	1.00	0.80	0.80	0.87	0.12
Ca	%	6590.00	6090.00	9990.00	7556.67	2122.11	8580.00	6440.00	7110.00	7376.67	1094.64
Cd	ppm	2.90	1.70	3.10	2.57	0.76	1.10	0.98	1.20	1.09	0.11
Co	ppm	12.40	12.30	14.70	13.13	1.36	7.75	10.30	10.80	9.62	1.64
Cr	ppm	23.70	22.40	29.70	25.27	3.89	17.60	22.50	23.10	21.07	3.02
Cu	ppm	33.70	36.50	52.40	40.87	10.09	19.70	33.10	30.40	27.73	7.09
Fe	%	35000.00	32200.00	41600.00	36266.67	4826.32	20300.00	25600.00	26300.00	24066.67	3280.75
Hg	ppb	0.38	0.32	0.56	0.42	0.13	0.09	0.12	0.14	0.12	0.03
K	%	1120.00	1040.00	1680.00	1280.00	348.71	614.00	794.00	860.00	756.00	127.33
La	ppm										
Mg	%	4730.00	4770.00	6080.00	5193.33	768.14	3910.00	4950.00	5190.00	4683.33	680.39
Mn	ppm	1260.00	1220.00	937.00	1139.00	176.08	330.00	469.00	466.00	421.67	79.40
Mo	ppm	3.00	2.30	2.80	2.70	0.36	0.92	1.00	1.20	1.04	0.14
Na	%	96.00	86.00	128.00	103.33	21.94	111.00	130.00	129.00	123.33	10.69
Ni	ppm	41.60	33.10	47.80	40.83	7.38	25.60	30.00	32.40	29.33	3.45
P	%	990.00	796.00	1210.00	998.67	207.14	850.00	792.00	736.00	792.67	57.00
Pb	ppm	16.90	14.80	20.40	17.37	2.83	7.20	9.70	9.60	8.83	1.42
Sb	ppm	19.50	12.40	11.70	14.53	4.32	6.10	9.10	9.80	8.33	1.97
Se	ppm	3.70	<0.3	0.60	2.15	2.19	2.30	<0.3	<0.3	2.30	
Sr	ppm	57.80	54.30	86.00	66.03	17.38	55.90	51.60	57.20	54.90	2.93
Th	ppm										
Ti	%	51.50	39.30	49.40	46.73	6.52	188.00	207.00	195.00	196.67	9.61
Tl	ppm	<0.3	<0.3	0.80	0.80		1.00	<0.3	0.60	0.80	0.28
U	ppm										
V	ppm	66.80	59.80	83.30	69.97	12.07	35.80	45.80	47.80	43.13	6.43
W	ppm										
Zn	ppm	168.00	149.00	224.00	180.33	38.99	84.70	114.00	116.00	104.90	17.52
LOI	%	11.07	12.15	8.82	10.68	1.70	10.80	7.33	8.87	9.00	1.74

LOI      Loss On Ignition

Brewery Creek Mine

Stream Sediment Analysis: GRAIN SIZE DISTRIBUTION - Laura Creek & Carolyn Creek Monitoring Stations

	W03: Laura Ck. below Exploration Camp BC-32 August 21, 2007			W04B: Laura Ck. above Carolyn Ck. BC-3 August 21, 2007			W15: Carolyn Ck. above Laura Ck. BC-2 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	0.6	1.5	15.7	0.8	14.1	25.8	0.2	0.6	<0.1
ASTM Mesh -12+20	2.8	1.2	8.5	2.8	7.4	5.5	1.4	1.2	0.6
ASTM Mesh -20+40	9	3.9	5.1	5.7	11.2	7.2	3.8	2.7	0.4
ASTM Mesh -40+60	12.5	9.3	4.8	8.3	12.9	11	5.6	4.6	0.6
ASTM Mesh -60+100	18.7	17.6	6.2	9.6	9.7	8.3	7.1	6.2	1.4
ASTM Mesh -100+140	11.8	10.6	5.2	7.3	5.5	4.4	7.2	6.3	2.5
ASTM Mesh -140+270	20.4	26.6	26.8	31.5	30.3	19.6	39.5	52.4	52.9
ASTM Mesh -270	20.6	27.7	26.8	31.6	8.4	18	33.5	25.8	40.4
<b>Total Percentage</b>	<b>96.4</b>	<b>98.4</b>	<b>99.1</b>	<b>97.6</b>	<b>99.5</b>	<b>99.8</b>	<b>98.3</b>	<b>99.8</b>	<b>98.8</b>

	W05: Laura Ck. above Ditch Rd. BC-1 August 21, 2007			W05A: Laura Ck. at the Ditch Rd. BC-37 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	0.3	0.9	26.3	0.8	1.8	2.5
ASTM Mesh -12+20	7.6	1.9	22	3.1	28.1	2.1
ASTM Mesh -20+40	36.8	3.7	15.6	7.1	24.3	2.5
ASTM Mesh -40+60	25.4	5	13.1	8.8	3	3.1
ASTM Mesh -60+100	8.4	6.2	4.8	10.4	3.2	4
ASTM Mesh -100+140	3.1	5.7	1.9	7.8	3	3.2
ASTM Mesh -140+270	8.4	33.5	8.7	31.8	16.4	19.6
ASTM Mesh -270	9.3	43	6.8	29.5	19.3	61.4
<b>Total Percentage</b>	<b>99.30</b>	<b>99.90</b>	<b>99.20</b>	<b>99.30</b>	<b>99.10</b>	<b>98.40</b>

## Brewery Creek Mine

## Stream Sediment Analysis: GRAIN SIZE DISTRIBUTION - Golden Creek, Lucky Creek &amp; Klondike River Monitoring Stations

	W16: Golden Ck. above Lucky Ck. BC-36 August 21, 2007			W13: Lucky Ck. downstream of Lucky Pit BC-4 August 21, 2007			W02: Golden Ck. above the Klondike BC-31 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	1.7	4.3	1.7	0.3	23.8	13.1	0.2	3.8	0.1
ASTM Mesh -12+20	3.1	14.5	2.8	1.1	4.2	23.9	0.3	17.5	0.8
ASTM Mesh -20+40	15.1	20.1	6.5	3.4	2.6	16.6	2.2	31.9	3.4
ASTM Mesh -40+60	29.2	20.3	11.8	5.4	2.5	8.2	6.8	16.3	9.2
ASTM Mesh -60+100	15.5	12.9	15.7	7	2.7	4.3	19.2	9.6	19.2
ASTM Mesh -100+140	5.7	4.9	10.3	6	2.4	1.9	14.4	3.6	12.7
ASTM Mesh -140+270	14.1	11.6	28.2	25.5	25.1	11.9	29.9	7.7	32.4
ASTM Mesh -270	14.6	11	22.2	49.8	35.9	19.8	25.6	8.1	21.8
<b>Total Percentage</b>	<b>99</b>	<b>99.6</b>	<b>99.2</b>	<b>98.5</b>	<b>99.2</b>	<b>99.7</b>	<b>98.6</b>	<b>98.5</b>	<b>99.6</b>

	W08: Klondike River above Golden Ck. BC-38 August 21, 2007			W09: Klondike Rive below Lee Ck. BC-6 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	45.8	<0.1	16.3	5.5	18	9.5
ASTM Mesh -12+20	16.1	11.7	19	12.3	19.1	30.4
ASTM Mesh -20+40	14	45.7	42.1	7.9	13.3	6.9
ASTM Mesh -40+60	6.5	39.2	15.1	6.8	8	9.1
ASTM Mesh -60+100	6	2.2	4	15.3	7.7	14.2
ASTM Mesh -100+140	2.7	0.2	0.9	10.2	5.4	5.5
ASTM Mesh -140+270	5	0.2	1	20.4	20.9	13.3
ASTM Mesh -270	3.2	0.3	0.5	17.7	6.3	10.2
<b>Total Percentage</b>	<b>99.3</b>	<b>99.5</b>	<b>98.9</b>	<b>96.1</b>	<b>98.7</b>	<b>99.1</b>

## Brewery Creek Mine

## Stream Sediment Analysis: GRAIN SIZE DISTRIBUTION - Laura Creek &amp; Carolyn Creek Monitoring Stations

	Laura Creek 50m upstream S. Klondike BC-39 August 21, 2007			Laura Creek Wetlands BC-53 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	18.7	11.4	7.5	2.7	15.2	1.4
ASTM Mesh -12+20	24.3	21.4	23.1	4.5	5.2	5.4
ASTM Mesh -20+40	15.3	15.4	19.4	9.2	6.8	7.7
ASTM Mesh -40+60	9.5	11.7	13.3	9.8	7.8	7.2
ASTM Mesh -60+100	7.2	8.5	10.9	7.5	5.7	7.2
ASTM Mesh -100+140	4.9	5.6	5.2	5.8	3.6	4.4
ASTM Mesh -140+270	12.8	12.3	8.7	26.9	19.2	19.9
ASTM Mesh -270	6.9	13.1	9.6	33.1	35	45.3
<b>Total Percentage</b>	<b>99.6</b>	<b>99.4</b>	<b>97.7</b>	<b>99.5</b>	<b>98.5</b>	<b>98.5</b>

## Brewery Creek Mine

## Stream Sediment Analysis: GRAIN SIZE DISTRIBUTION - Pacific Creek Monitoring Stations

	W14: Pacific Ck. below Mine Camp BC-35 August 21, 2007			W11: Pacific Ck. above Lee Ck. BC-5 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	1	0.8	0.9	31.3	31.8	29.6
ASTM Mesh -12+20	2.4	5	3.8	16.9	19.3	18.5
ASTM Mesh -20+40	4.3	6.7	6.2	20.6	22.7	21.9
ASTM Mesh -40+60	6.4	7.7	9.6	9.7	9.3	12.4
ASTM Mesh -60+100	11.3	13.9	13.4	4.7	3.7	4.8
ASTM Mesh -100+140	9.4	11.8	8.6	2.4	1.9	1.8
ASTM Mesh -140+270	32.8	32.4	31.6	5.6	7.1	5.5
ASTM Mesh -270	29.7	21.5	25.8	7.8	3.6	5.1
<b>Total Percentage</b>	<b>97.3</b>	<b>99.8</b>	<b>99.9</b>	<b>99</b>	<b>99.4</b>	<b>99.6</b>

## Brewery Creek Mine

## Stream Sediment Analysis: GRAIN SIZE DISTRIBUTION - Lee Creek Monitoring Stations

	W06A: Lee Creek above Pacific Creek BC-33 August 21, 2007			W07: Lee Creek at the Ditch Road BC-34 August 21, 2007		
	A % Weight	B % Weight	C % Weight	A % Weight	B % Weight	C % Weight
ASTM Mesh +12	14.2	21.6	23	4	7.5	30.4
ASTM Mesh -12+20	27.1	21.3	10.9	4.6	35.6	25.1
ASTM Mesh -20+40	38.5	31.8	25.2	7.2	36.5	23
ASTM Mesh -40+60	11.7	17	19.2	13.1	9.4	7
ASTM Mesh -60+100	2.3	3.6	6.4	15.4	3.3	4.8
ASTM Mesh -100+140	1.1	1	2.6	9.4	1.6	2.4
ASTM Mesh -140+270	1.7	1.5	6.5	19	2.8	4.2
ASTM Mesh -270	2.2	1.5	5.8	25.1	2.7	3.1
<b>Total Percentage</b>	<b>98.8</b>	<b>99.3</b>	<b>99.6</b>	<b>97.8</b>	<b>99.4</b>	<b>100</b>

Brewery Creek Mine

Stream Sediment Analysis: HISTORICAL COMPARISON

		Pacific Creek Monitoring Stations														
		W11 BC-5														
		1991				1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	13.0				33.4	27.2	**	20.8	23.1	14.5	**	12.3	13.7	**	7.2
Sb	ppm	2.0				3.0	5.9	**	3.1	3.7	2.5	**	1.8	2.3	**	2.4
Cd	ppm	2.1				2.1	3.4	**	2.6	2.7	2.8	**	2.3	2.9	**	2.5
Cu	ppm	36.0				47.3	55.9	**	38.3	43.3	36.6	**	30.0	51.3	**	41.4
Hg	ppm	0.2				0.4	0.3	**	0.5	0.8	0.4	**	0.3	0.3	**	0.3
Mo	ppm	1.0				5.1	4.6	**	2.9	2.6	2.5	**	1.8	2.4	**	2.2
Pb	ppm	8.0				13.1	14.5	**	9.6	10.5	9.4	**	7.5	13.2	**	7.2
Ni	ppm	58.0				61.0	73.0	**	59.8	73.9	60.4	**	63.4	66.2	**	50.5
Zn	ppm	342.0				378.8	412.7	**	367.2	460.9	371.5	**	321.9	385.0	**	304.0

		Pacific Creek Monitoring Stations													
		W14 BC-35													
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm		18.9	24.0	28.2	41.5	44.3	20.6	31.9	21.5	38.0	33.1	10.9	18.6	18.8
Sb	ppm		3.5	3.0	5.1	6.8	6.6	3.3	5.1	5.9	3.2	3.7	1.4	1.7	4.4
Cd	ppm		2.0	1.5	1.3	2.1	2.0	1.5	1.8	1.3	2.5	1.7	1.9	1.6	2.6
Cu	ppm		25.1	30.0	36.5	38.9	56.0	23.0	36.9	24.8	41.6	27.4	51.0	23.3	27.2
Hg	ppm		0.5	0.8	0.8	1.0	1.4	0.9	0.9	0.6	0.7	0.5	0.2	0.5	0.6
Mo	ppm		4.0	1.0	2.3	2.7	2.3	1.4	2.0	1.5	2.2	1.9	4.3	1.1	1.1
Pb	ppm		10.0	8.0	9.6	9.4	11.0	6.2	9.3	7.4	10.1	8.0	11.1	7.0	5.9
Ni	ppm		46.0	59.0	71.0	75.0	72.0	44.1	68.9	47.7	78.8	77.9	45.6	49.4	57.8
Zn	ppm		241.7	351.0	371.2	410.6	445.0	240.0	365.2	270.3	453.1	421.6	263.0	308.0	381.7

		Lee Creek Monitoring Stations														
		W06A BC-33														
		1991	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	15.0	8.0	6.3	10.0	10.7	13.2	12.2	17.1	12.8	7.5	11.5	6.9	9.0	8.5	6.5
Sb	ppm	2.0	8.0	2.3	2.0	2.8	3.6	2.8	3.2	2.5	1.5	1.2	0.9	1.4	1.3	3.2
Cd	ppm	3.0	2.9	2.4	2.7	2.1	2.8	2.1	1.8	2.2	1.7	1.9	2.3	2.6	2.5	3.7
Cu	ppm	81.0	59.4	51.8	64.0	61.2	60.5	82.7	32.7	63.4	45.1	58.3	54.8	53.0	54.2	65.3
Hg	ppm	0.2	0.0	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.3
Mo	ppm	6.0	8.3	4.0	5.0	6.0	6.0	5.7	2.5	5.7	3.9	4.3	4.1	3.9	3.3	4.1
Pb	ppm	14.0	9.0	10.0	13.0	12.7	11.3	9.0	7.7	11.2	8.8	11.5	11.8	12.1	10.5	10.1
Ni	ppm	82.0	59.3	59.8	72.0	68.0	70.0	67.0	48.9	70.5	49.5	65.8	68.5	58.6	54.4	69.0
Zn	ppm	518.0	400.3	384.7	472.0	416.2	411.9	447.0	290.1	447.9	325.4	431.2	305.0	335.0	322.0	365.0

		Lee Creek Monitoring Stations														
		W07 BC-34														
		1991	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	12.0	8.0	8.0	10.0	9.4	10.2	**	9.1	11.9	7.5	11.8	8.0	9.2	11.2	6.2
Sb	ppm	2.0	8.0	2.8	2.0	2.6	3.2	**	2.9	2.4	1.6	1.2	1.8	2.7	1.1	3.6
Cd	ppm	3.2	3.2	2.6	4.2	2.3	2.6	**	1.8	2.1	1.8	1.9	2.8	2.0	3.3	3.3
Cu	ppm	70.0	66.0	67.5	76.0	66.9	55.3	**	50.3	57.4	44.2	54.7	49.7	48.2	84.5	60.7
Hg	ppm	0.2	0.0	0.3	0.3	0.3	0.2	**	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.3
Mo	ppm	6.0	9.3	4.0	5.0	6.1	5.5	**	4.9	4.9	3.8	4.2	3.9	3.7	4.1	3.8
Pb	ppm	12.0	10.0	10.0	12.0	13.5	10.1	**	10.7	10.8	8.6	14.4	9.5	11.3	13.8	9.5
Ni	ppm	81.0	71.3	63.5	85.0	74.0	69.0	**	60.3	67.4	51.7	67.3	75.7	61.2	73.5	65.0
Zn	ppm	497.0	437.3	397.3	508.0	456.1	402.9	**	344.5	434.9	315.3	427.5	370.9	353.0	434.0	351.0

\* all values represent mean of replicate samples



Brewery Creek Mine

Stream Sediment Analysis: HISTORICAL COMPARISON

Laura Creek and Carolyn Creek Monitoring Stations

W03  
BC-32

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	108.6	47.0	61.9	104.5	263.0	103.5	100.8	79.1	128.0	216.4	157.0	292.0	104.0
Sb	ppm	94.2	43.0	61.9	83.8	162.6	47.8	61.6	41.7	31.4	59.9	42.9	47.2	51.2
Cd	ppm	2.0	1.3	1.6	2.6	1.1	2.0	2.3	1.8	2.5	2.0	1.7	0.8	2.9
Cu	ppm	32.3	23.0	31.4	32.3	51.6	35.1	36.2	27.5	36.5	34.7	48.3	34.1	37.2
Hg	ppm	0.4	0.3	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.4	0.8	0.6	0.6
Mo	ppm	4.0	3.0	4.5	6.1	9.1	5.3	5.3	4.2	5.2	6.7	6.2	5.1	4.3
Pb	ppm	15.0	12.0	21.3	22.1	19.0	17.6	21.9	16.6	22.9	16.6	22.8	14.2	15.9
Ni	ppm	33.3	34.0	42.0	45.0	48.0	35.6	45.2	34.5	48.4	55.8	36.7	28.5	38.0
Zn	ppm	199.0	204.0	224.1	278.4	203.0	177.9	248.1	202.8	281.0	224.7	184.0	140.0	178.0

Laura Creek and Carolyn Creek Monitoring Stations

W04B  
BC-3

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	14.5	39.0	46.8	64.4	79.3	112.1	51.6	34.7	71.8	21.5	24.3	11.6	31.0
Sb	ppm	4.3	17.0	25.1	30.5	30.5	321.3	19.9	13.1	12.8	9.4	4.9	1.3	12.1
Cd	ppm	2.0	0.6	1.0	1.1	1.1	1.7	1.0	1.0	1.1	0.5	0.7	0.2	1.3
Cu	ppm	27.4	23.0	30.8	27.3	65.7	33.3	26.1	22.0	24.9	16.3	35.8	16.0	23.9
Hg	ppm	0.0	0.1	0.1	0.2	0.3	0.5	0.2	0.2	0.2	0.1	0.1	0.0	0.2
Mo	ppm	4.0	1.0	3.0	2.9	3.3	3.3	2.0	1.8	2.1	1.3	1.5	0.7	1.1
Pb	ppm	11.0	10.0	27.1	20.1	22.0	25.8	14.0	11.6	13.8	8.4	16.6	6.0	10.1
Ni	ppm	24.5	34.0	39.0	43.0	40.0	43.3	42.5	32.0	43.7	29.6	38.2	17.9	30.9
Zn	ppm	66.8	157.0	159.7	187.0	205.0	176.5	183.9	138.3	189.1	99.9	129.0	58.3	116.3

Laura Creek and Carolyn Creek Monitoring Stations

W15  
BC-2

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	10.7	11.0	12.6	20.2	16.0	16.4	14.2	12.0	19.6	8.0	12.8	5.2	4.5
Sb	ppm	1.6	2.0	3.8	4.0	3.8	2.9	2.7	2.2	2.8	1.5	1.6	0.5	1.9
Cd	ppm	2.0	0.2	0.6	1.1	0.7	0.7	0.5	0.6	0.7	0.3	0.6	0.1	0.2
Cu	ppm	17.9	21.0	35.7	47.3	43.6	32.6	27.0	25.1	31.3	14.4	30.5	11.4	12.0
Hg	ppm	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Mo	ppm	4.0	1.0	1.8	1.8	0.9	0.9	0.8	0.7	1.0	0.5	1.2	0.4	0.3
Pb	ppm	10.0	7.0	22.2	20.2	8.0	14.8	13.1	11.9	15.5	8.7	16.2	7.5	6.6
Ni	ppm	18.2	22.0	28.0	36.0	24.0	24.9	27.6	21.8	31.7	24.2	29.3	15.1	13.8
Zn	ppm	61.3	74.0	68.6	88.2	81.0	59.9	78.9	64.6	88.8	69.0	84.4	52.0	45.2

Laura Creek and Carolyn Creek Monitoring Stations

W05  
BC-1

		1991	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	69.0	15.3	21.1	41.0	66.4	73.4	65.8	121.6	71.4	43.1	47.5	52.7	40.9	16.0	27.7
Sb	ppm	16.0	9.3	7.2	21.0	31.3	34.8	24.9	31.9	21.1	10.8	6.5	13.8	3.6	1.7	8.0
Cd	ppm	3.1	1.1	2.0	1.1	1.6	2.0	1.2	1.7	1.2	1.1	0.8	0.8	2.5	0.3	0.9
Cu	ppm	41.0	32.8	31.5	31.0	38.4	32.3	40.9	31.2	26.8	24.3	24.8	20.3	62.5	14.2	23.3
Hg	ppm	0.1	0.0	0.1	0.1	0.2	0.3	0.3	0.5	0.3	0.2	0.1	0.2	0.1	0.0	0.1
Mo	ppm	2.0	4.3	4.0	3.0	4.6	3.8	3.0	4.0	3.0	1.8	2.1	1.6	2.2	0.8	1.2
Pb	ppm	16.0	16.0	10.0	14.0	28.3	19.0	18.0	26.8	15.4	11.2	12.3	9.9	19.1	7.5	8.8
Ni	ppm	59.0	38.3	27.6	43.0	43.0	47.0	38.0	44.8	41.5	31.2	35.7	34.4	59.4	19.6	25.4
Zn	ppm	215.0	168.3	88.0	189.0	174.6	185.3	175.0	176.0	175.6	124.6	141.8	120.8	192.0	71.2	97.0

Brewery Creek Mine

Stream Sediment Analysis: HISTORICAL COMPARISON

Laura Creek and Carolyn Creek Monitoring Stations

W05A  
BC-37

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	28.1	46.0	77.4	70.1	80.9	70.9	99.3	41.8	61.8	39.5	42.8	24.6	23.7
Sb	ppm	12.1	19.0	36.0	30.4	32.0	19.7	24.1	11.0	9.7	7.2	4.3	2.2	7.5
Cd	ppm	2.0	0.6	1.7	1.7	1.8	1.3	2.0	1.3	1.2	1.0	1.7	0.6	1.0
Cu	ppm	36.5	34.0	49.5	43.8	87.5	32.2	45.2	27.5	34.0	29.0	50.9	25.4	25.0
Hg	ppm	0.1	0.2	0.3	0.3	0.4	0.2	0.5	0.3	0.2	0.1	0.1	0.1	0.1
Mo	ppm	4.0	2.0	4.1	3.7	3.7	2.8	2.8	1.7	2.4	1.4	2.4	1.1	1.0
Pb	ppm	10.0	14.0	20.4	17.9	13.0	15.6	16.5	13.3	15.4	10.9	20.0	8.9	9.2
Ni	ppm	30.8	38.0	51.0	48.0	45.0	39.5	49.9	33.0	41.5	49.7	55.0	28.3	27.6
Zn	ppm	108.3	166.0	179.5	192.8	222.0	150.4	191.6	137.5	171.2	161.8	188.0	91.2	103.5

Laura Creek and Carolyn Creek Monitoring Stations

W39  
BC-39

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm										62.8	104.0	**	94.6
Sb	ppm										11.1	10.9	**	14.5
Cd	ppm										1.2	1.6	**	2.6
Cu	ppm										29.2	35.4	**	40.9
Hg	ppm										0.3	0.4	**	0.4
Mo	ppm										2.5	3.4	**	2.7
Pb	ppm										14.6	22.7	**	17.4
Ni	ppm										41.2	42.5	**	40.8
Zn	ppm										175.2	218.0	**	180.3

Laura Creek and Carolyn Creek Monitoring Stations

W53  
BC-53

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm									77.4	69.9	21.8	**	24.6
Sb	ppm									11.7	15.8	2.2	**	8.3
Cd	ppm									2.0	1.1	1.1	**	1.1
Cu	ppm									47.6	25.6	29.5	**	27.7
Hg	ppm									0.3	0.3	0.1	**	0.1
Mo	ppm									2.4	1.7	1.3	**	1.0
Pb	ppm									16.1	10.7	14.7	**	8.8
Ni	ppm									52.1	39.9	35.5	**	29.3
Zn	ppm									185.5	138.8	122.0	**	104.9

\* all values represent mean of replicate samples

\*\*Sites not sampled

Stream Sediment Analysis: HISTORICAL COMPARISON

		Lucky Ck. Monitoring Station													
		W13													
		BC-4													
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
As	ppm	70.6	106.7	101.9	326.5	191.0	132.9	157.9	96.6	141.5	79.7	69.8	22.2	33.9	
Sb	ppm	16.4	19.7	24.0	92.4	34.9	28.1	34.6	16.3	7.9	8.9	7.2	2.0	6.3	
Cd	ppm	2.0	2.3	1.3	2.5	1.8	1.5	1.7	1.6	1.6	1.4	1.5	0.7	1.4	
Cu	ppm	33.8	28.7	33.5	39.1	49.1	29.9	38.9	28.0	33.9	24.3	41.0	21.9	27.1	
Hg	ppm	0.3	1.0	1.9	1.2	1.0	1.1	1.2	0.7	0.9	0.5	0.4	0.1	0.3	
Mo	ppm	4.0	4.7	7.2	6.5	5.1	5.3	6.6	4.2	5.9	3.9	3.4	0.9	1.1	
Pb	ppm	23.7	34.0	48.5	62.5	47.0	35.3	40.7	32.5	46.0	29.1	29.3	10.6	17.8	
Ni	ppm	37.4	46.7	30.0	54.0	41.0	31.3	39.3	32.8	39.2	46.3	46.0	25.1	32.4	
Zn	ppm	216.0	307.0	170.6	298.4	237.0	158.1	213.4	190.4	240.8	194.8	211.0	89.9	120.7	

		Golden Creek Monitoring Stations													
		W16													
		BC-36													
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
As	ppm	19.2	8.0	6.4	8.1	10.2	13.1	9.2	4.6	12.0	6.1	22.3	6.4	5.4	
Sb	ppm	2.6	2.0	2.1	1.5	2.0	2.6	1.4	1.0	1.4	2.0	2.6	<0.5	2.1	
Cd	ppm	2.4	1.1	1.4	1.0	1.2	1.9	1.4	1.5	2.5	1.3	1.9	0.6	1.3	
Cu	ppm	99.0	42.3	59.3	41.8	61.7	55.7	45.2	31.1	58.8	33.1	26.7	21.9	37.5	
Hg	ppm	0.4	1.0	0.2	0.1	0.2	0.3	0.3	0.5	0.2	0.2	0.5	0.1	0.2	
Mo	ppm	4.3	3.0	4.8	3.6	4.2	5.1	3.6	2.5	4.1	2.6	1.6	1.2	2.8	
Pb	ppm		6.3	13.2	8.4	13.0	9.9	9.9	8.6	11.0	7.3	8.4	6.3	7.0	
Ni	ppm	50.0	46.3	56.0	40.0	47.0	45.9	50.6	33.2	58.8	43.5	61.8	23.2	36.9	
Zn	ppm	308.5	289.7	302.7	217.8	290.0	268.3	300.7	204.8	362.3	230.4	373.0	104.0	206.3	

		Golden Creek Monitoring Stations														
		W02														
		BC-31														
		1991	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	85.0	52.3	35.2	41.7	37.8	39.0	50.5	35.4	35.0	21.7	48.9	23.0	36.3	20.3	17.1
Sb	ppm	29.0	13.3	12.2	12.3	12.6	11.8	29.6	9.8	7.7	5.9	6.3	2.1	6.6	2.6	4.5
Cd	ppm	4.2	1.7	2.0	1.9	1.8	2.5	1.9	1.5	1.4	1.1	2.3	1.5	2.3	1.9	1.3
Cu	ppm	59.0	37.9	61.7	42.0	54.8	56.6	95.9	34.2	43.9	32.7	48.1	30.8	39.7	41.4	33.7
Hg	ppm	0.5	0.0	0.3	1.0	0.3	0.4	0.4	0.3	0.5	0.4	0.3	0.3	0.2	0.3	0.2
Mo	ppm	3.7	7.3	4.0	3.0	5.6	4.6	3.9	3.0	4.1	2.5	3.1	1.8	3.0	2.0	2.0
Pb	ppm	33.0	15.7	19.3	19.0	22.7	17.5	25.0	14.8	15.2	12.1	19.6	12.0	17.7	12.8	9.9
Ni	ppm	69.0	44.7	49.9	55.0	57.0	60.0	52.0	43.6	50.1	39.7	59.2	53.7	56.8	44.1	39.4
Zn	ppm	328.0	232.7	287.7	309.7	305.9	295.6	289.0	215.5	296.7	211.7	309.8	233.6	297.0	223.0	182.3

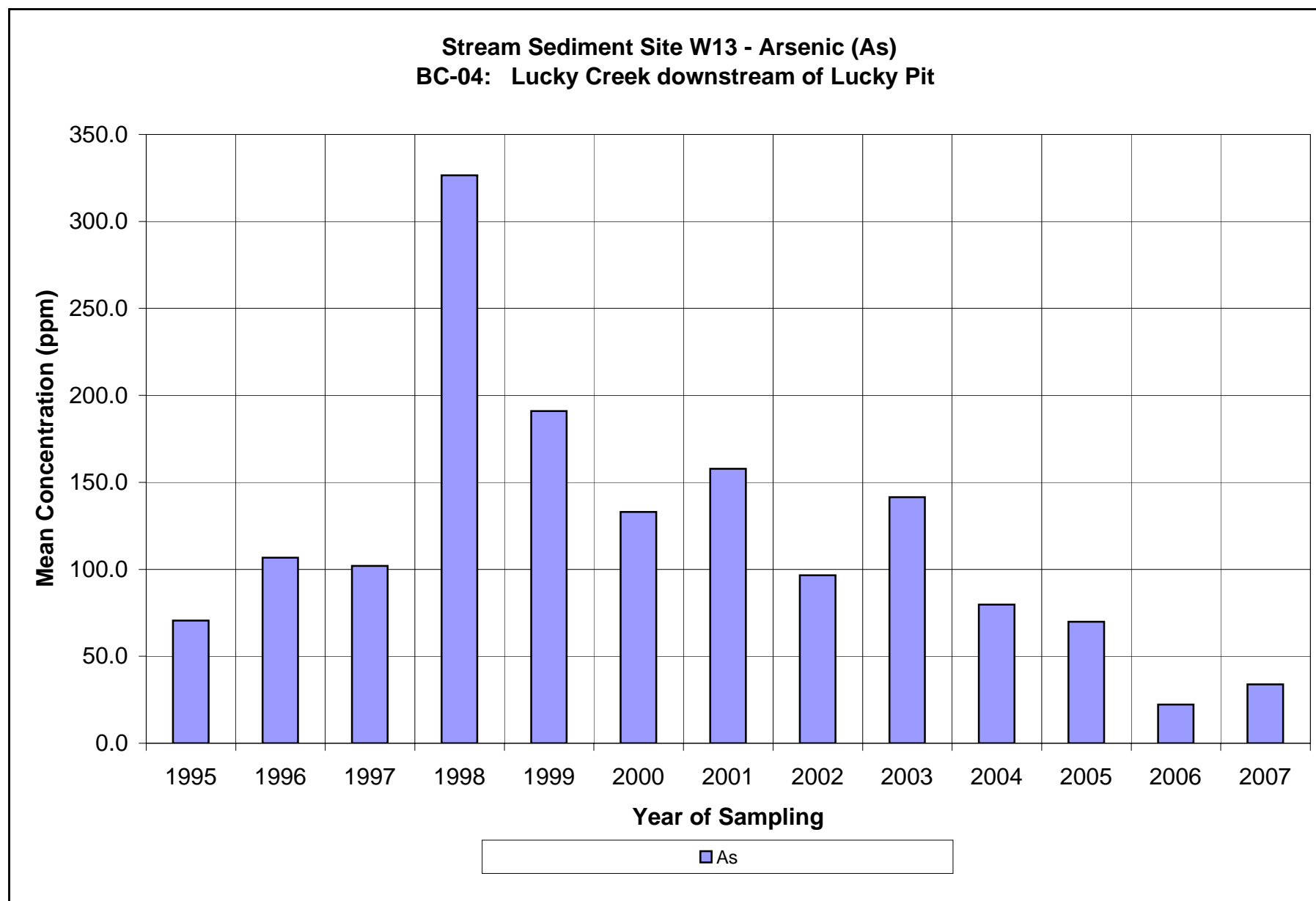
\* all values represent mean of replicate samples

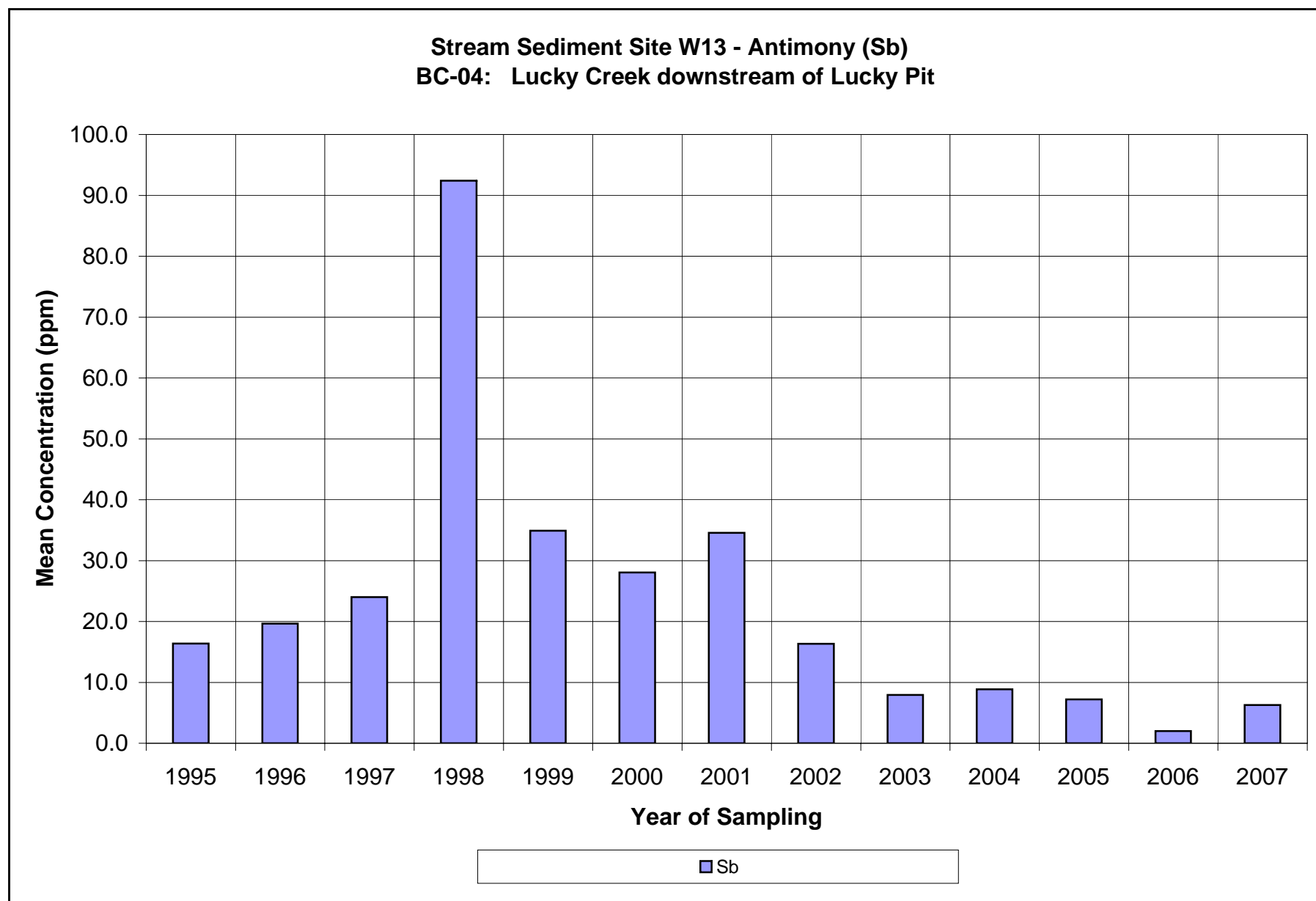
Stream Sediment Analysis: HISTORICAL COMPARISON

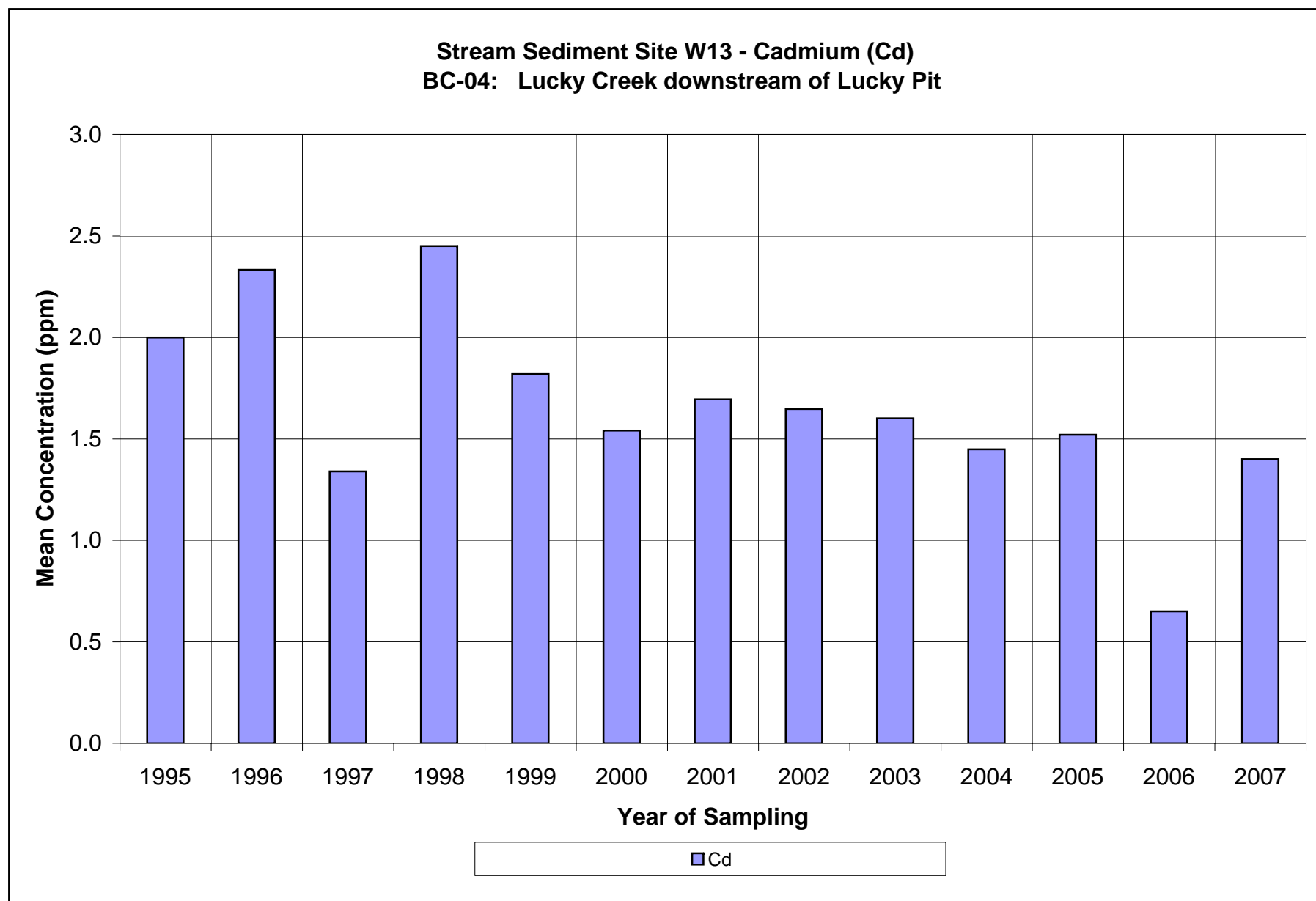
Klondike River Monitoring Stations																
W8																
BC-38																
		1991	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	21.0	24.7	20.9	18.8	11.5	27.4	21.8	12.5	22.3	13.6	15.9	11.7	16.4	14.9	17.5
Sb	ppm	2.0	8.0	1.8	2.0	1.9	2.1	2.0	1.0	1.3	1.1	0.8	0.9	0.8	0.5	1.9
Cd	ppm	13.0	0.9	2.0	0.4	0.4	0.9	0.6	0.6	0.7	0.5	0.5	0.7	1.0	1.3	1.2
Cu	ppm	31.0	27.0	30.0	24.8	22.8	29.1	115.1	21.3	29.3	19.3	22.4	21.3	25.9	32.2	121.3
Hg	ppm	0.1	0.0	0.1	1.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Mo	ppm	2.0	6.0	4.0	1.0	2.2	3.8	2.1	1.4	1.7	1.3	1.5	1.3	1.6	1.3	1.7
Pb	ppm	12.0	9.0	10.0	10.8	12.6	15.9	13.0	9.1	12.3	10.3	12.9	9.2	12.2	12.7	13.1
Ni	ppm	39.0	31.0	31.1	33.8	28.0	34.0	33.0	27.1	35.4	24.0	30.1	34.4	34.0	34.5	37.4
Zn	ppm	184.0	125.3	145.3	171.3	124.1	129.4	163.0	101.5	158.6	113.6	131.5	133.3	168.0	158.0	163.0

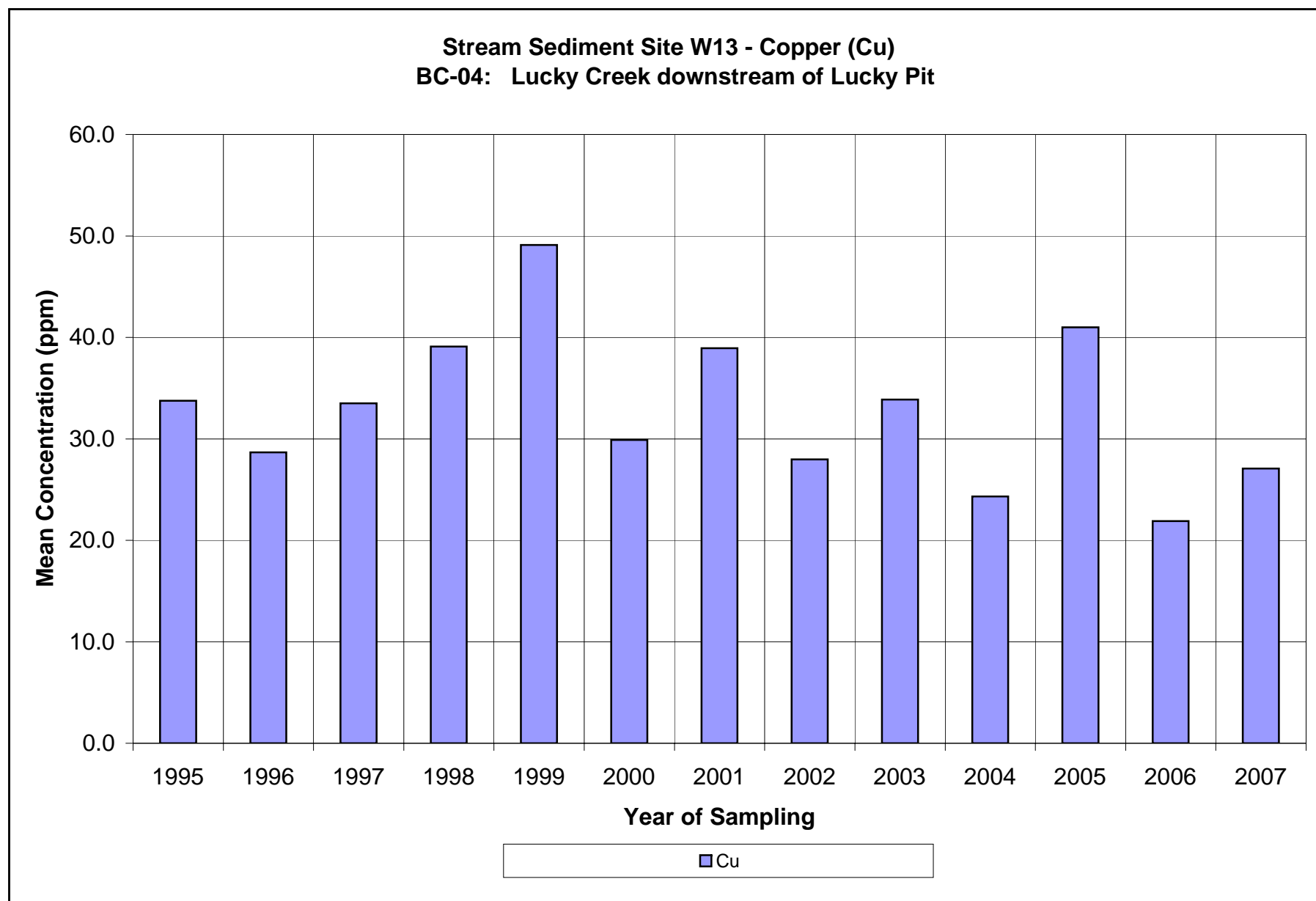
Klondike River Monitoring Stations																
W9																
BC-6																
		1991	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
As	ppm	21.0	16.0	20.4	18.8	14.3	17.9	20.9	18.0	18.6	16.9	19.5	19.0	13.3	12.6	13.2
Sb	ppm	2.0	8.0	1.9	2.0	0.9	2.5	2.0	1.9	1.5	1.1	1.2	1.3	1.0	0.8	2.1
Cd	ppm	1.0	0.8	2.0	1.0	0.9	1.3	0.7	0.6	0.7	0.6	0.7	0.9	1.3	1.4	1.2
Cu	ppm	33.0	35.2	74.7	30.3	32.1	34.8	52.7	24.1	30.0	23.0	26.3	27.7	38.0	71.6	29.9
Hg	ppm	0.1	0.0	0.1	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Mo	ppm	1.0	6.3	4.0	2.0	2.7	3.0	1.9	1.9	2.3	1.8	1.8	2.2	2.6	1.9	1.5
Pb	ppm	11.0	10.3	11.7	10.5	13.9	11.9	7.0	10.8	10.8	10.0	10.3	10.2	11.5	11.8	10.6
Ni	ppm	38.0	43.3	38.4	41.5	34.0	44.0	33.0	29.3	38.5	29.6	34.9	41.1	45.1	54.4	33.4
Zn	ppm	165.0	202.7	203.0	224.8	162.1	217.3	163.0	120.9	182.6	136.7	168.9	171.5	231.0	193.0	165.7

\* all values represent mean of replicate samples

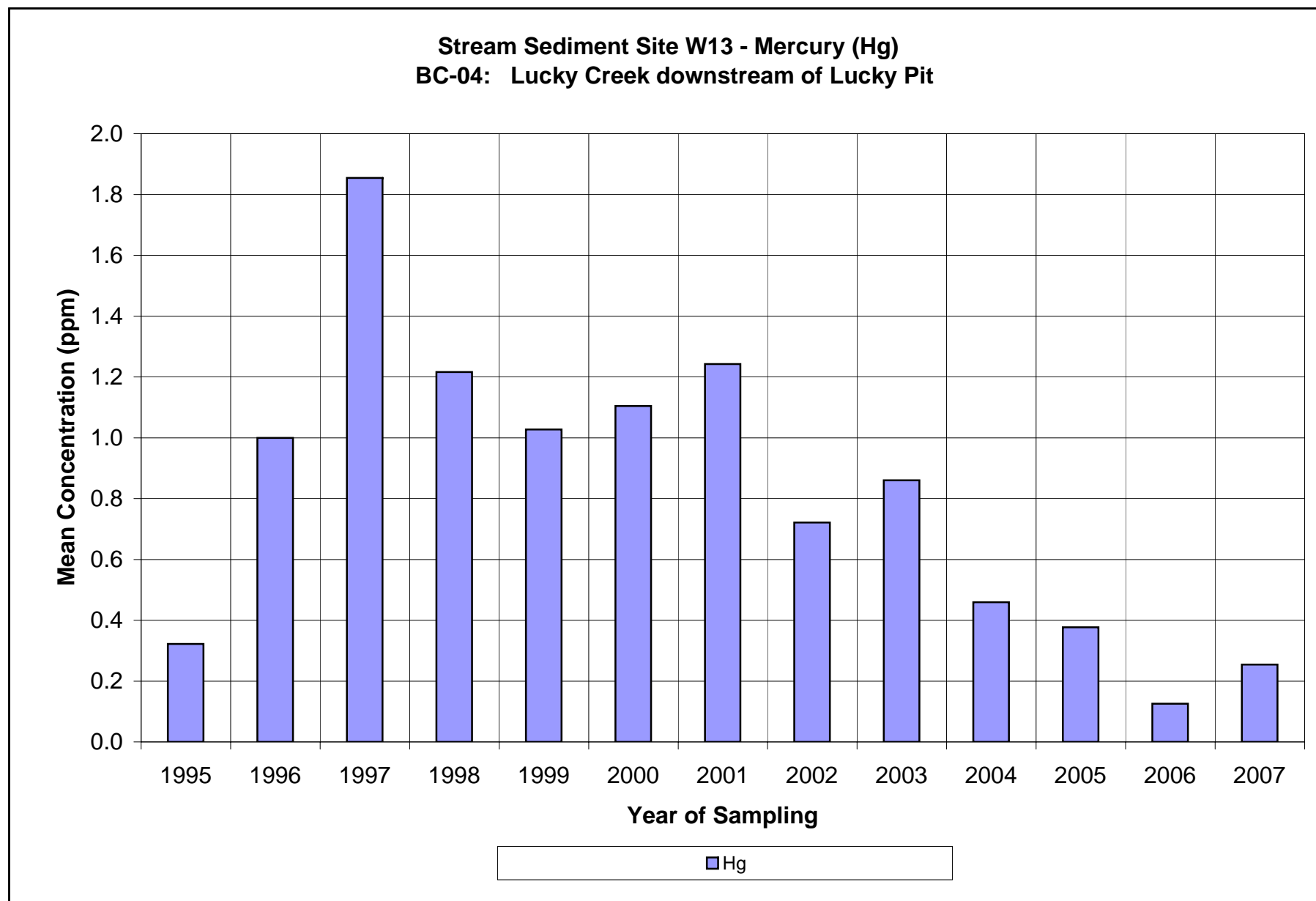




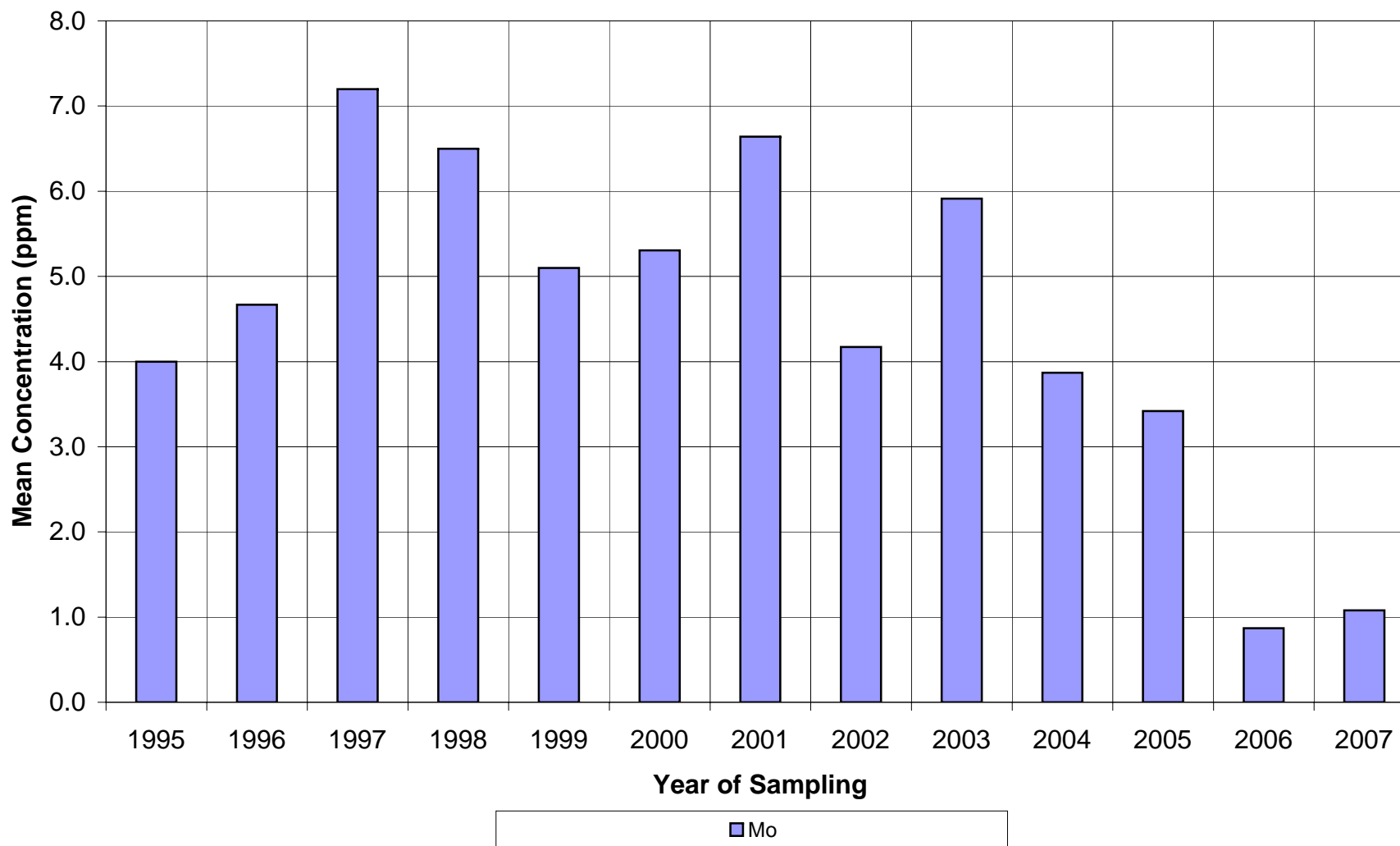


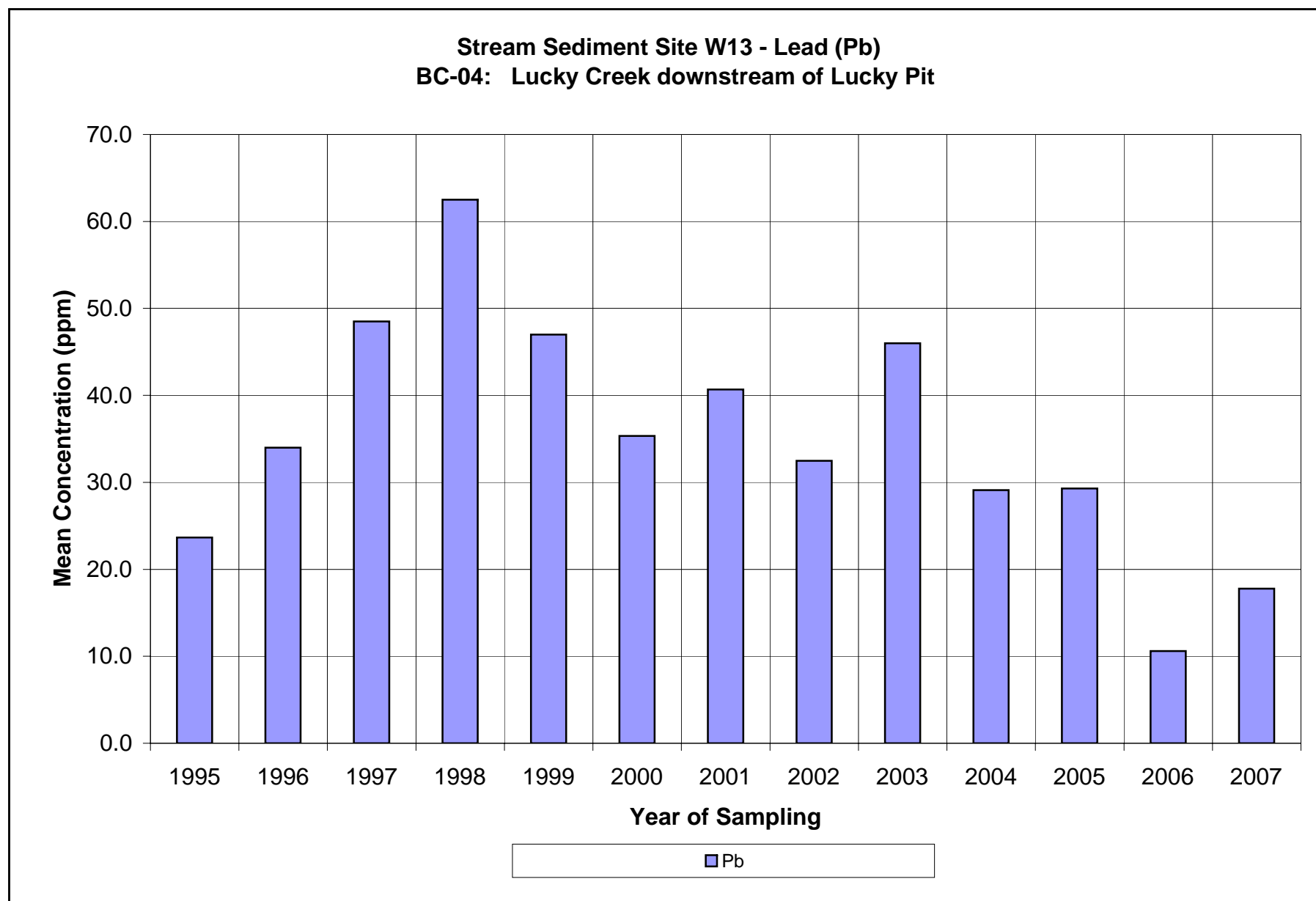


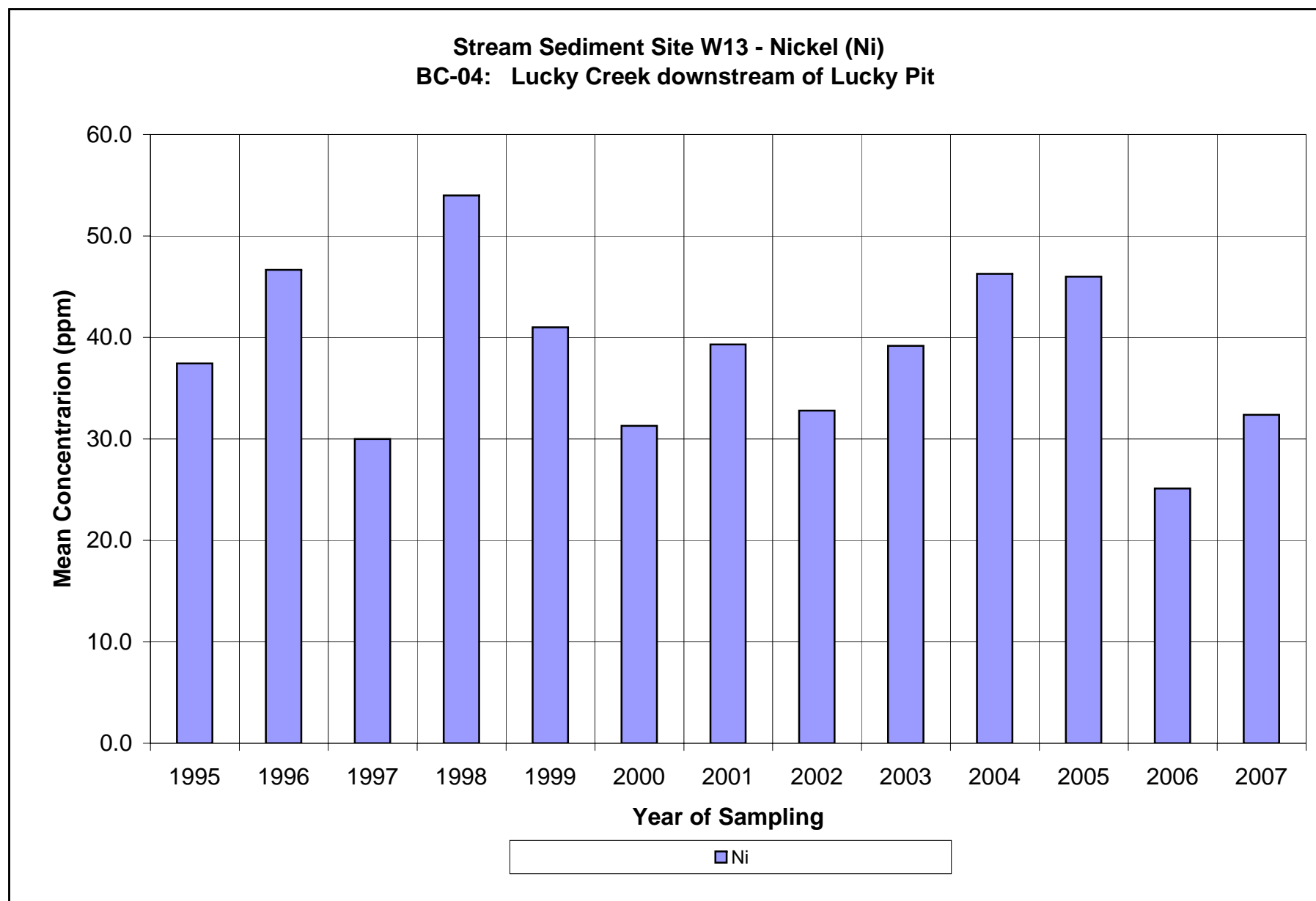




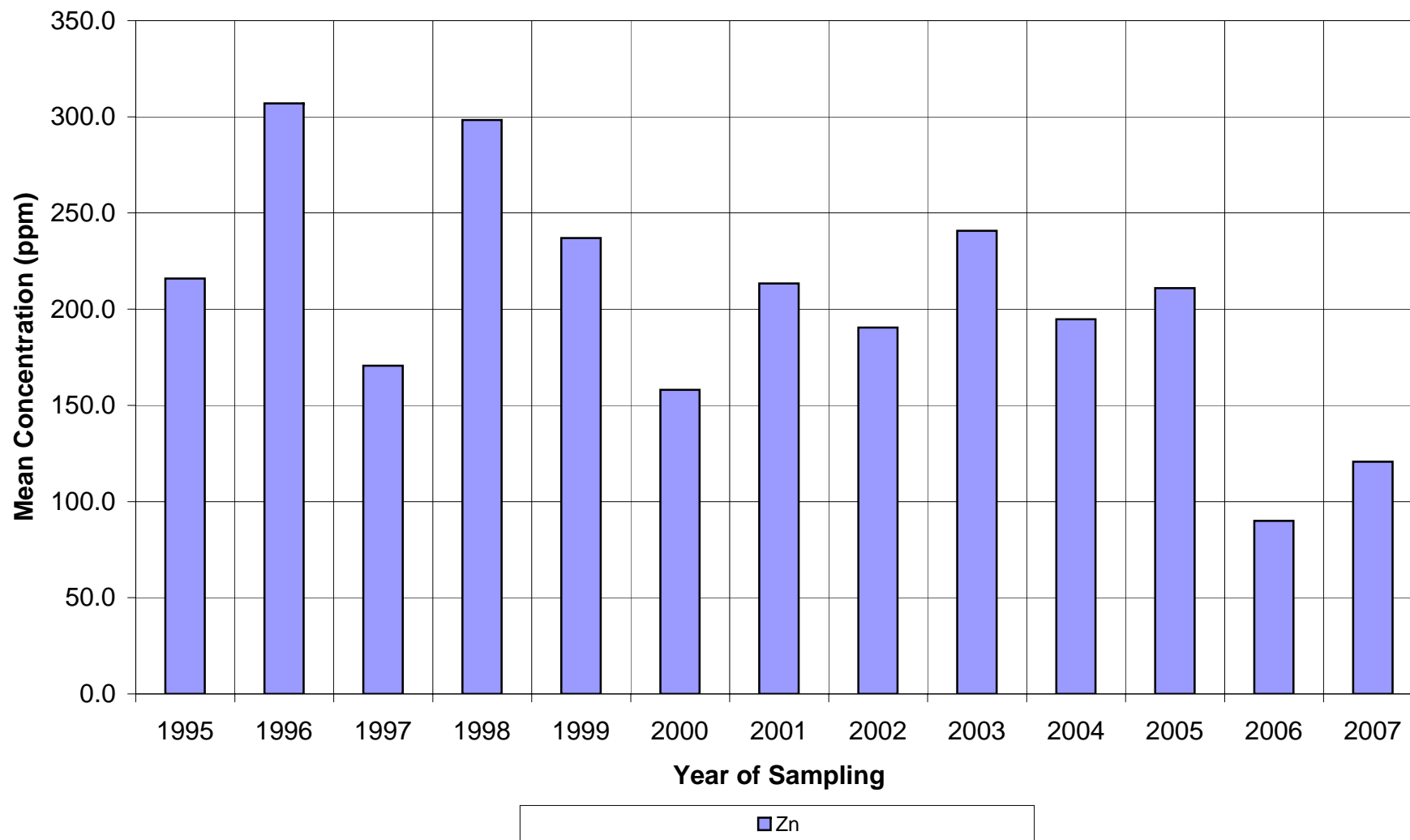
**Stream Sediment Site W13 - Molybdenum (Mo)  
BC-04: Lucky Creek downstream of Lucky Pit**



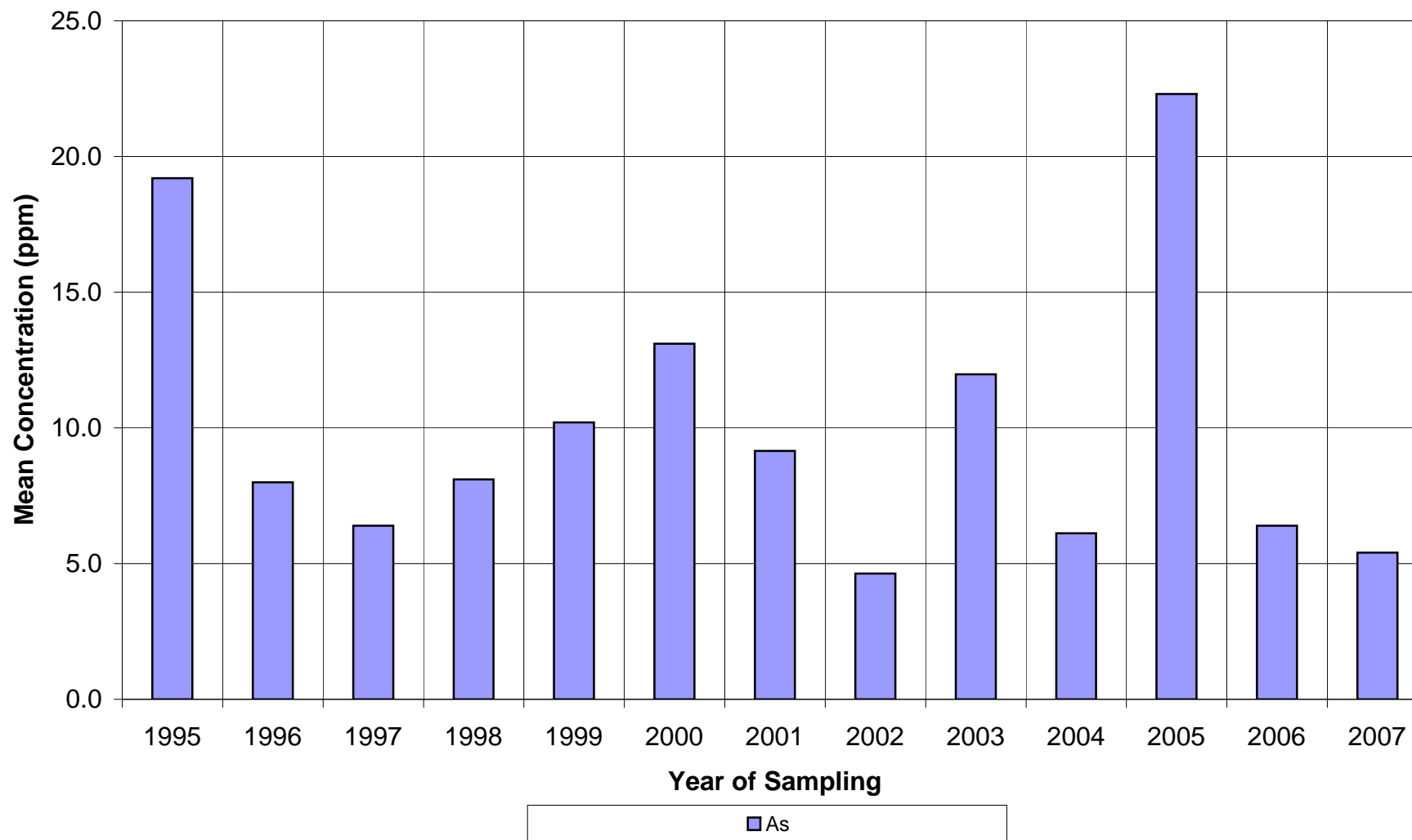


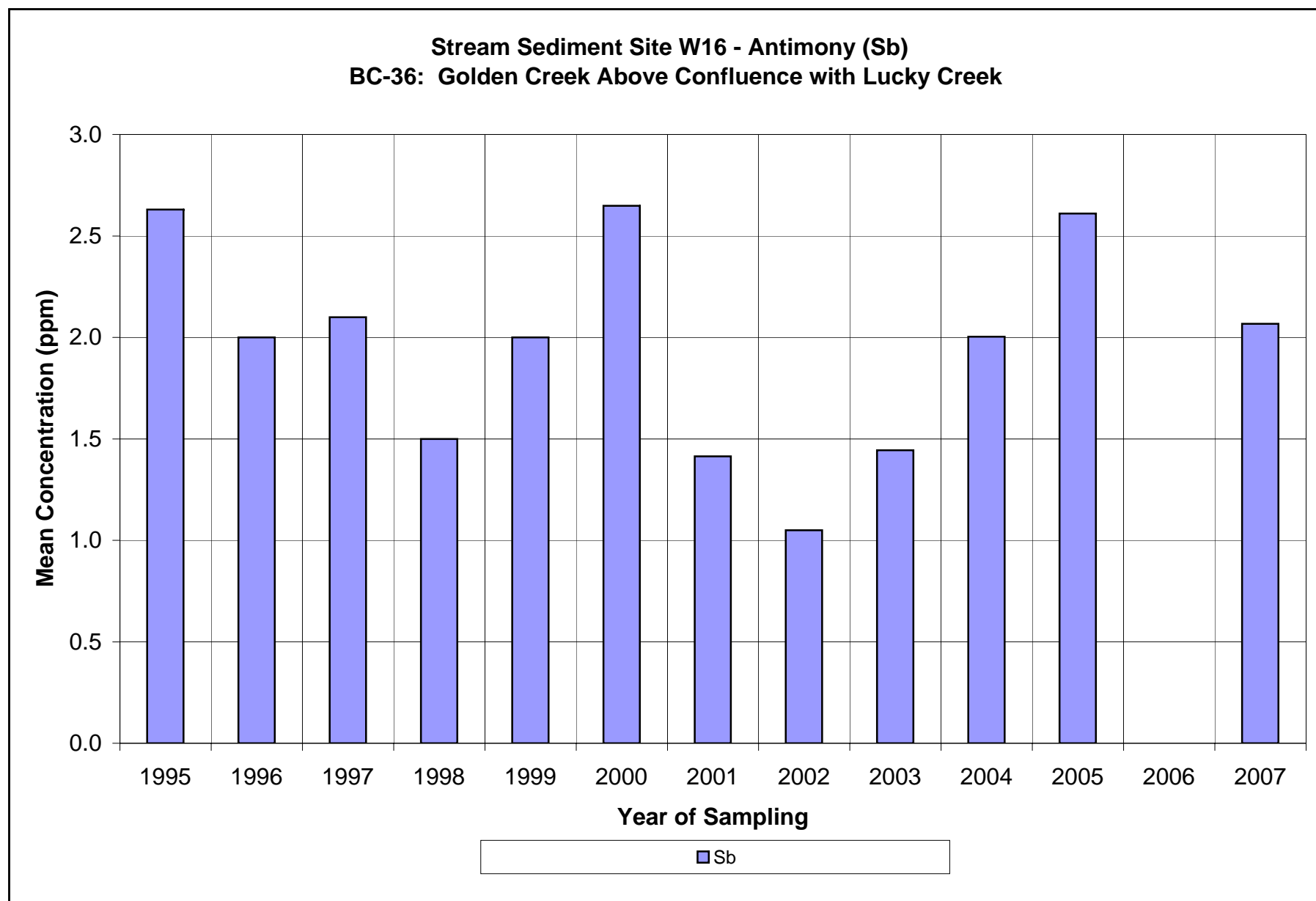


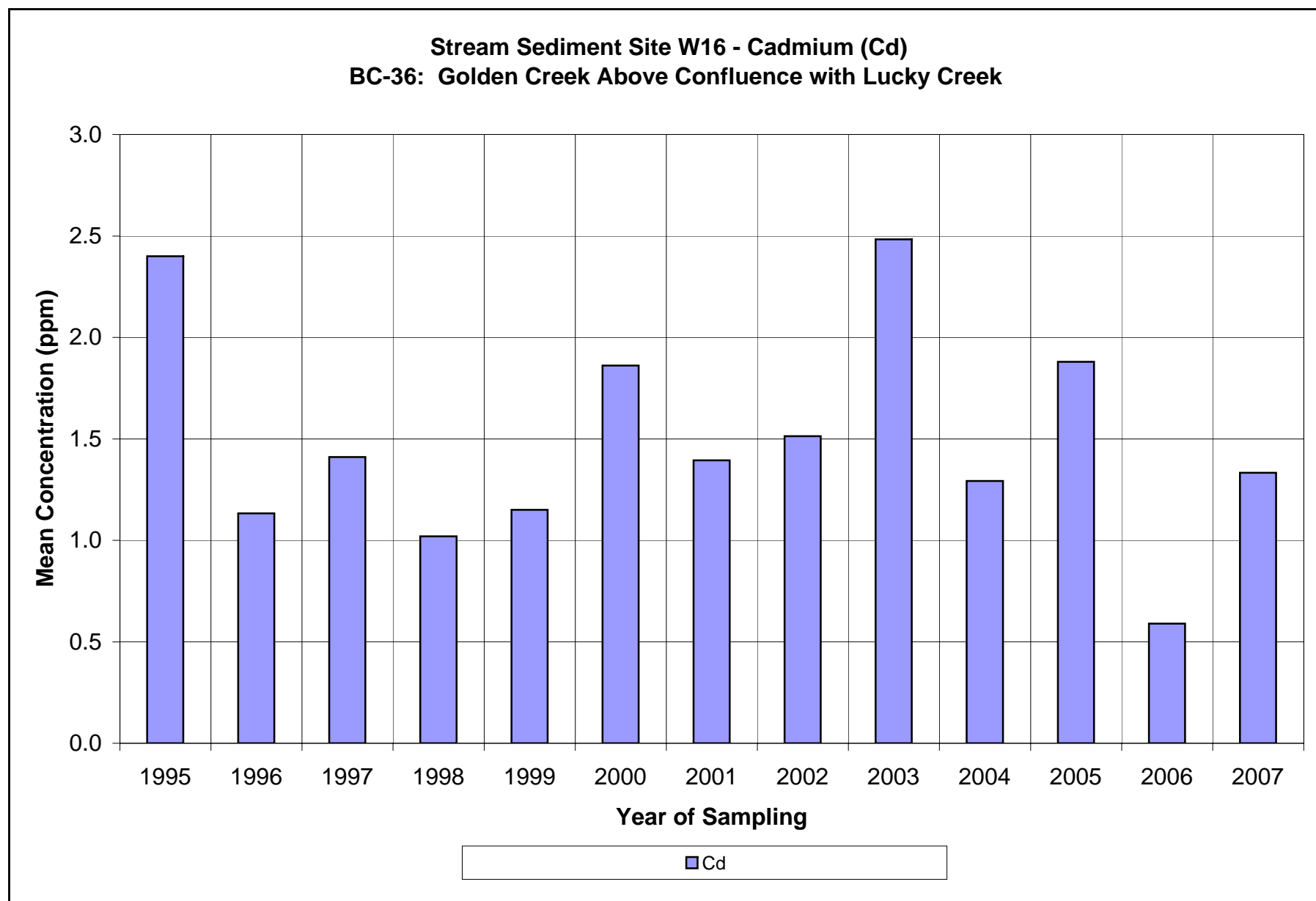
**Stream Sediment Site W13 - Zinc (Zn)**  
**BC-04: Lucky Creek downstream of Lucky Pit**



**Stream Sediment Site W16 - Arsenic (As)**  
**BC-36: Golden Creek Above Confluence with Lucky Creek**

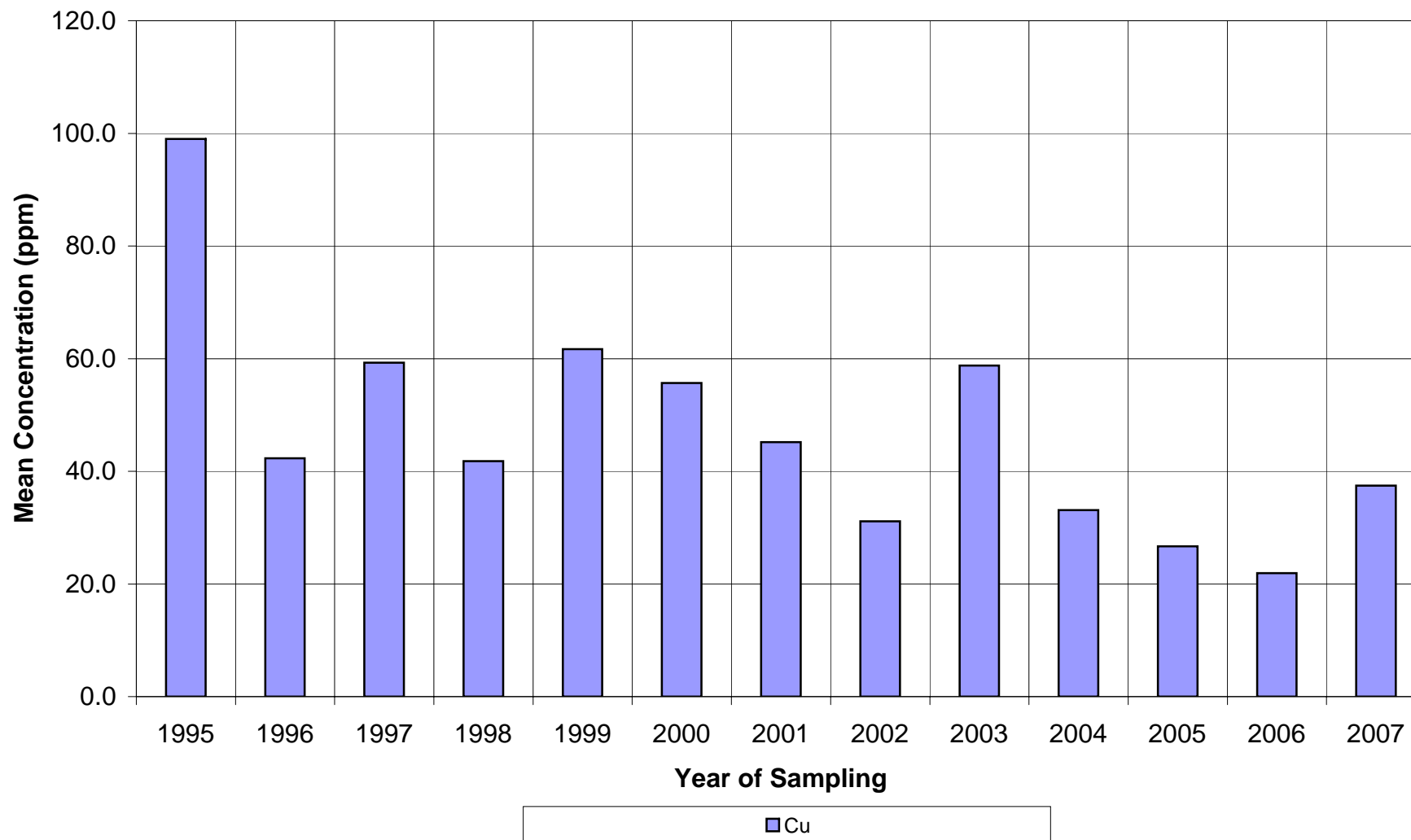


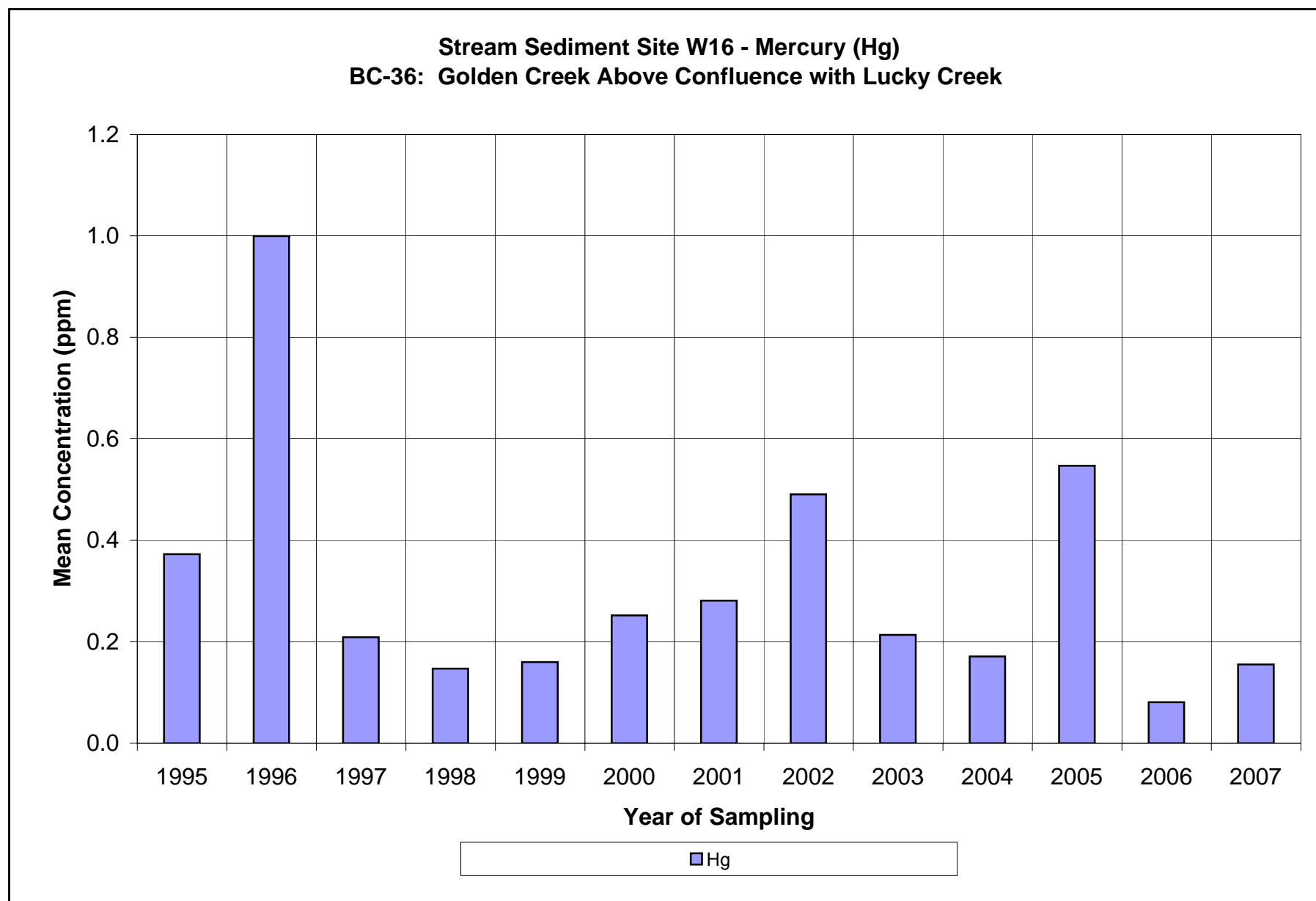


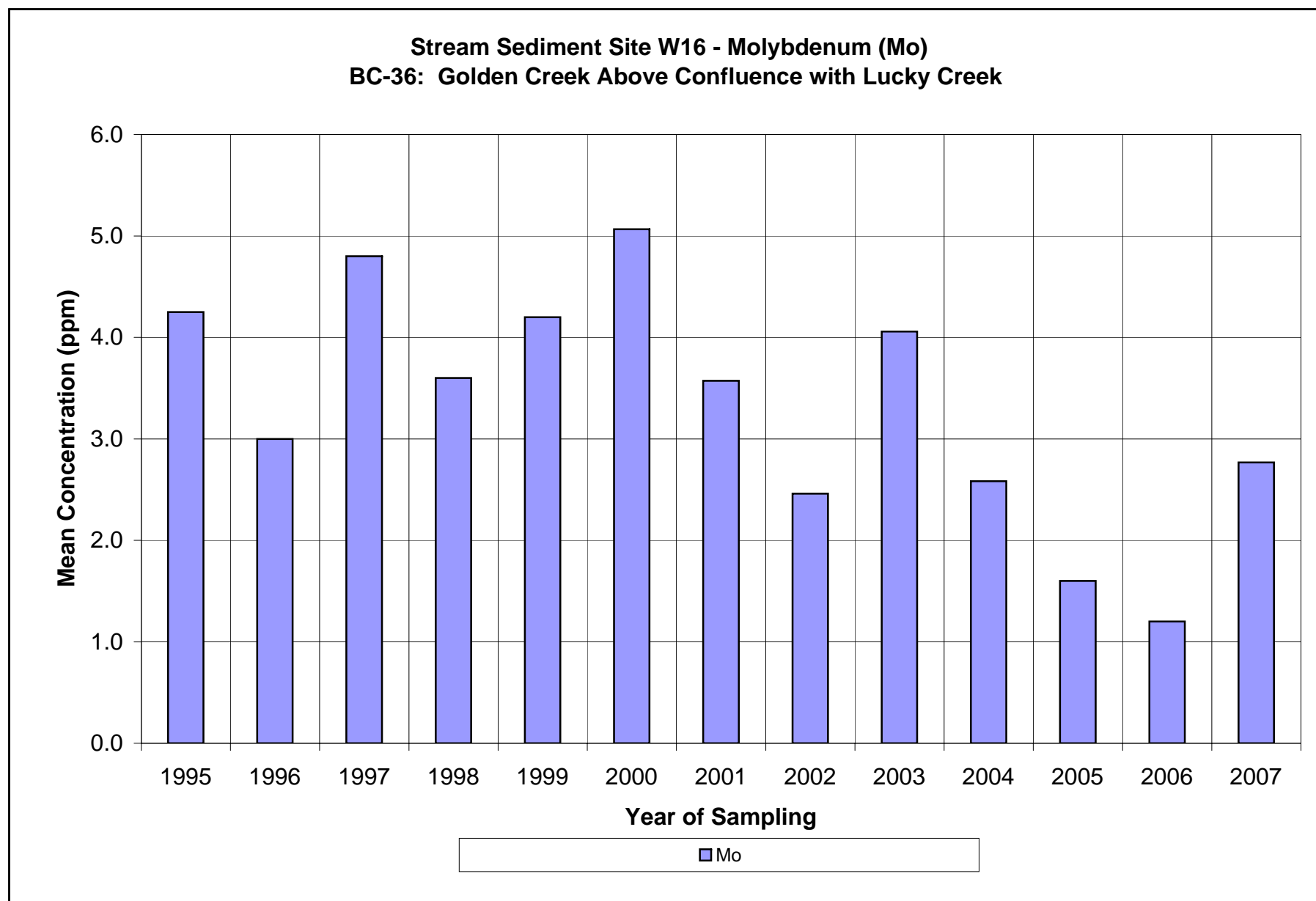


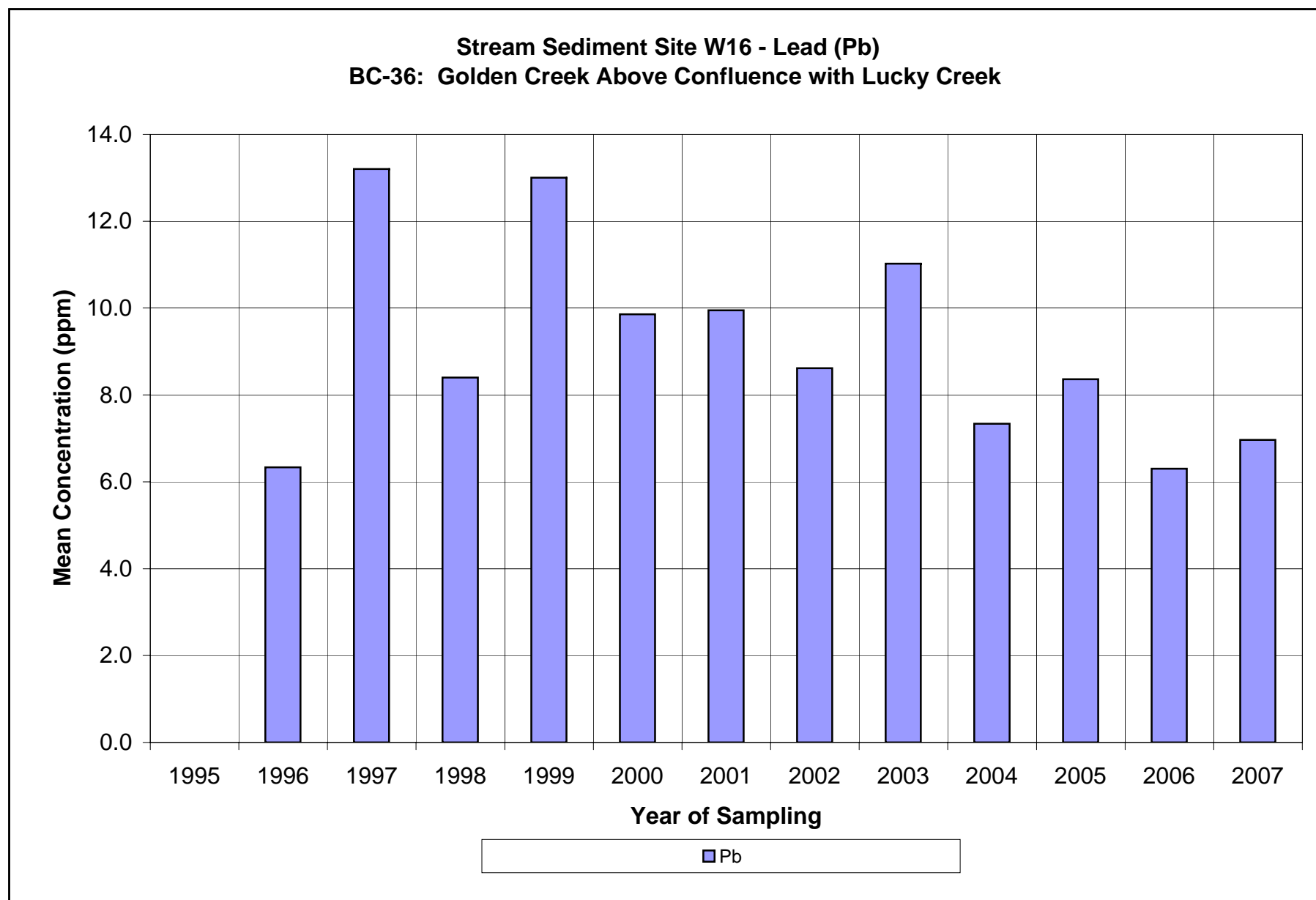


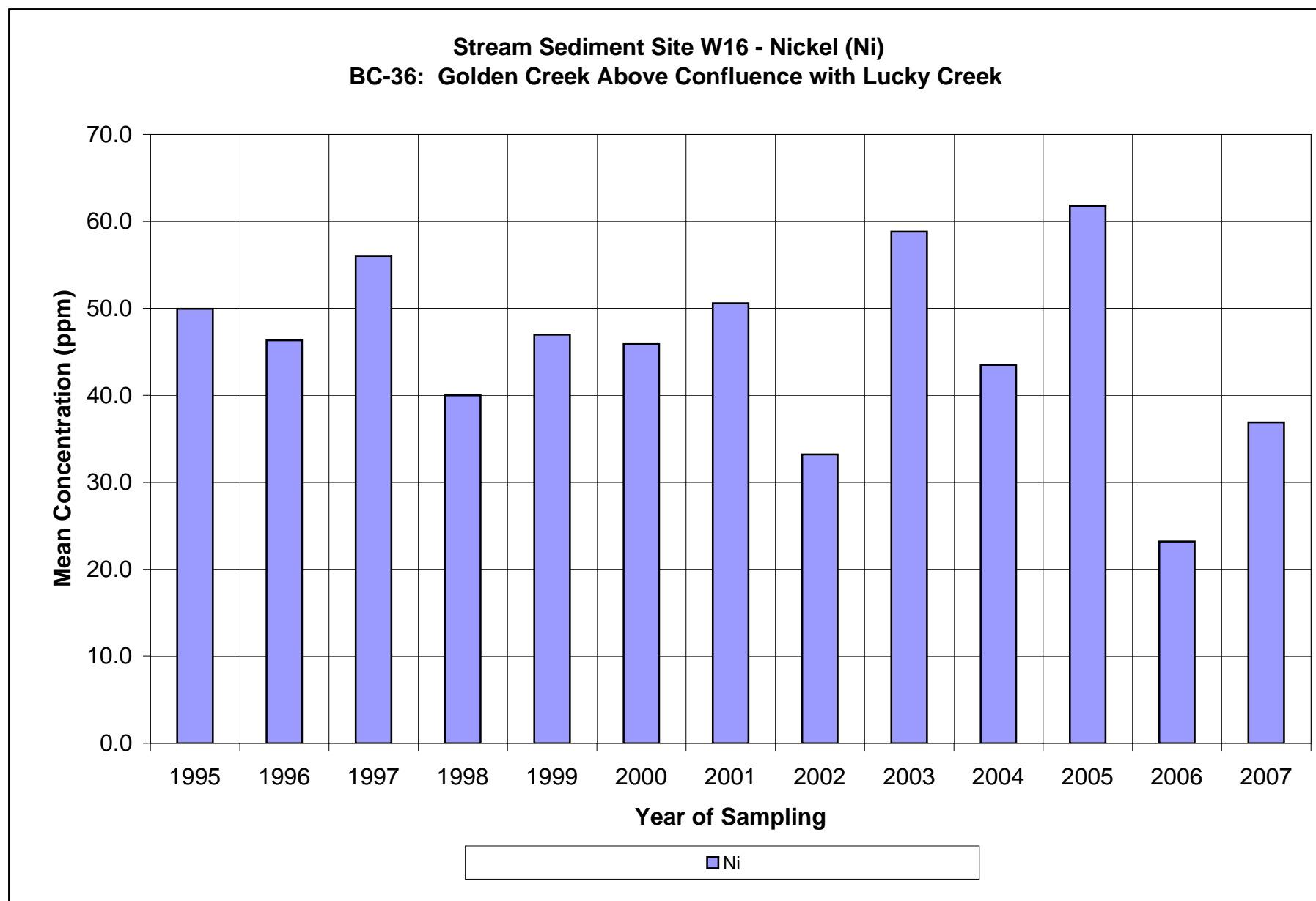
**Stream Sediment Site W16 - Copper (Cu)**  
**BC-36: Golden Creek Above Confluence with Lucky Creek**



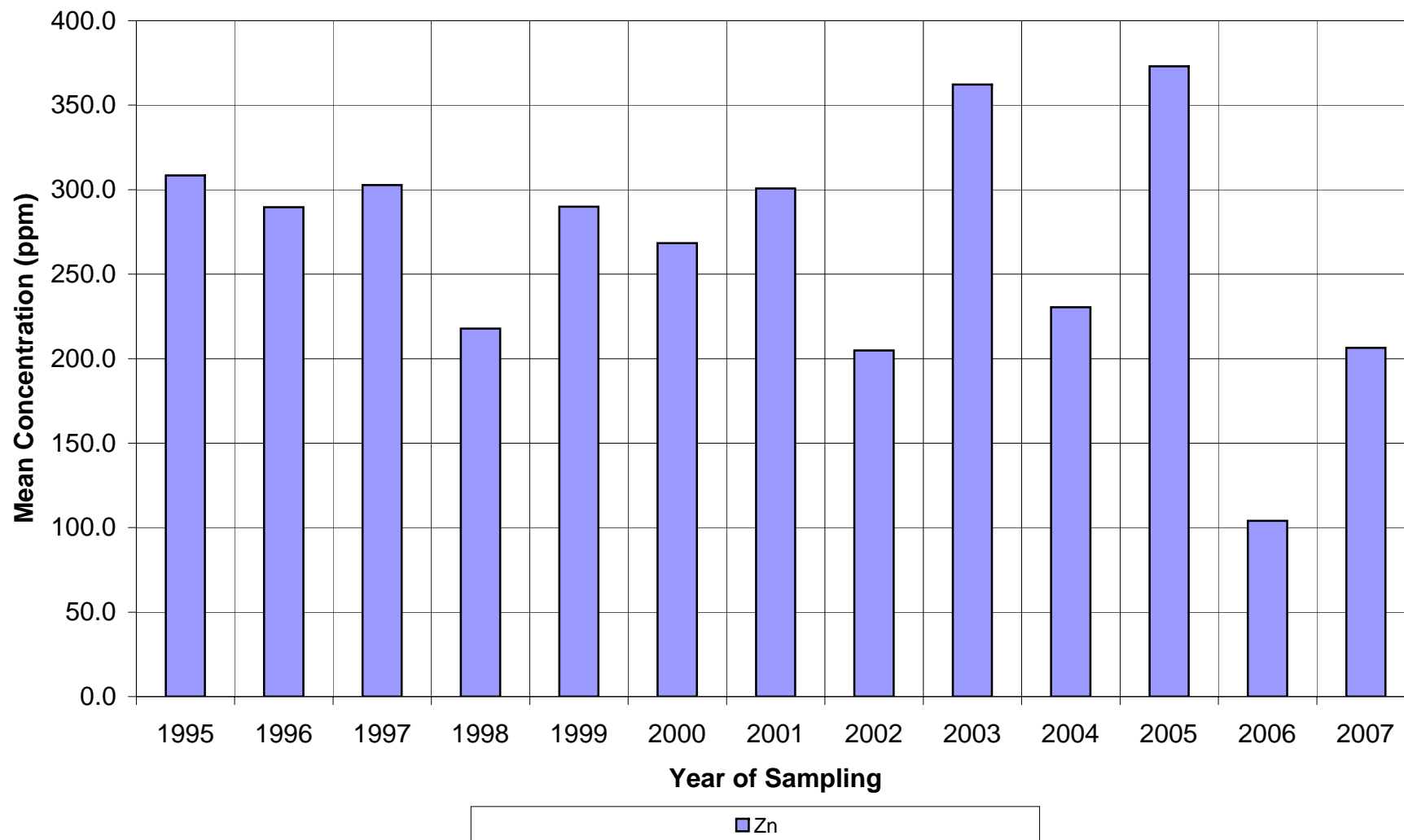


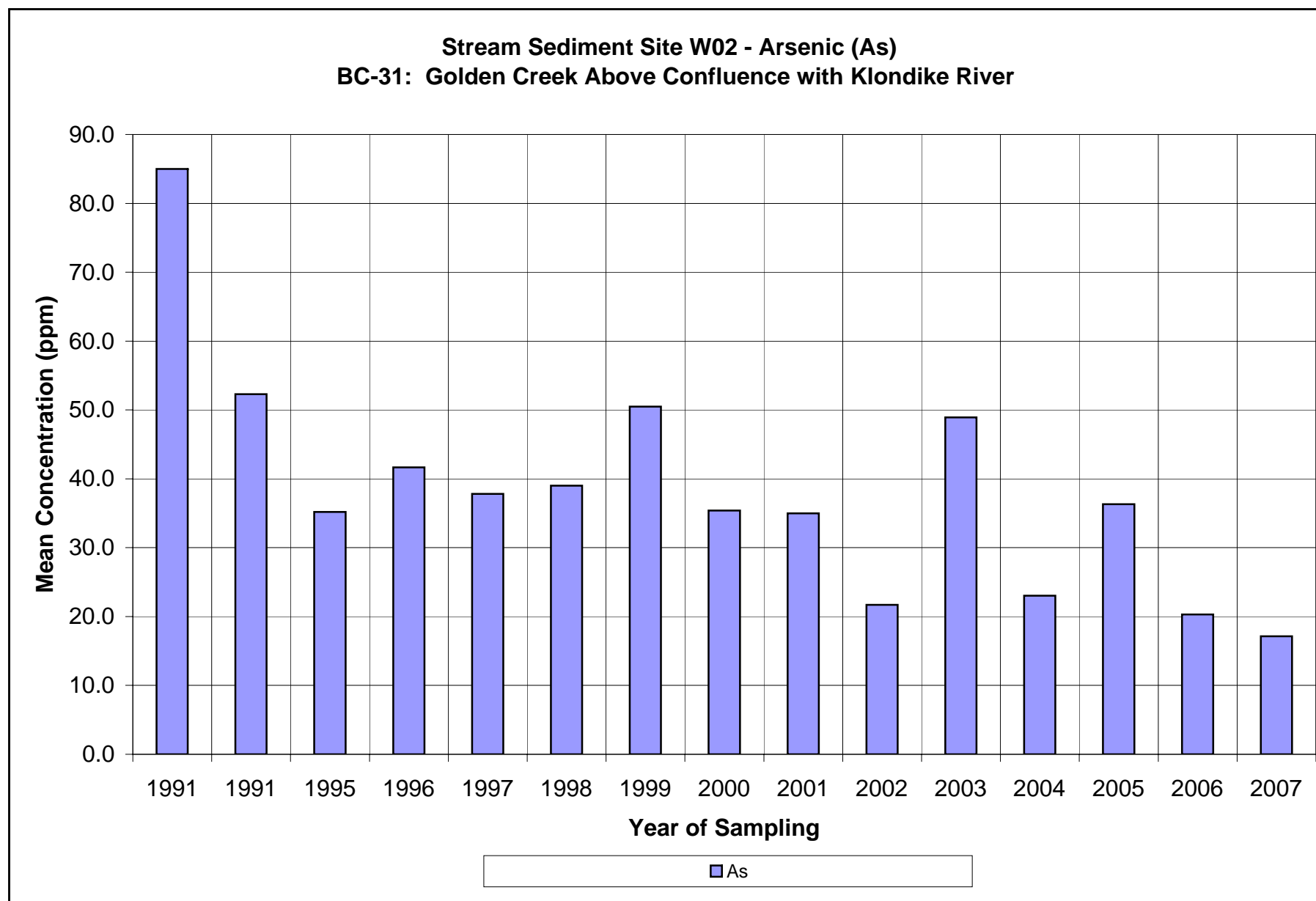


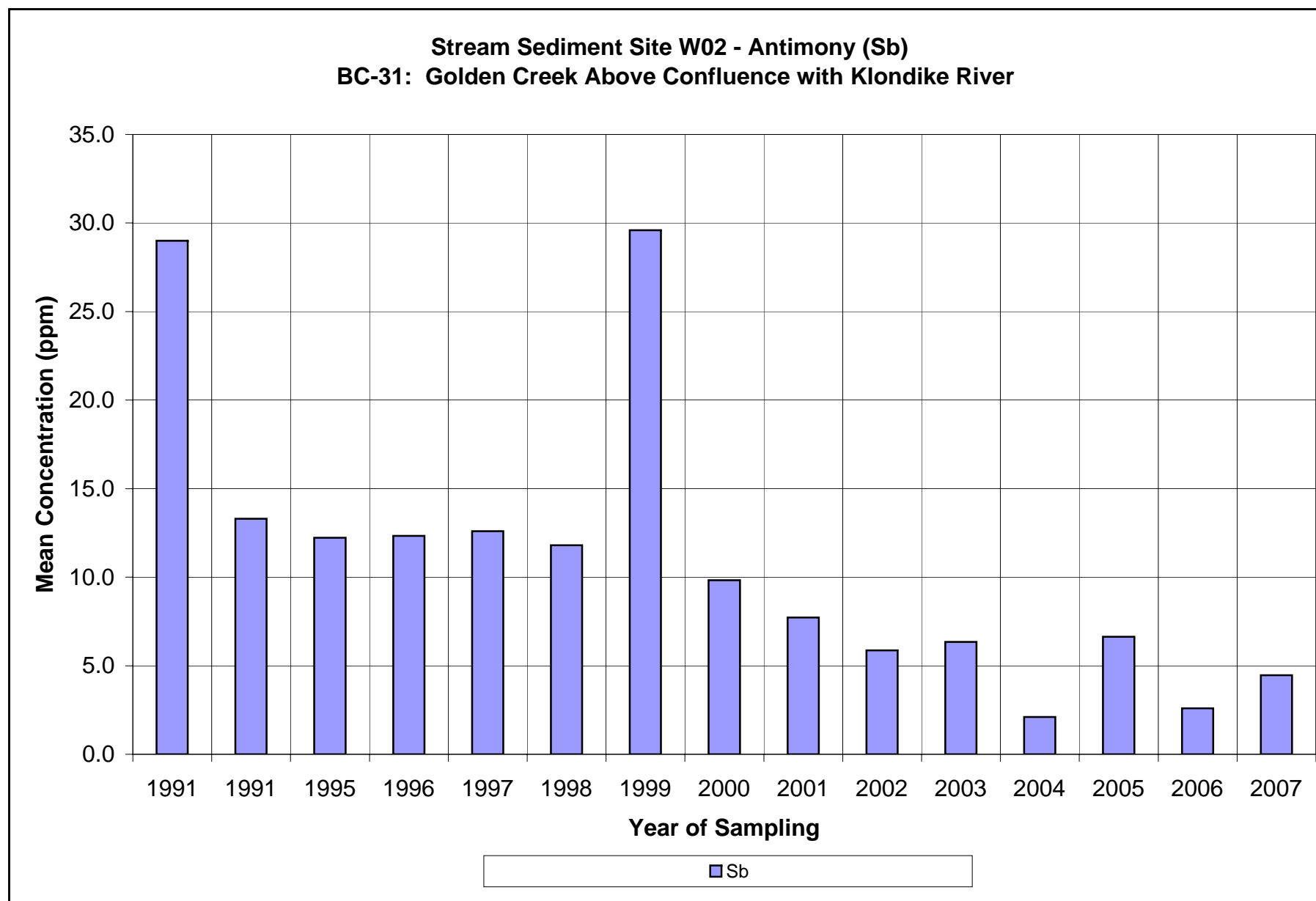




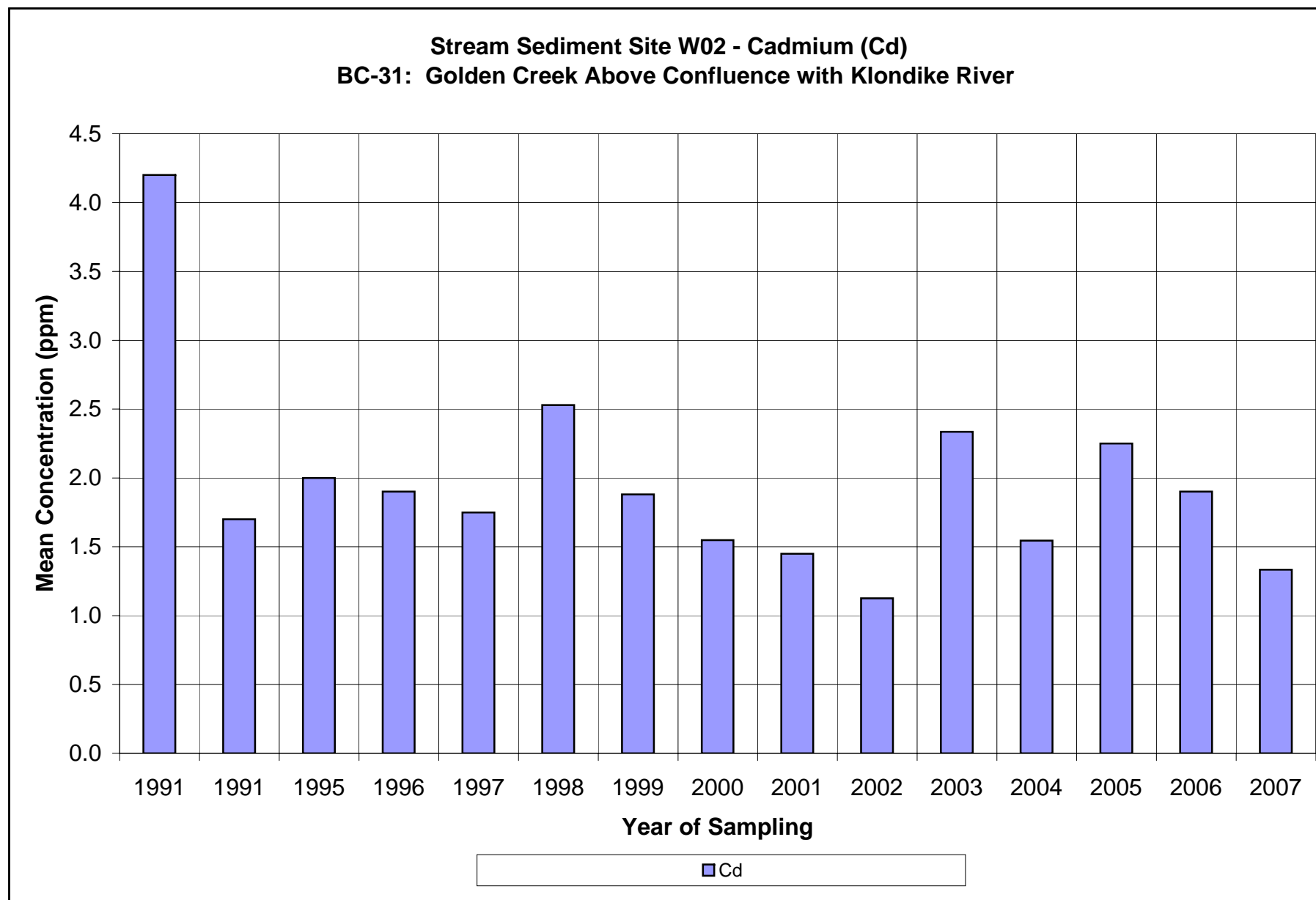
**Stream Sediment Site W16 - Zinc (Zn)**  
**BC-36: Golden Creek Above Confluence with Lucky Creek**



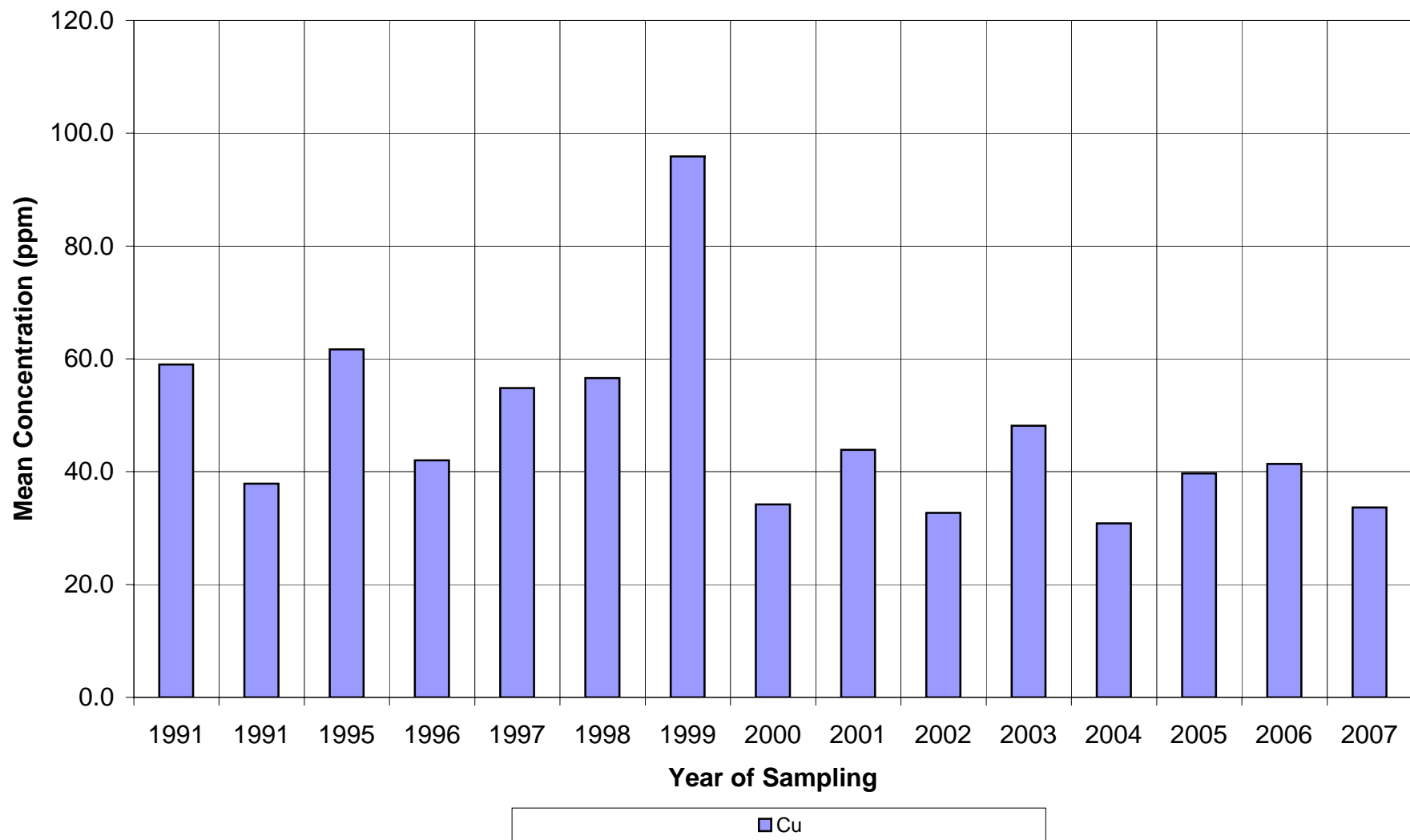


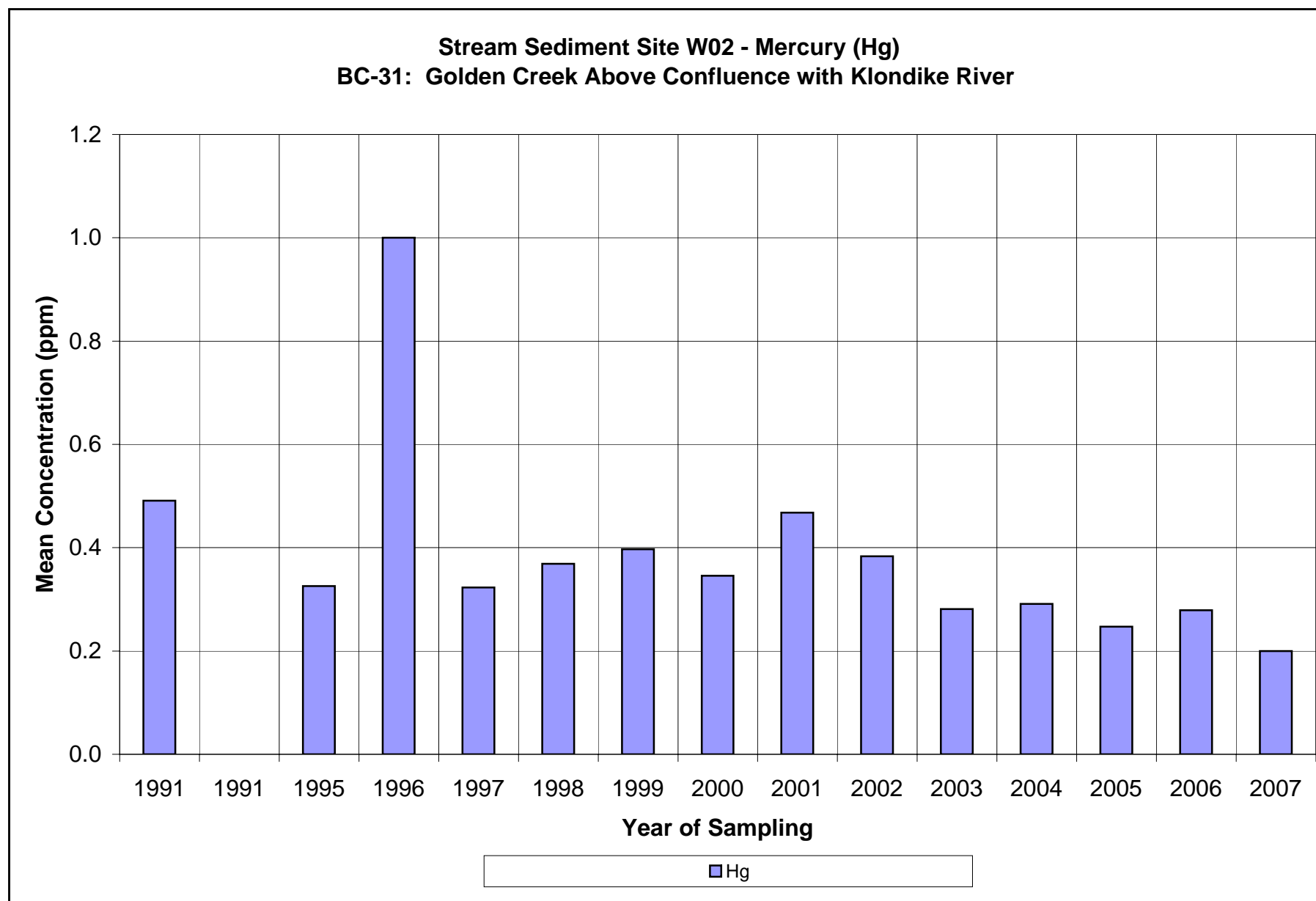




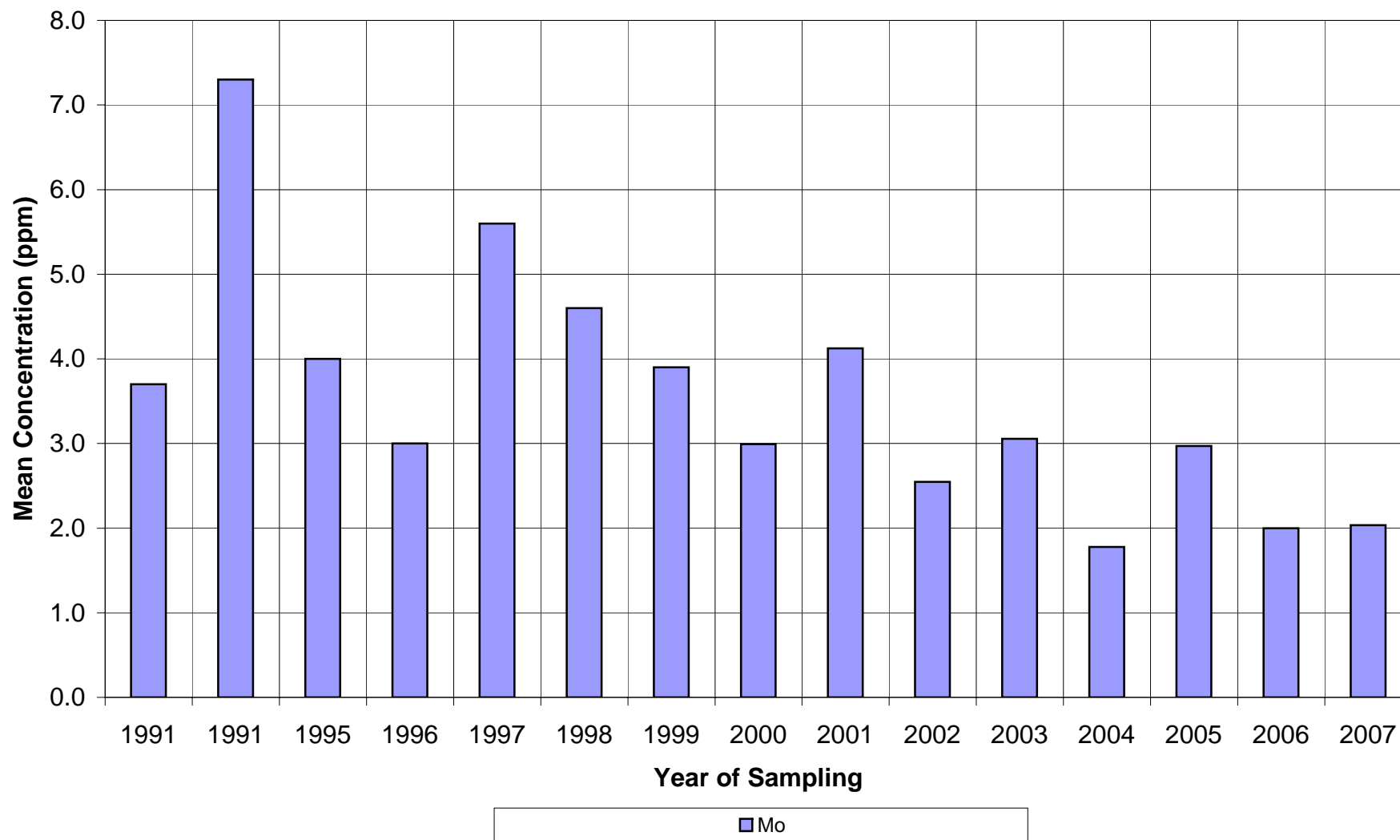


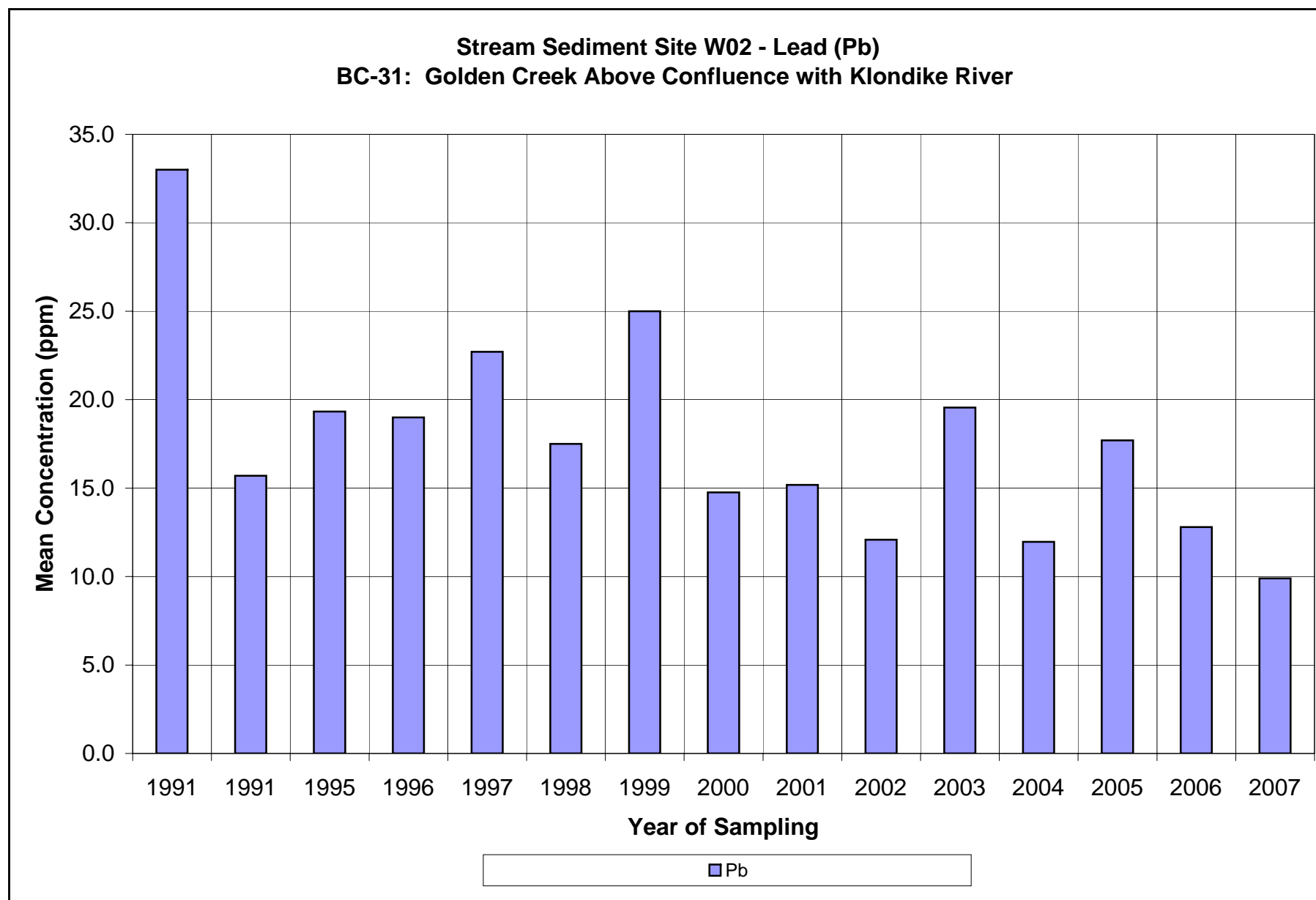
**Stream Sediment Site W02 - Copper (Cu)**  
**BC-31: Golden Creek Above Confluence with Klondike River**

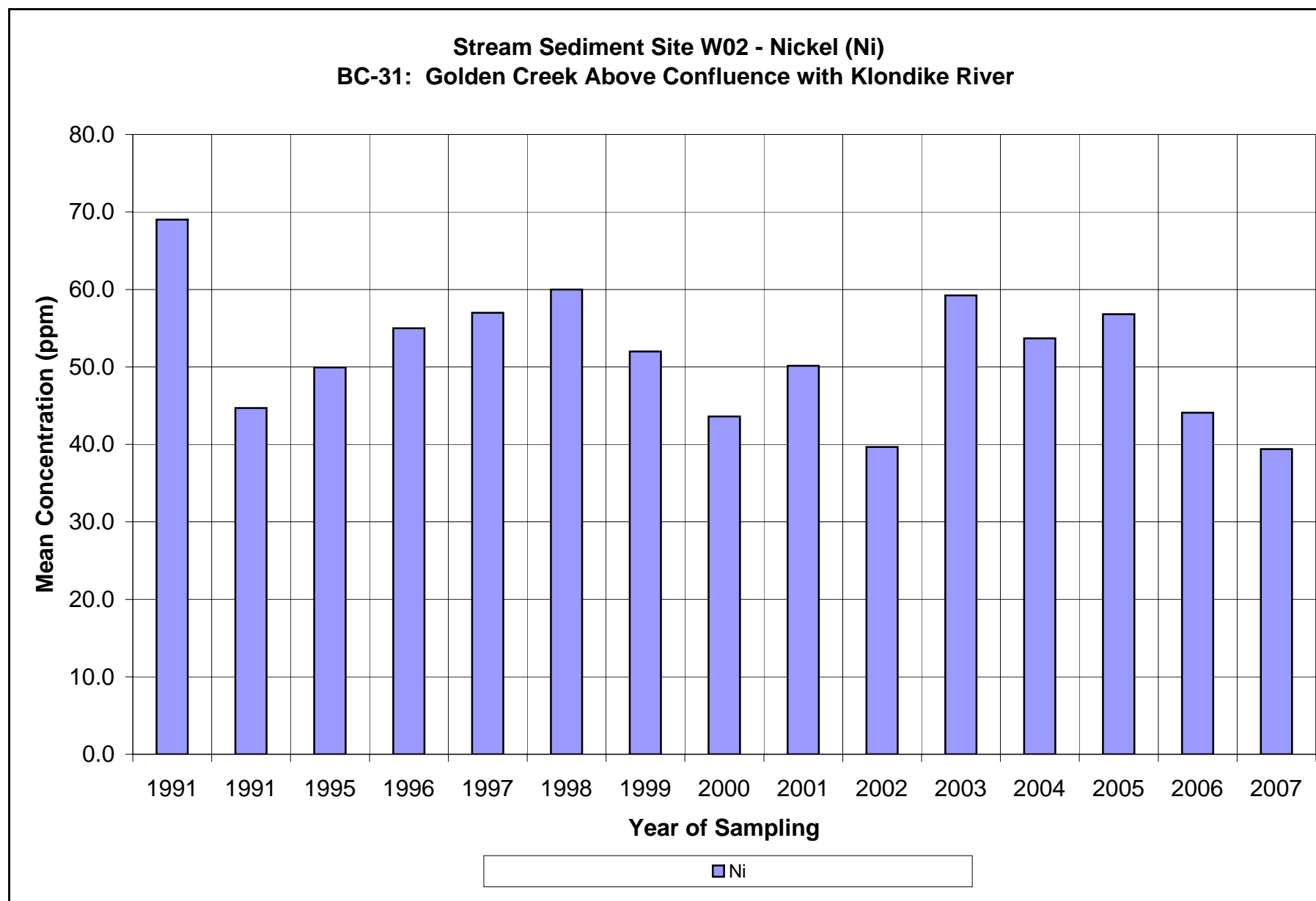




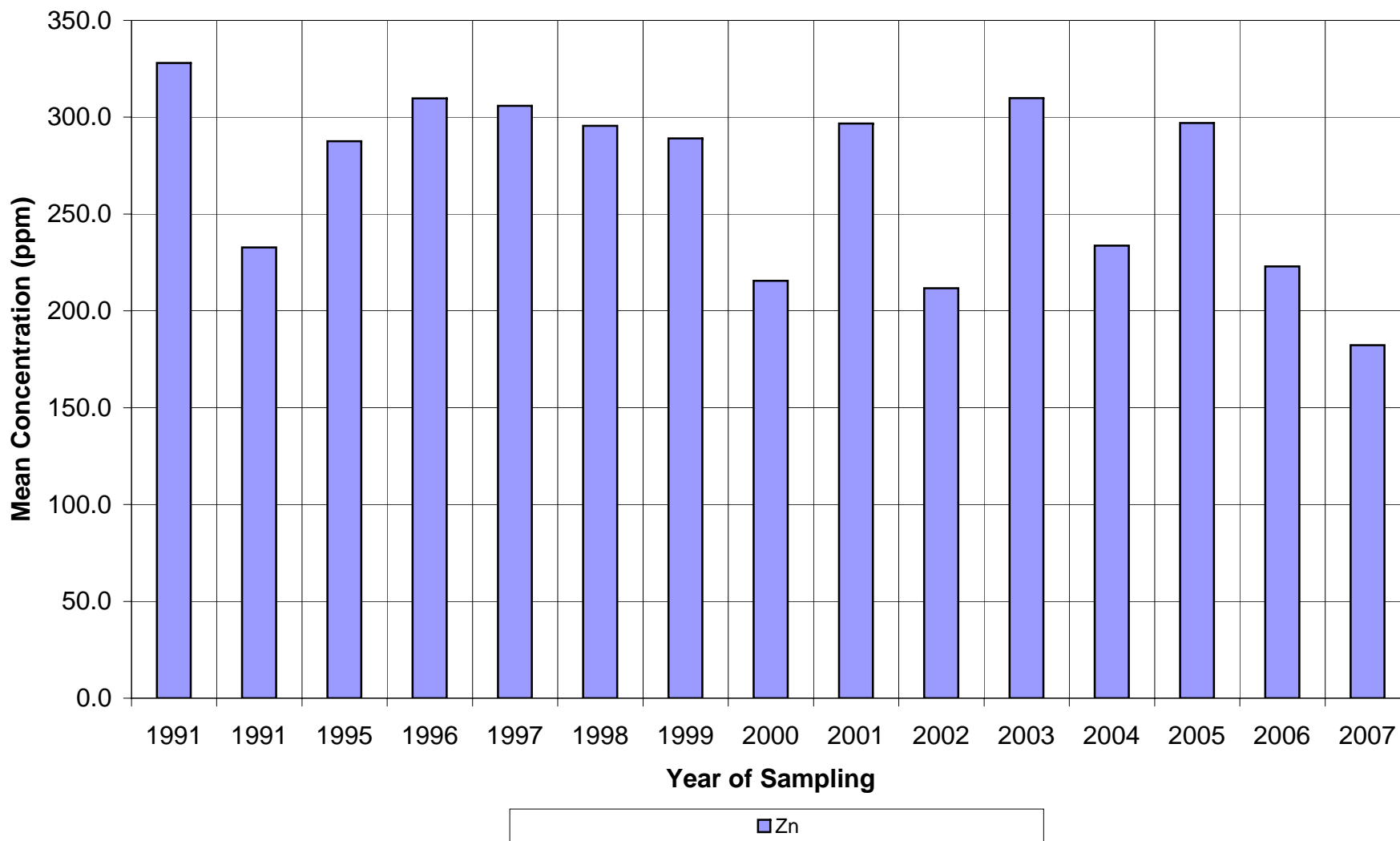
**Stream Sediment Site W02 - Molybdenum (Mo)**  
**BC-31: Golden Creek Above Confluence with Klondike River**

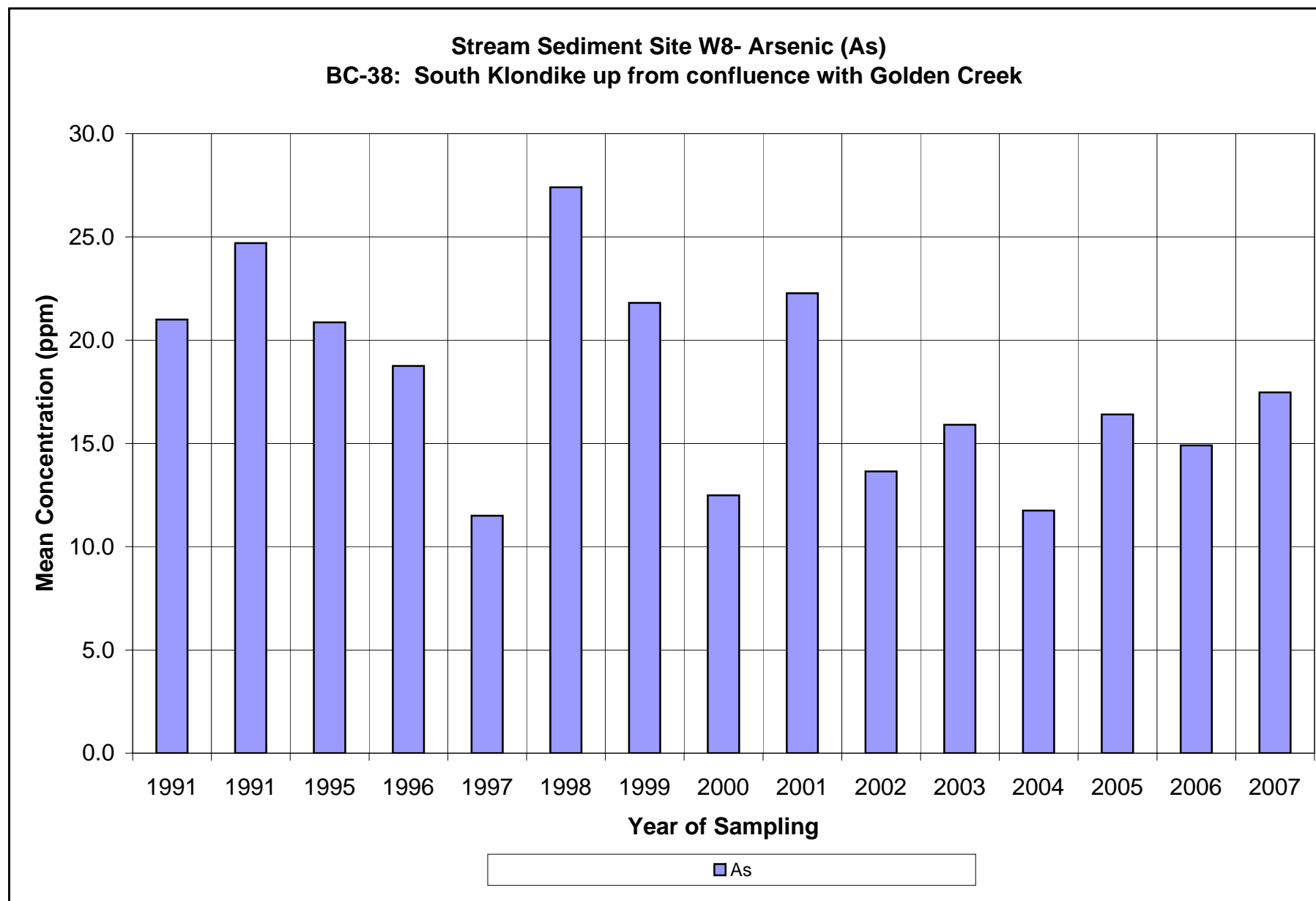




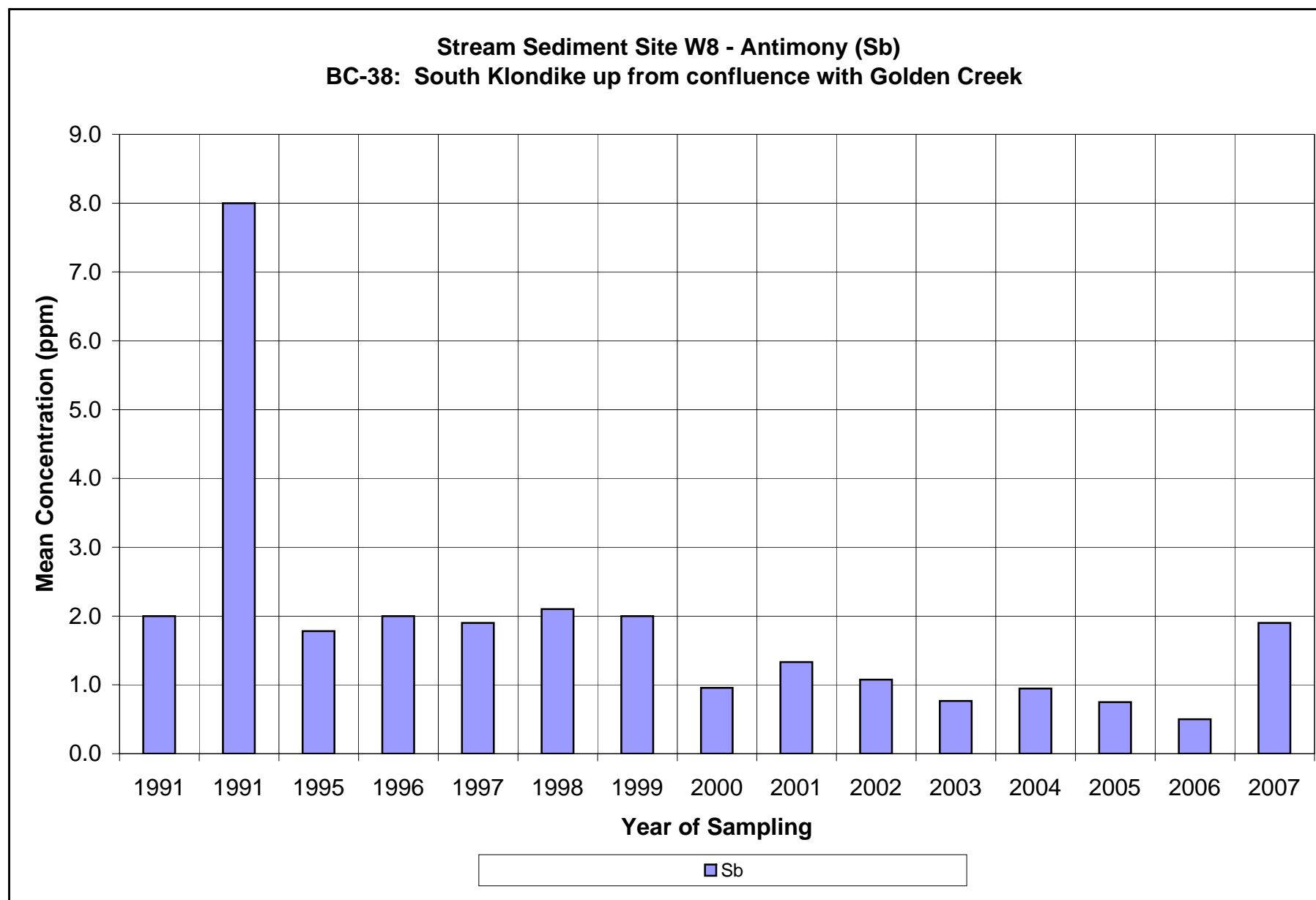


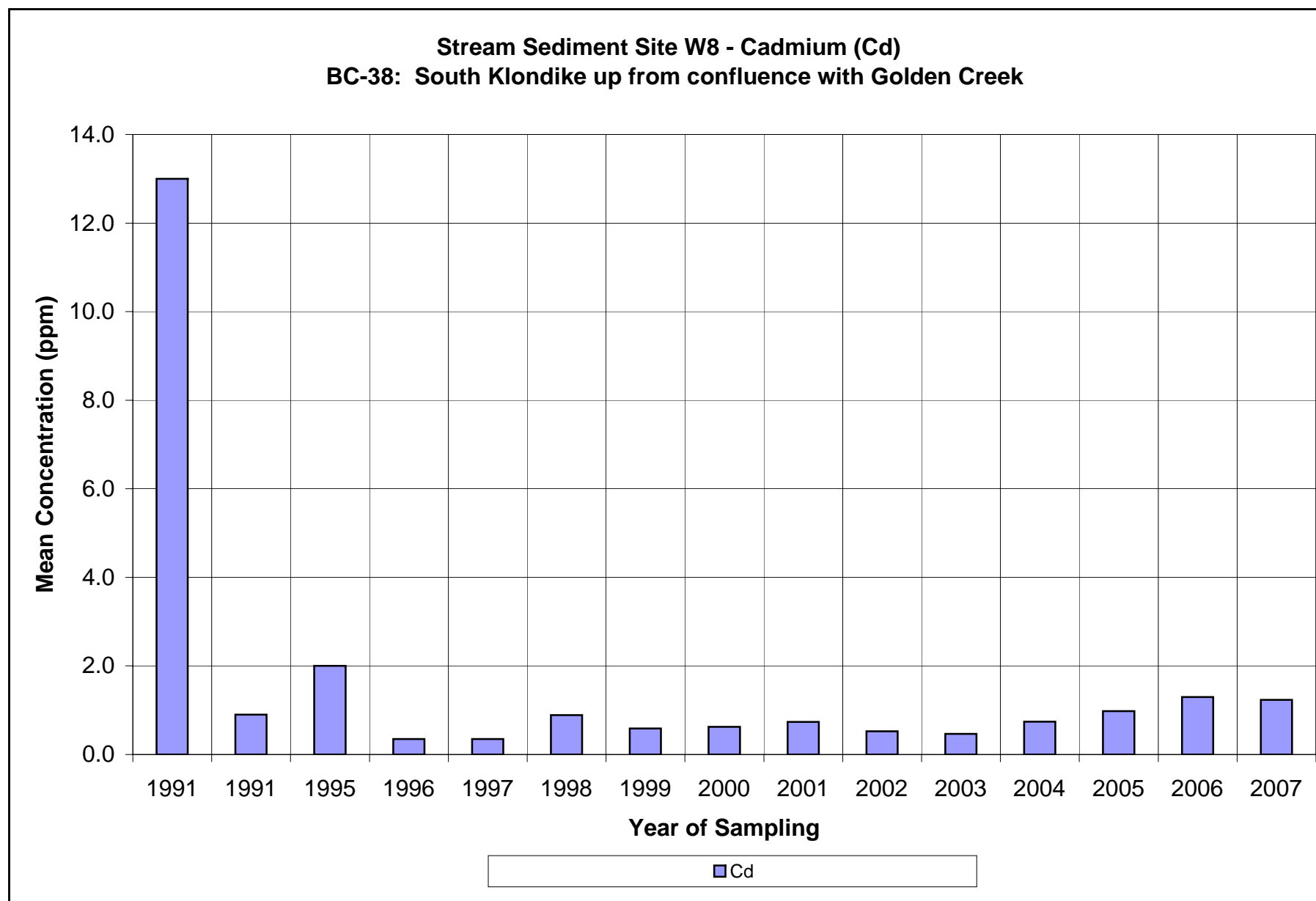
**Stream Sediment Site W02 - Zinc (Zn)**  
**BC-31: Golden Creek Above Confluence with Klondike River**

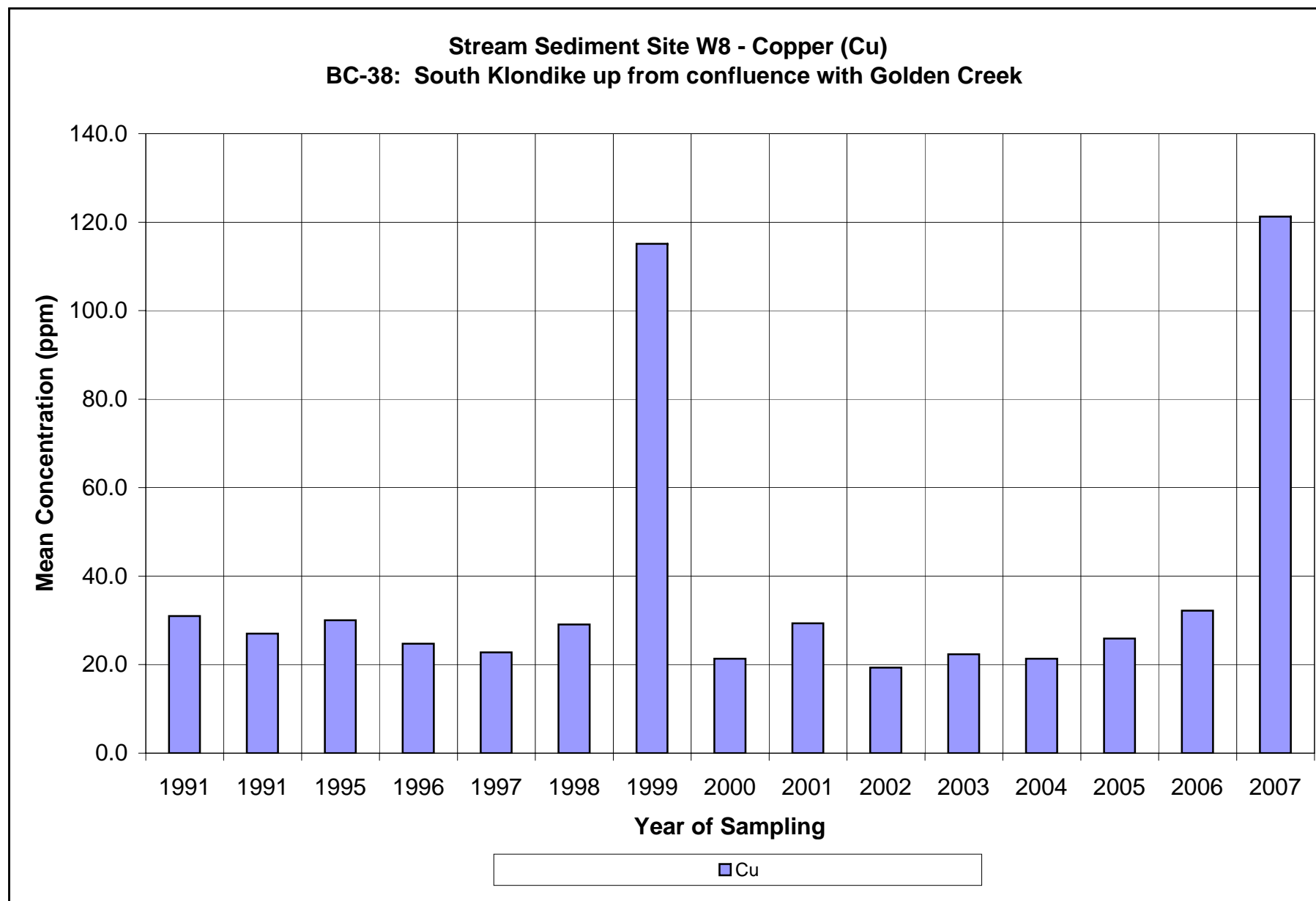


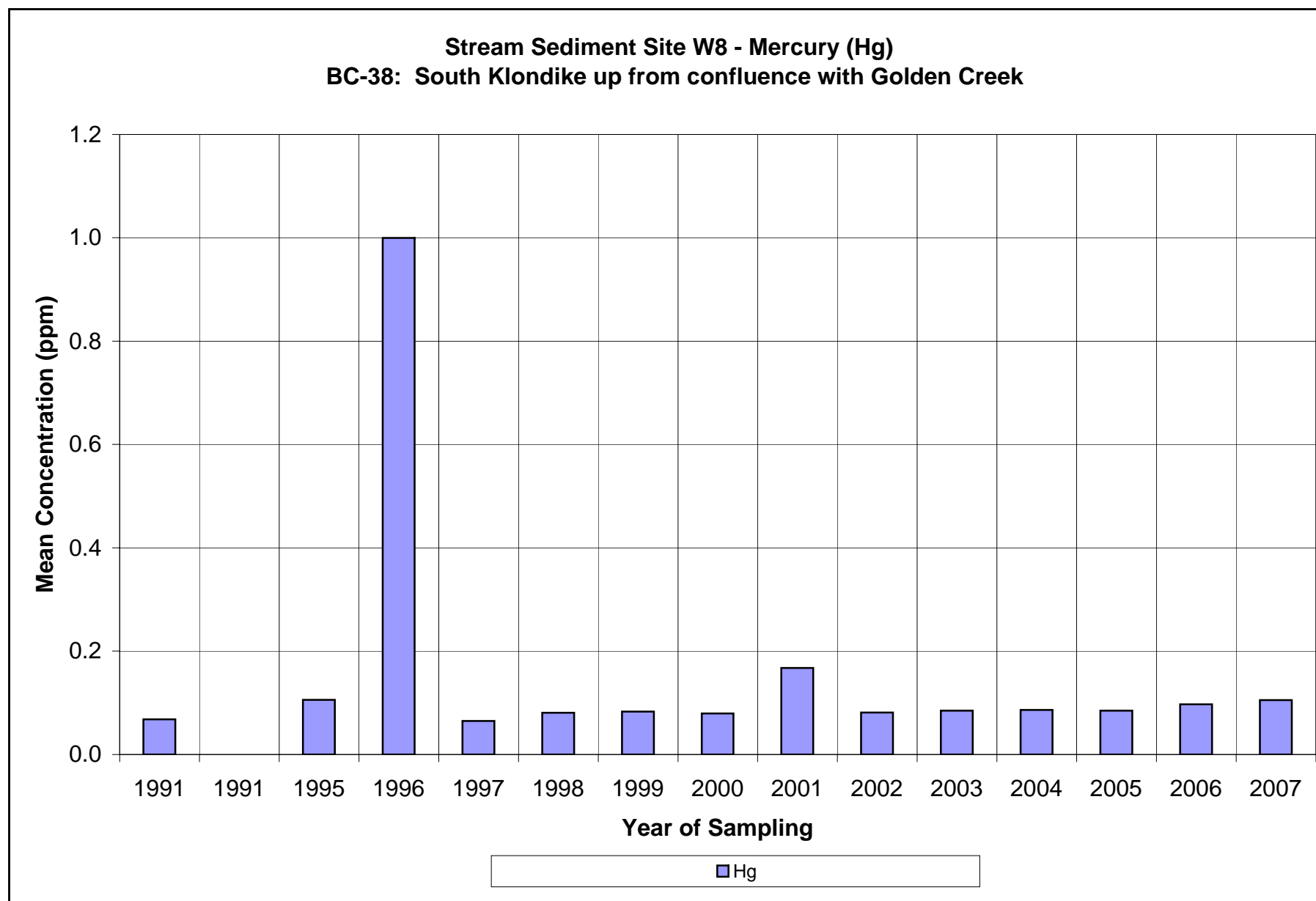


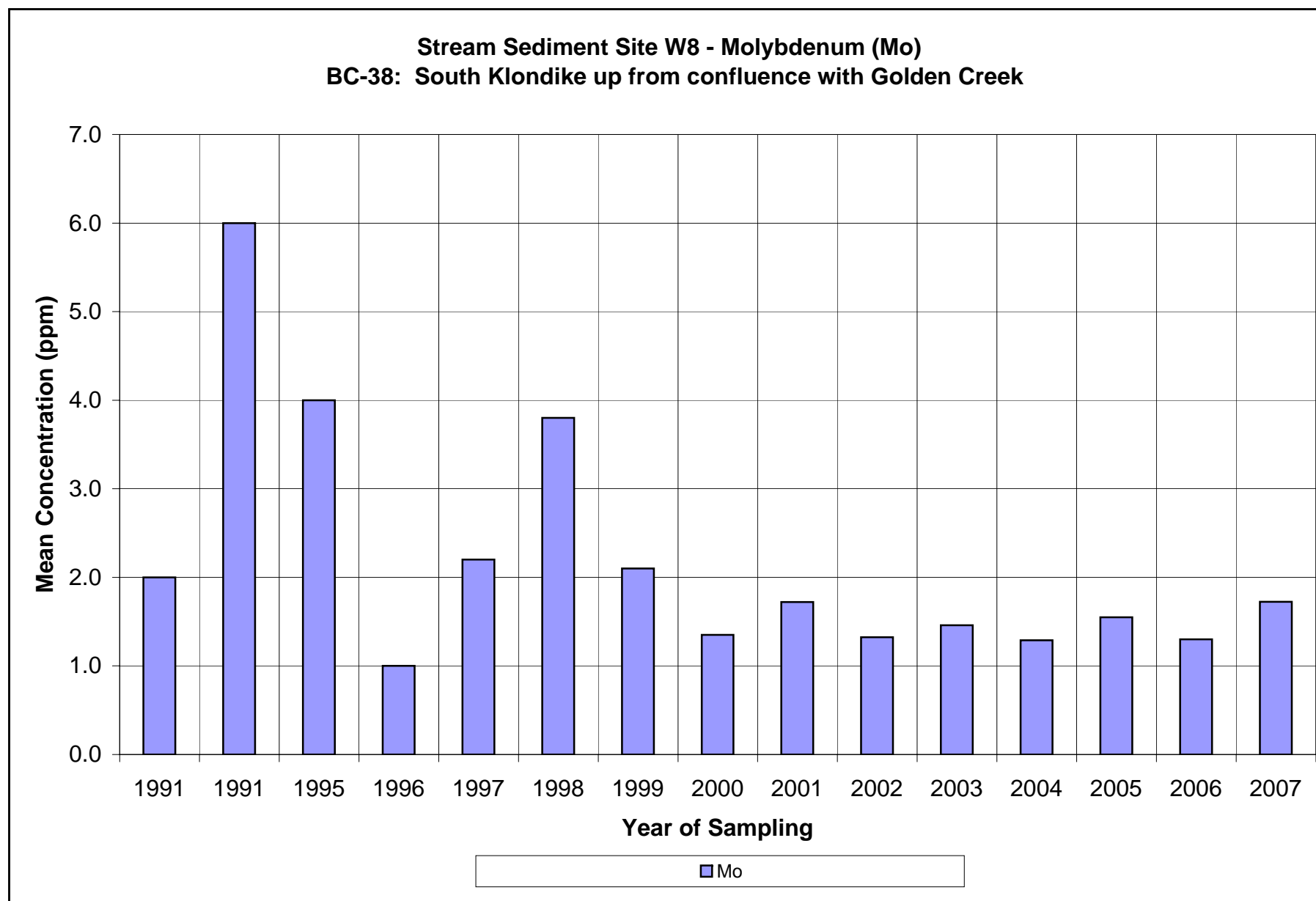


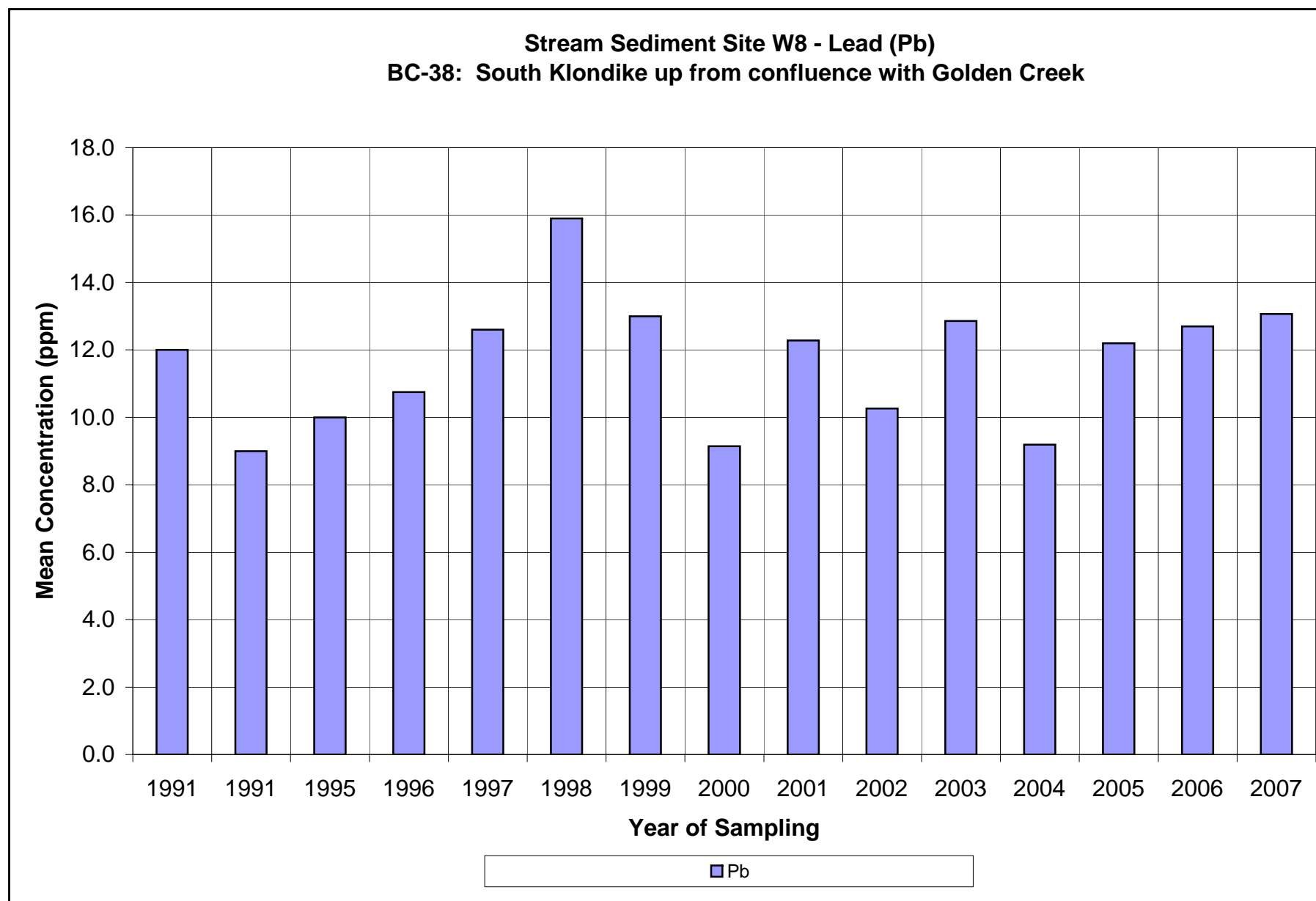




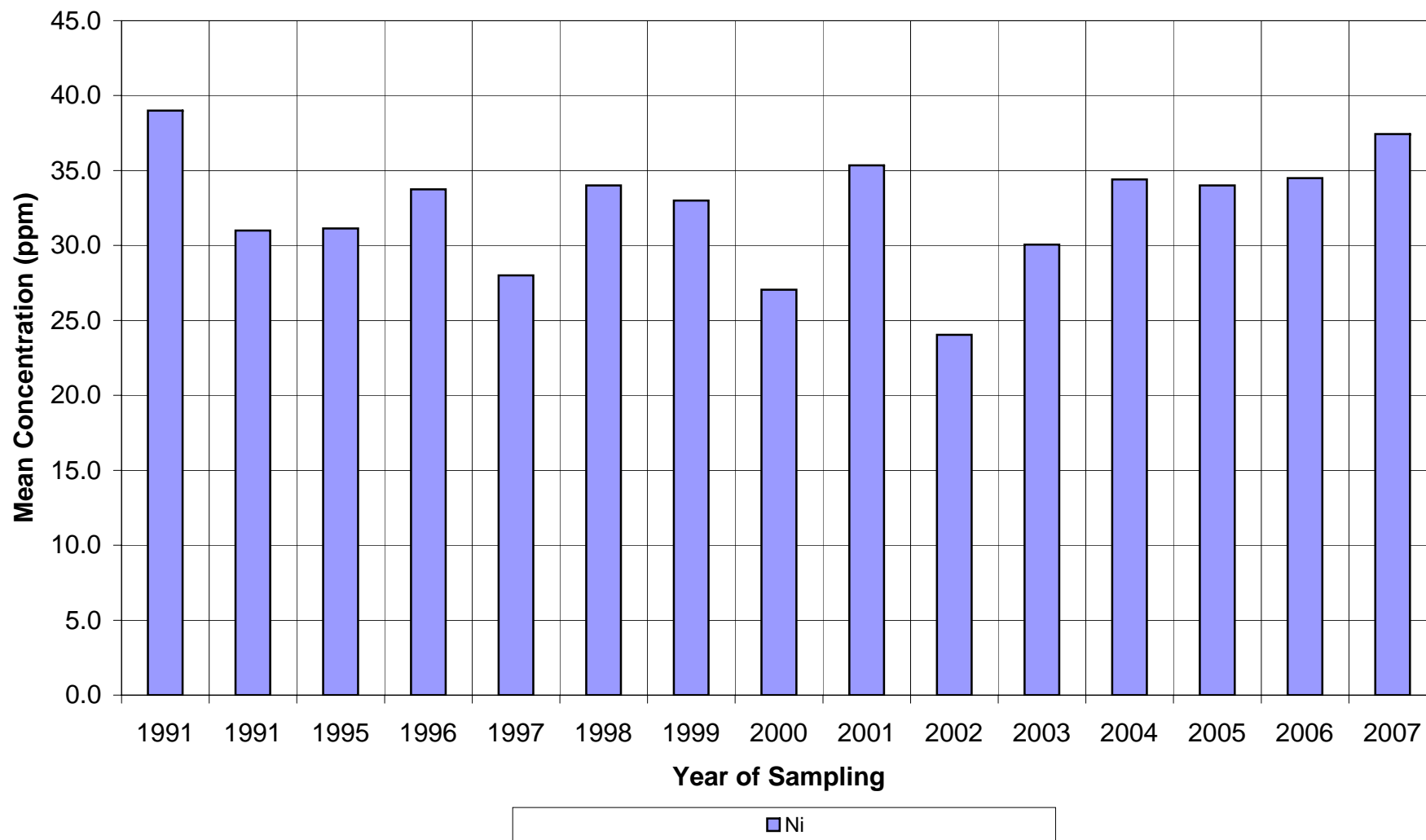


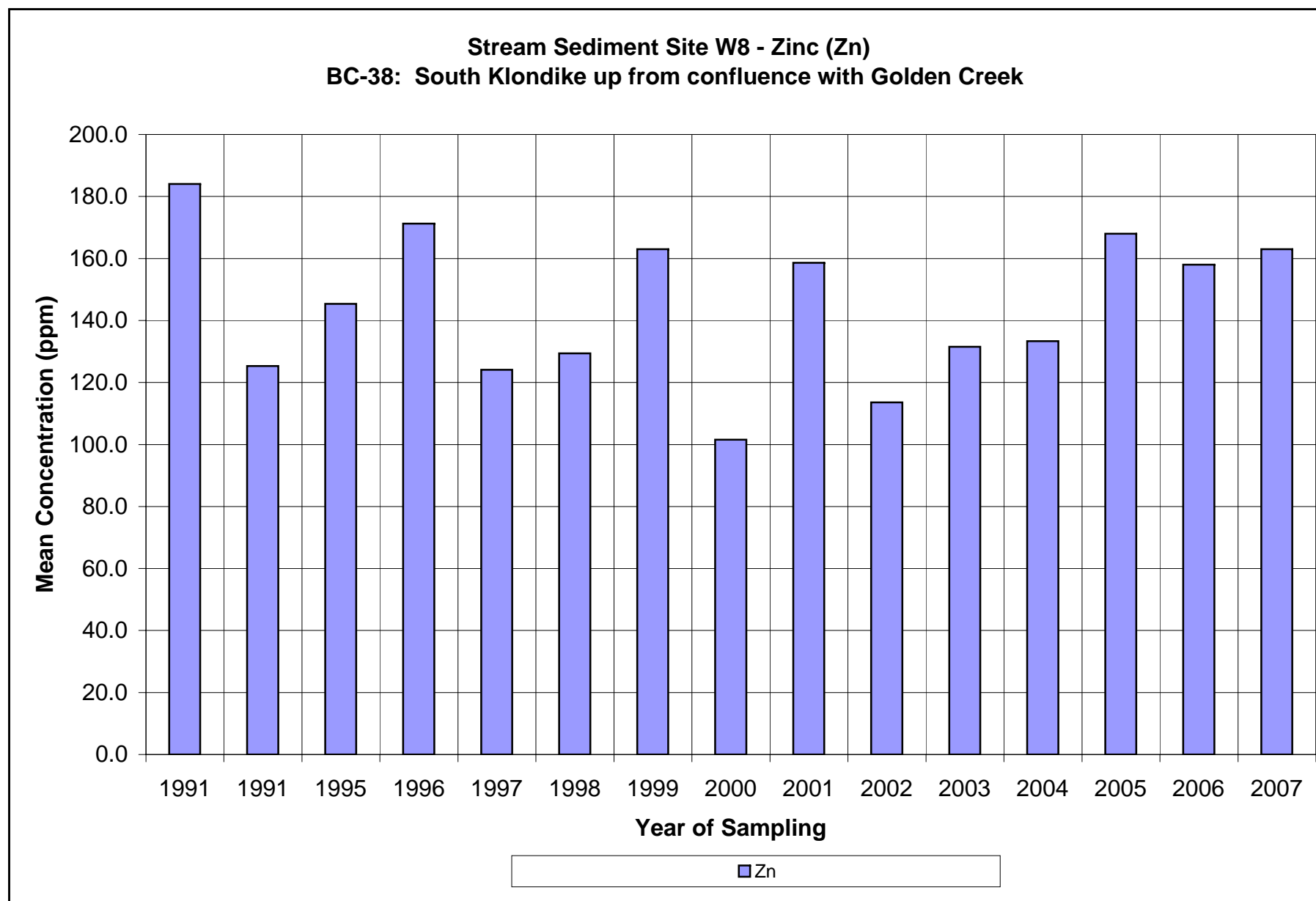




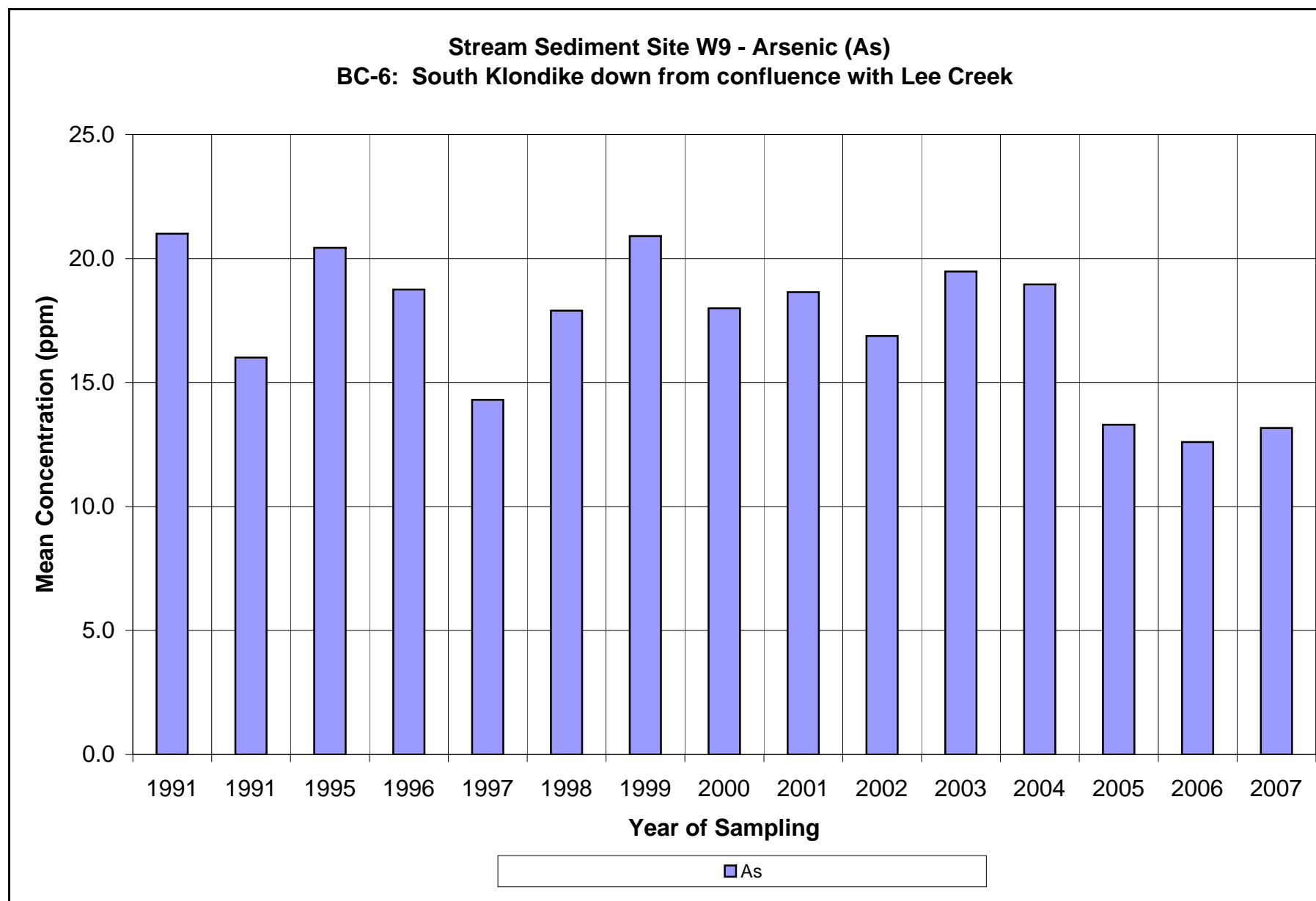


**Stream Sediment Site W8 - Nickel (Ni)**  
**BC-38: South Klondike up from confluence with Golden Creek**

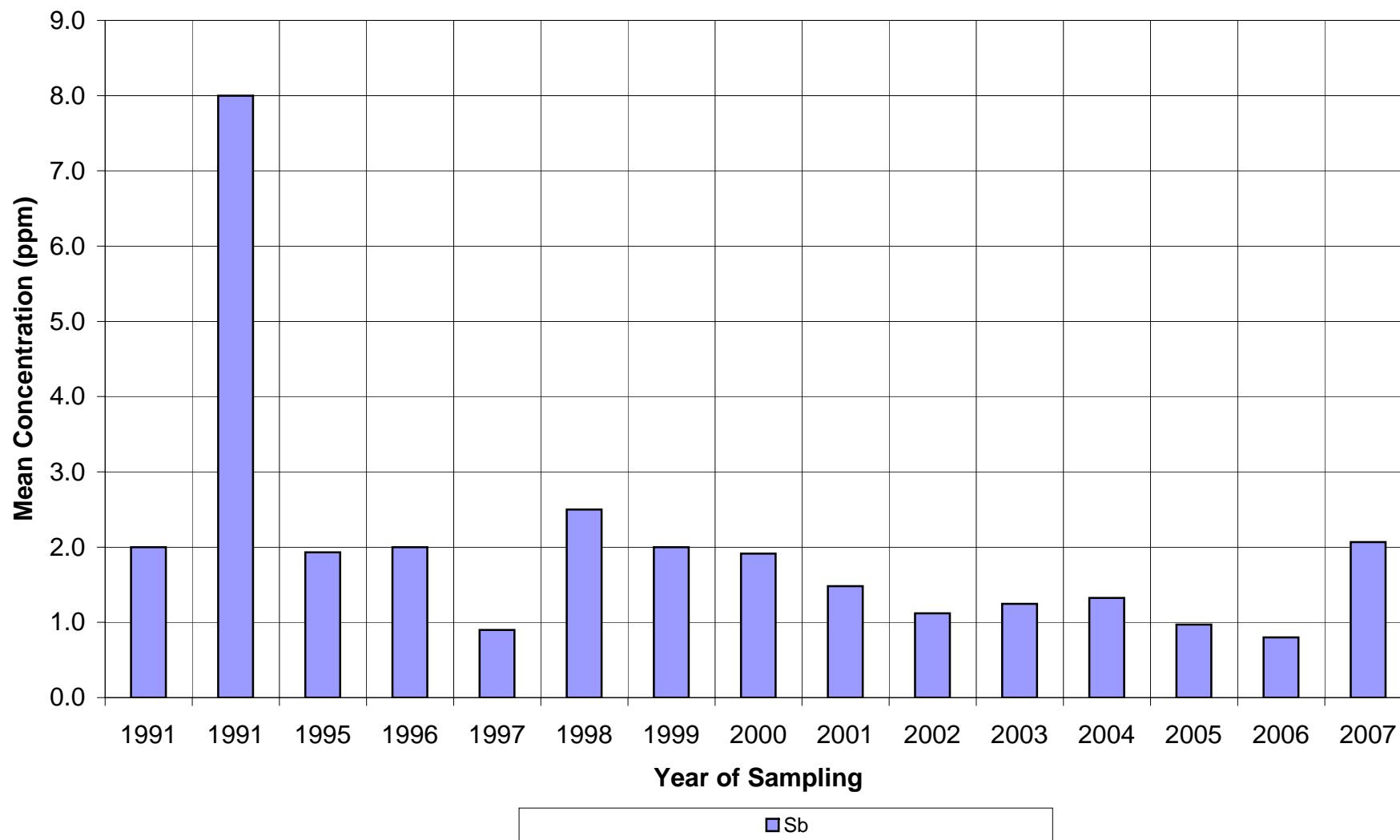


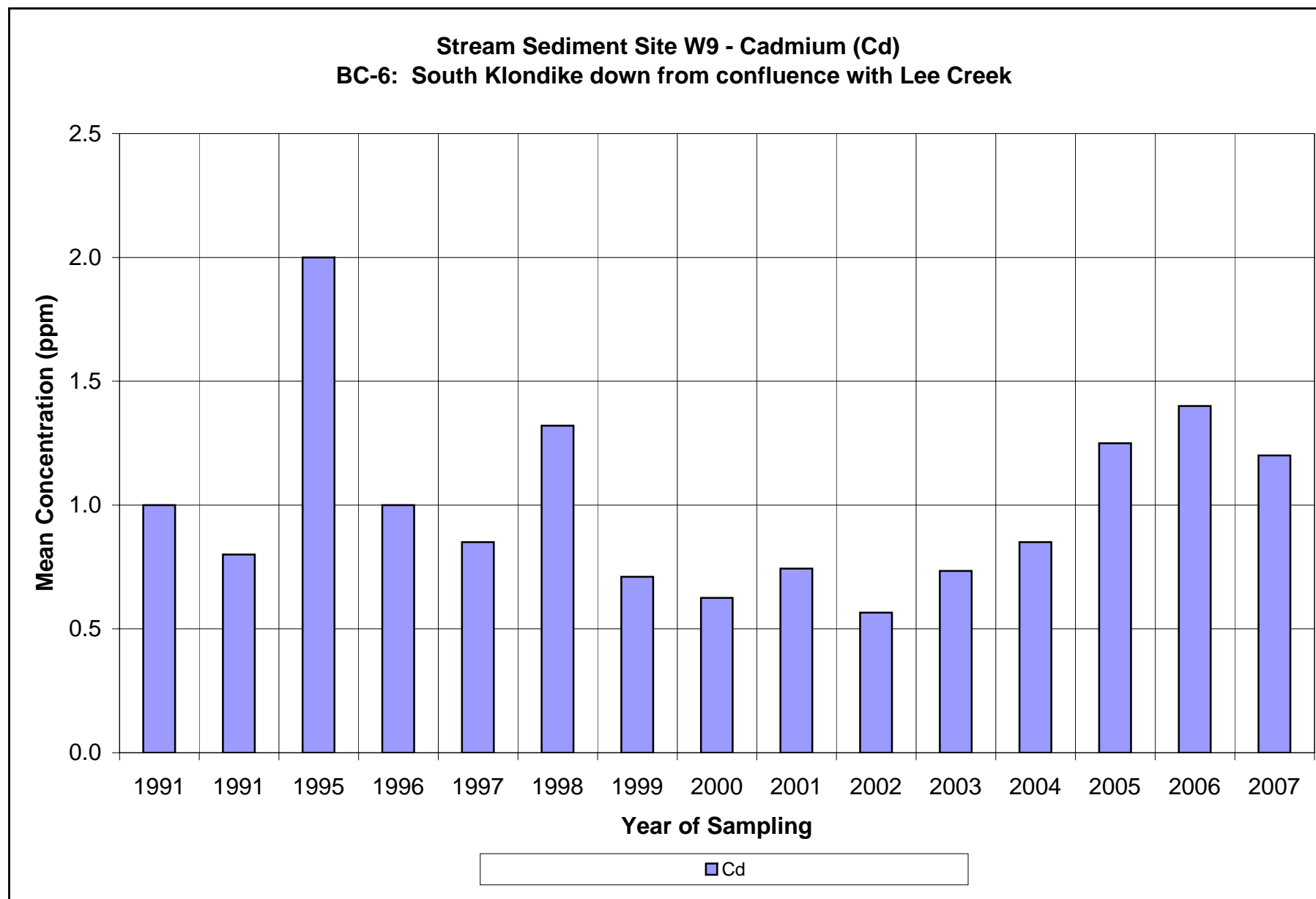


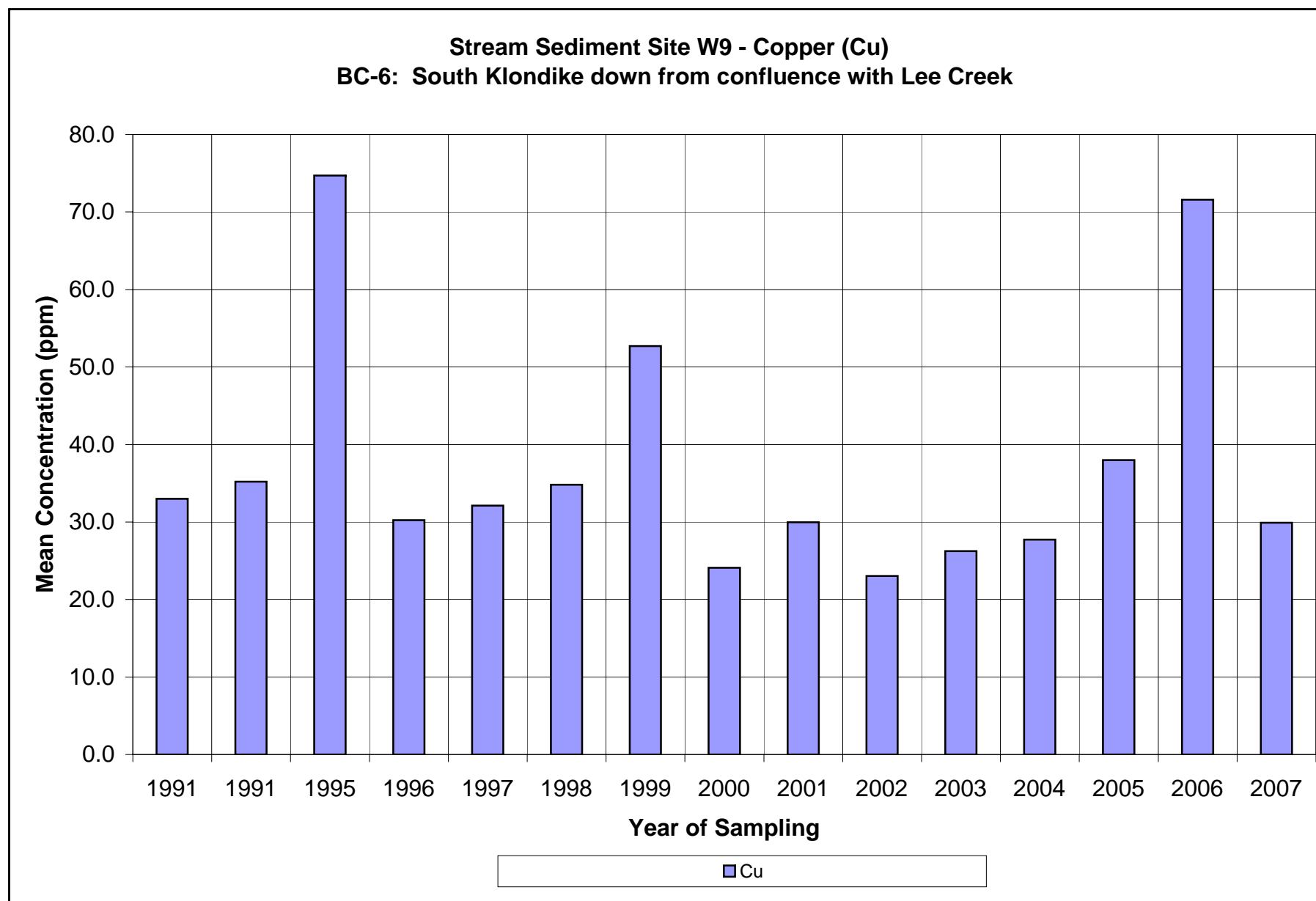


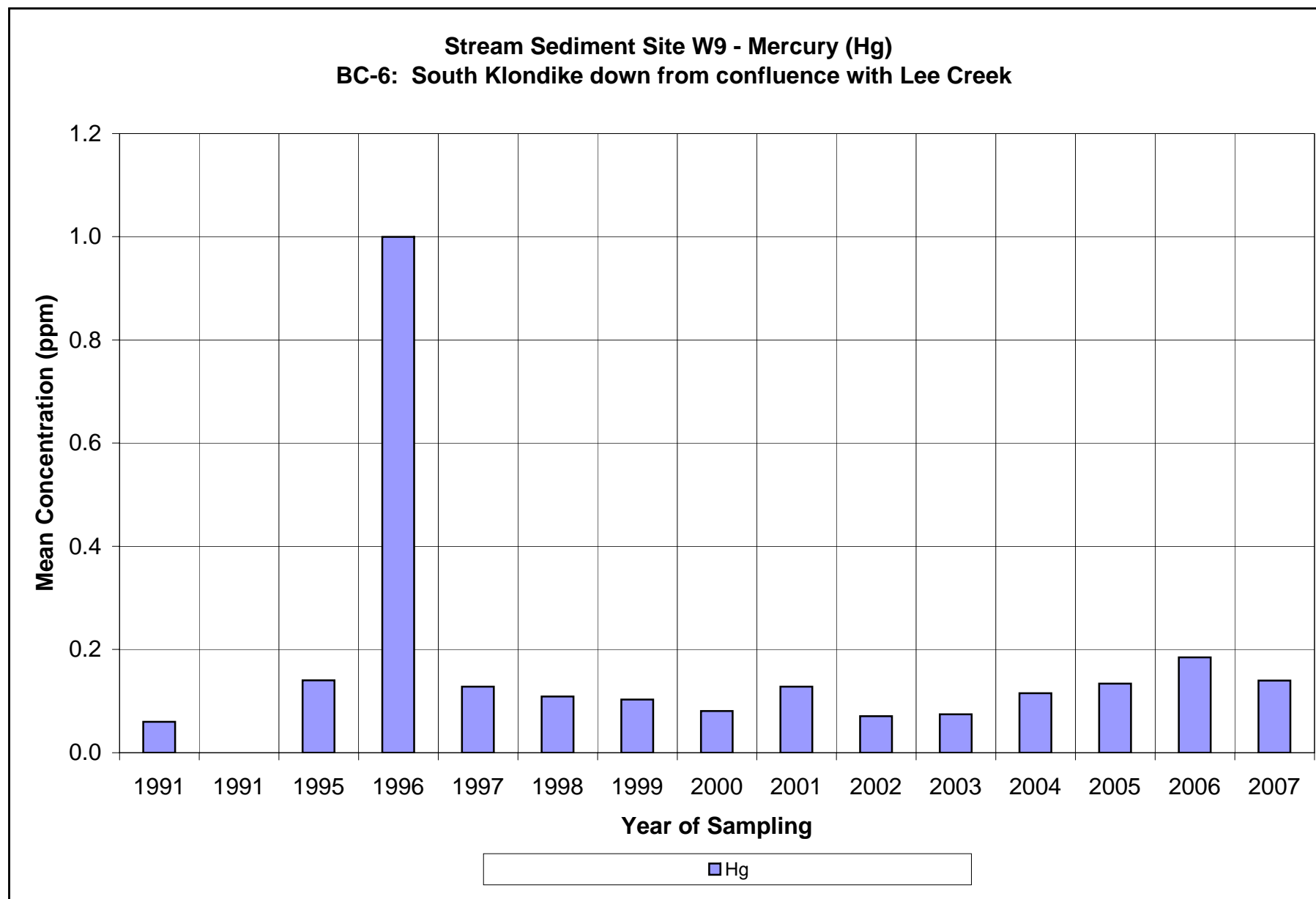


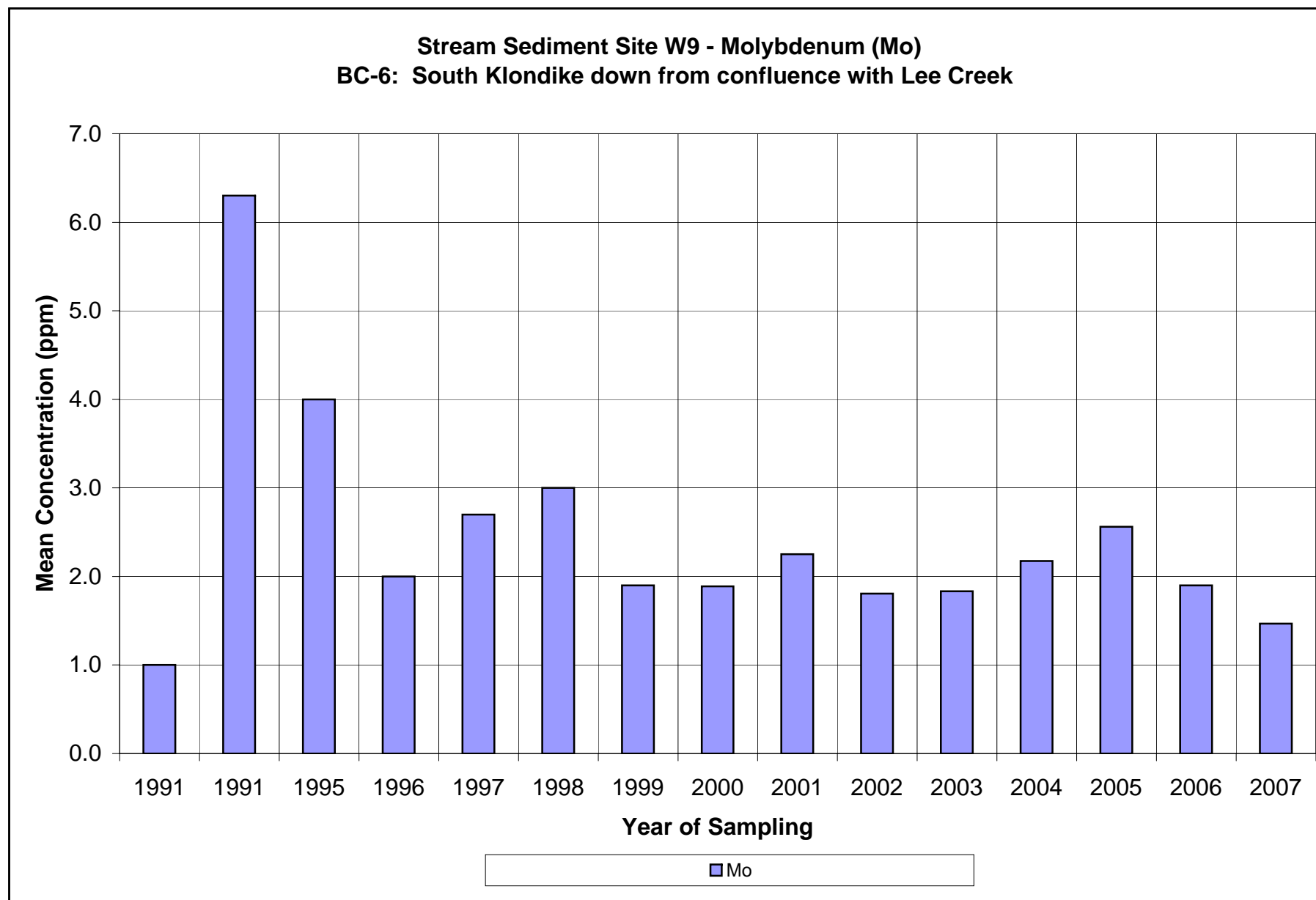
**Stream Sediment Site W9 - Antimony (Sb)**  
**BC-6: South Klondike down from confluence with Lee Creek**



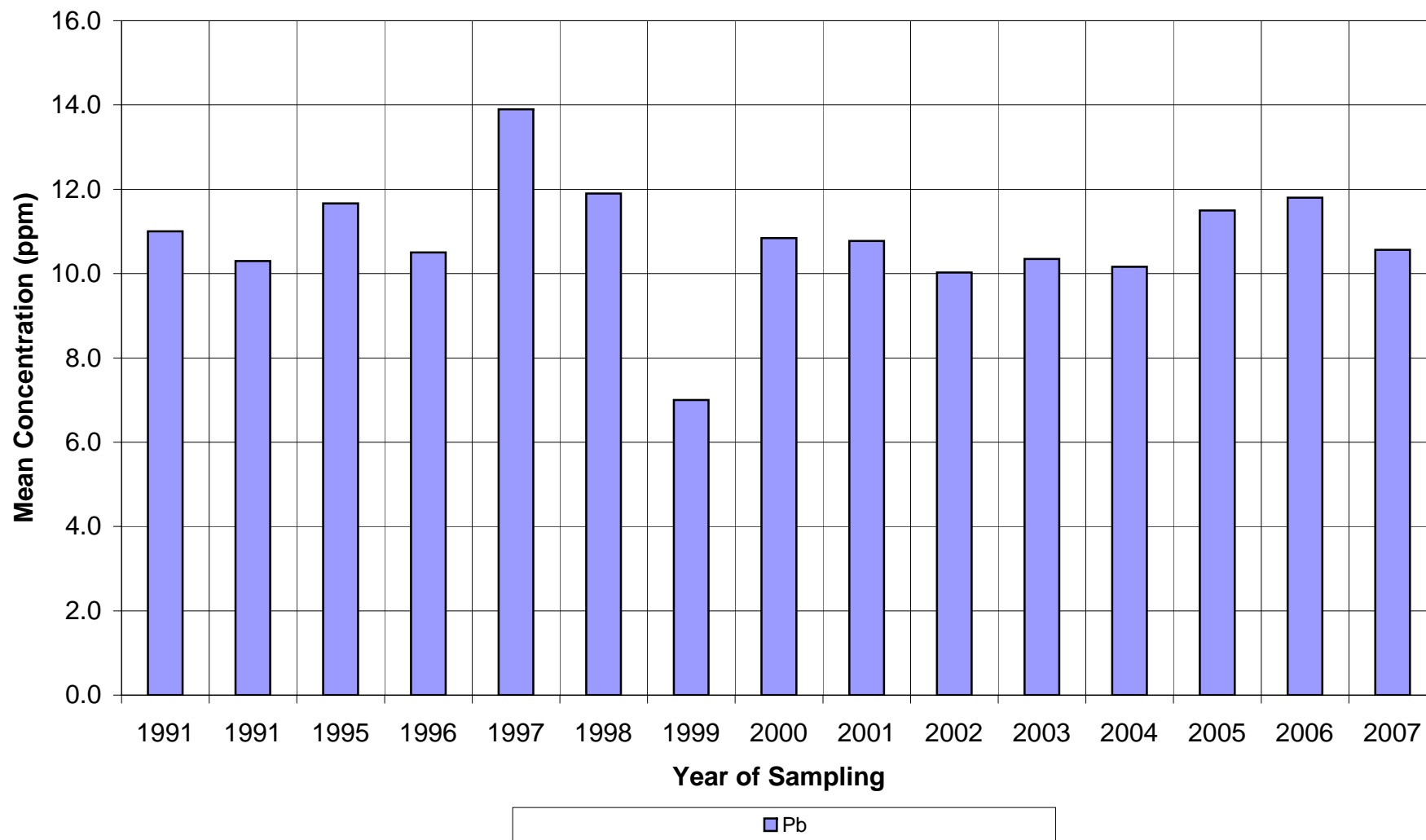




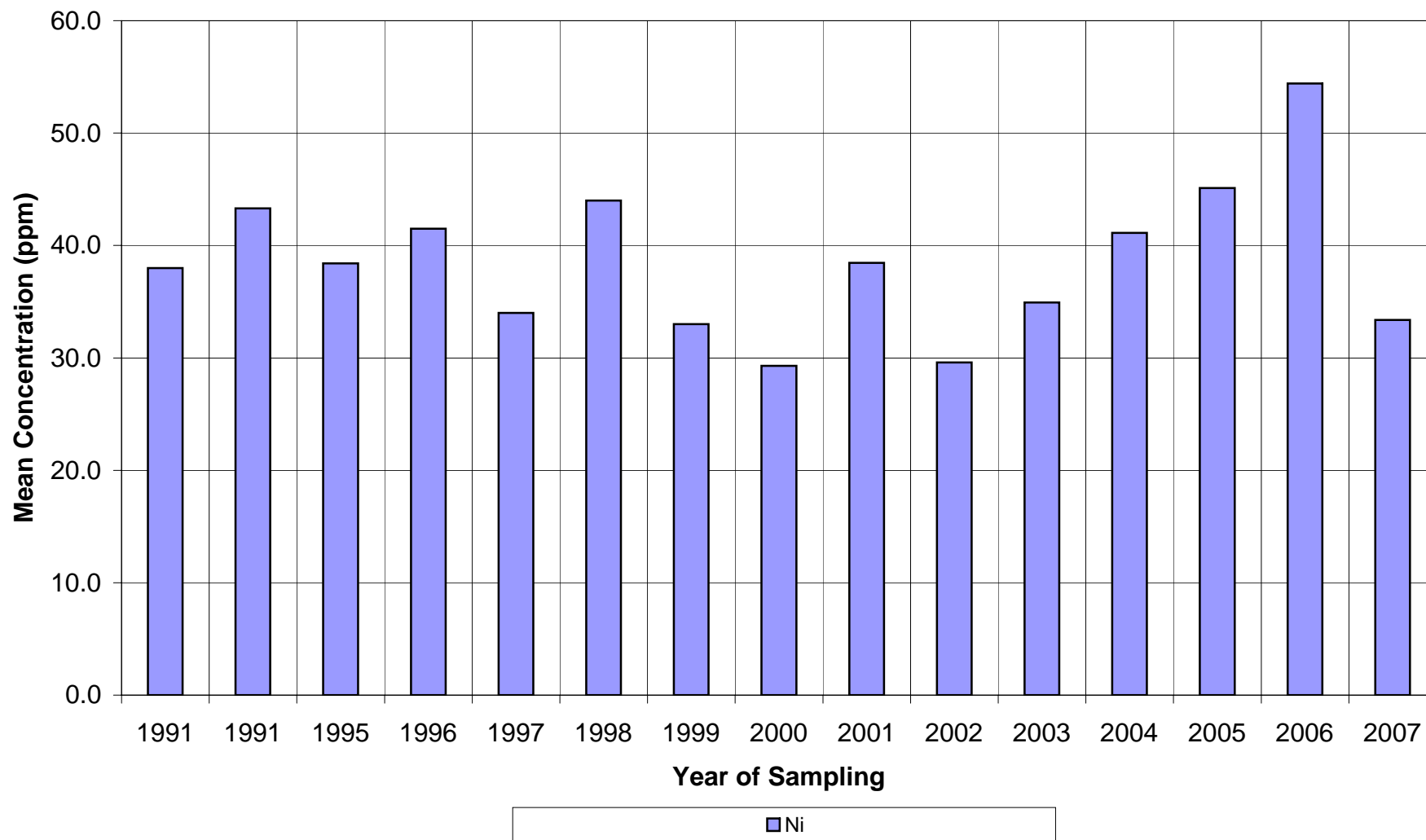




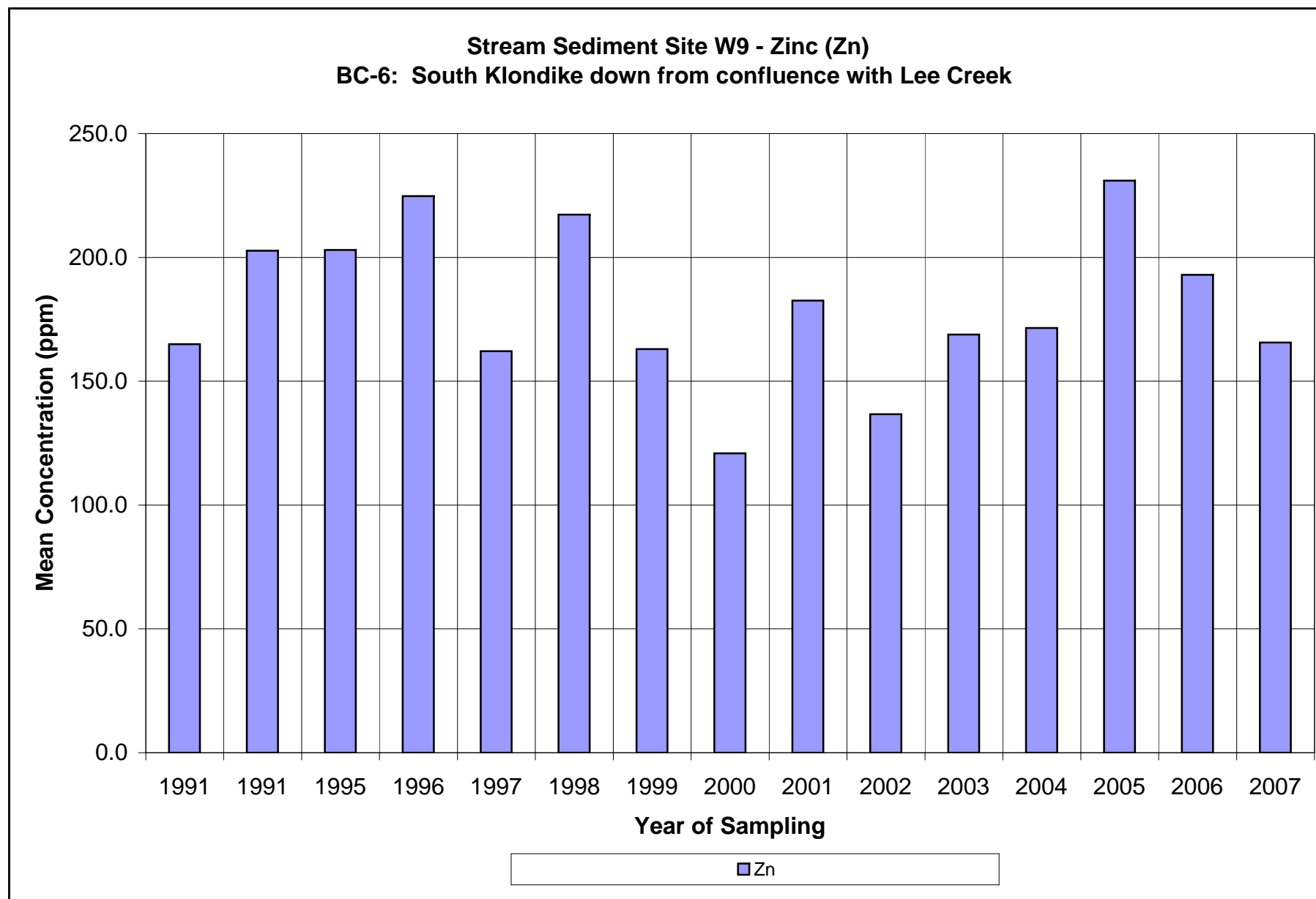
**Stream Sediment Site W9 - Lead (Pb)  
BC-6: South Klondike down from confluence with Lee Creek**



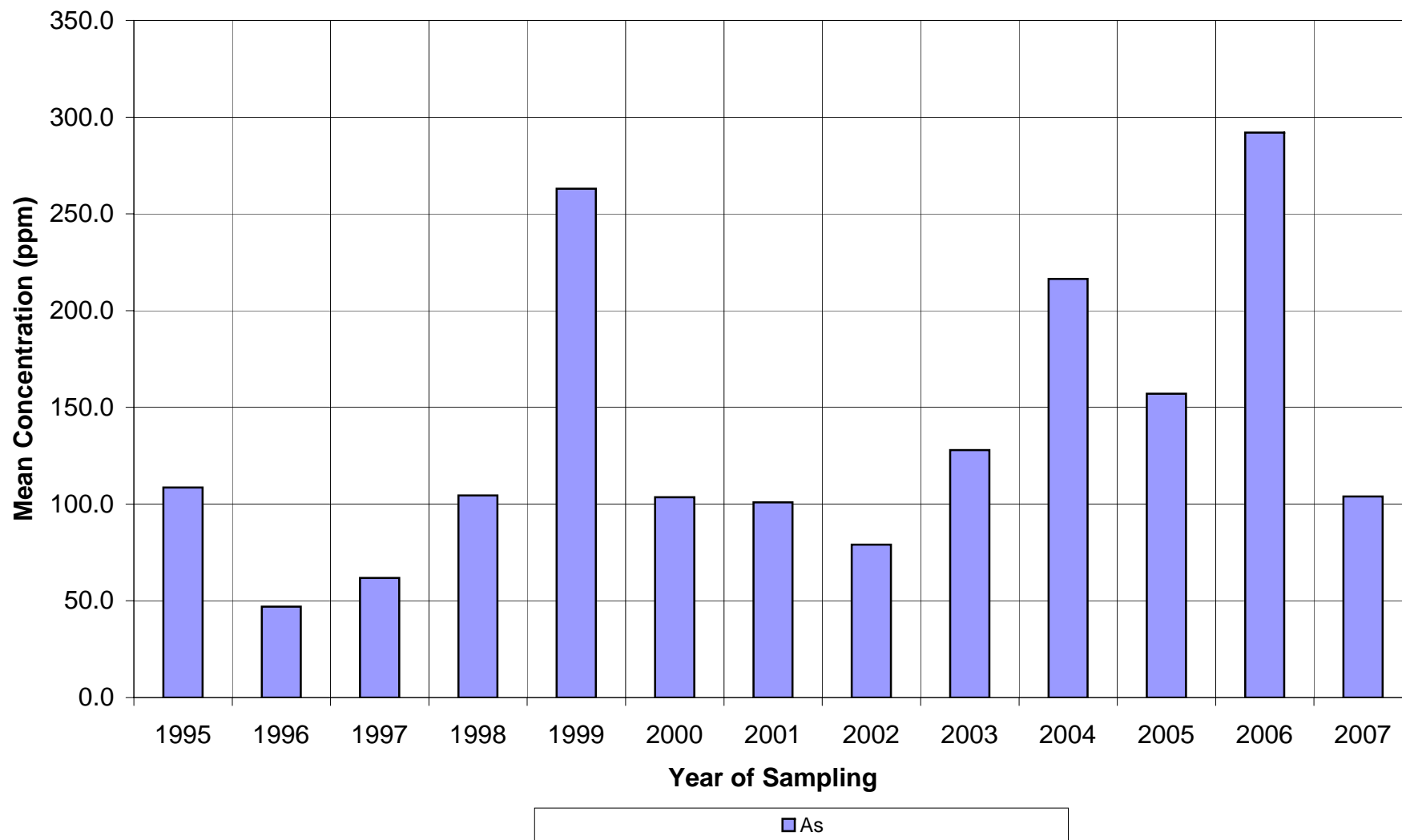
**Stream Sediment Site W9 - Nickel (Ni)**  
**BC-6: South Klondike down from confluence with Lee Creek**

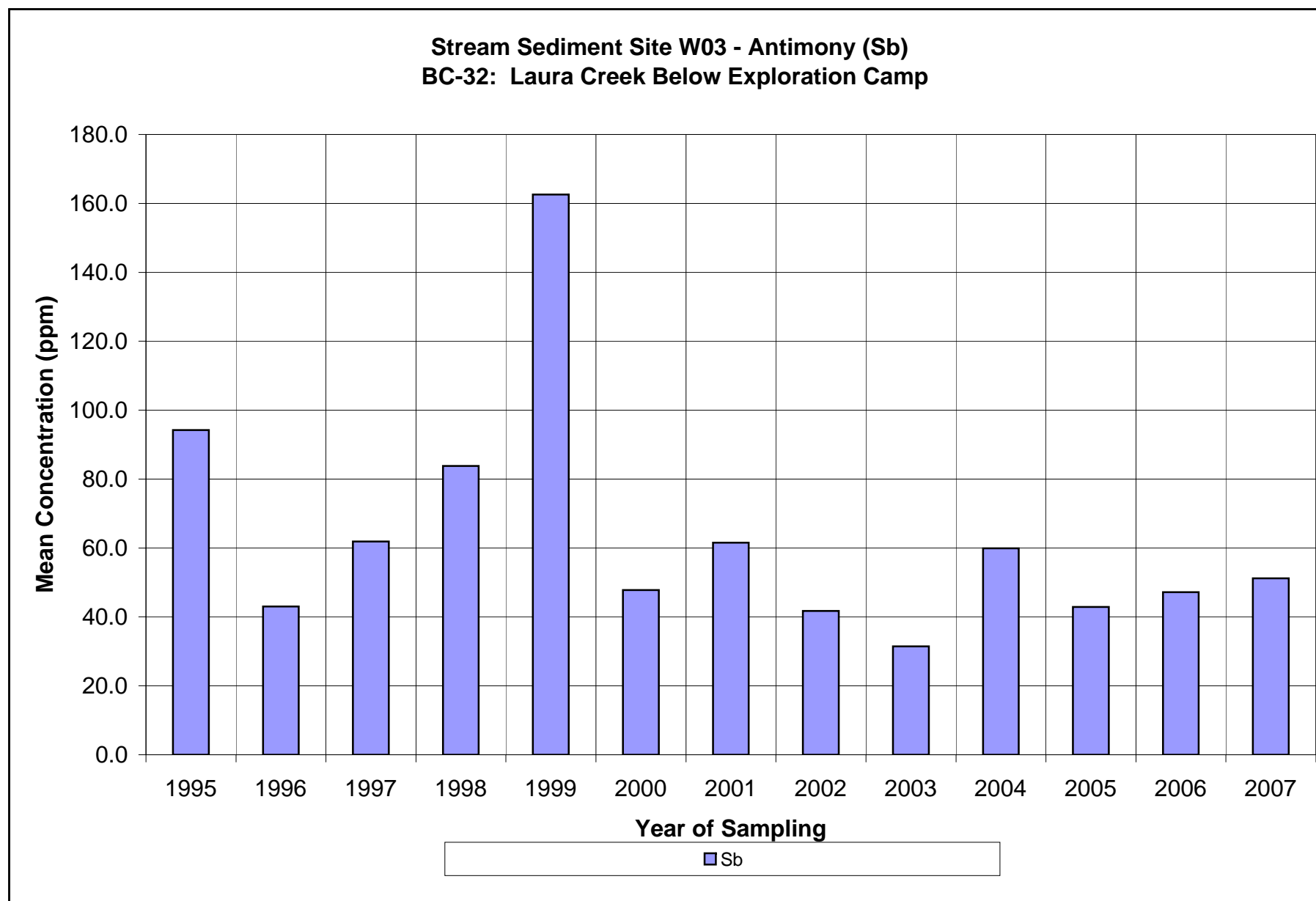


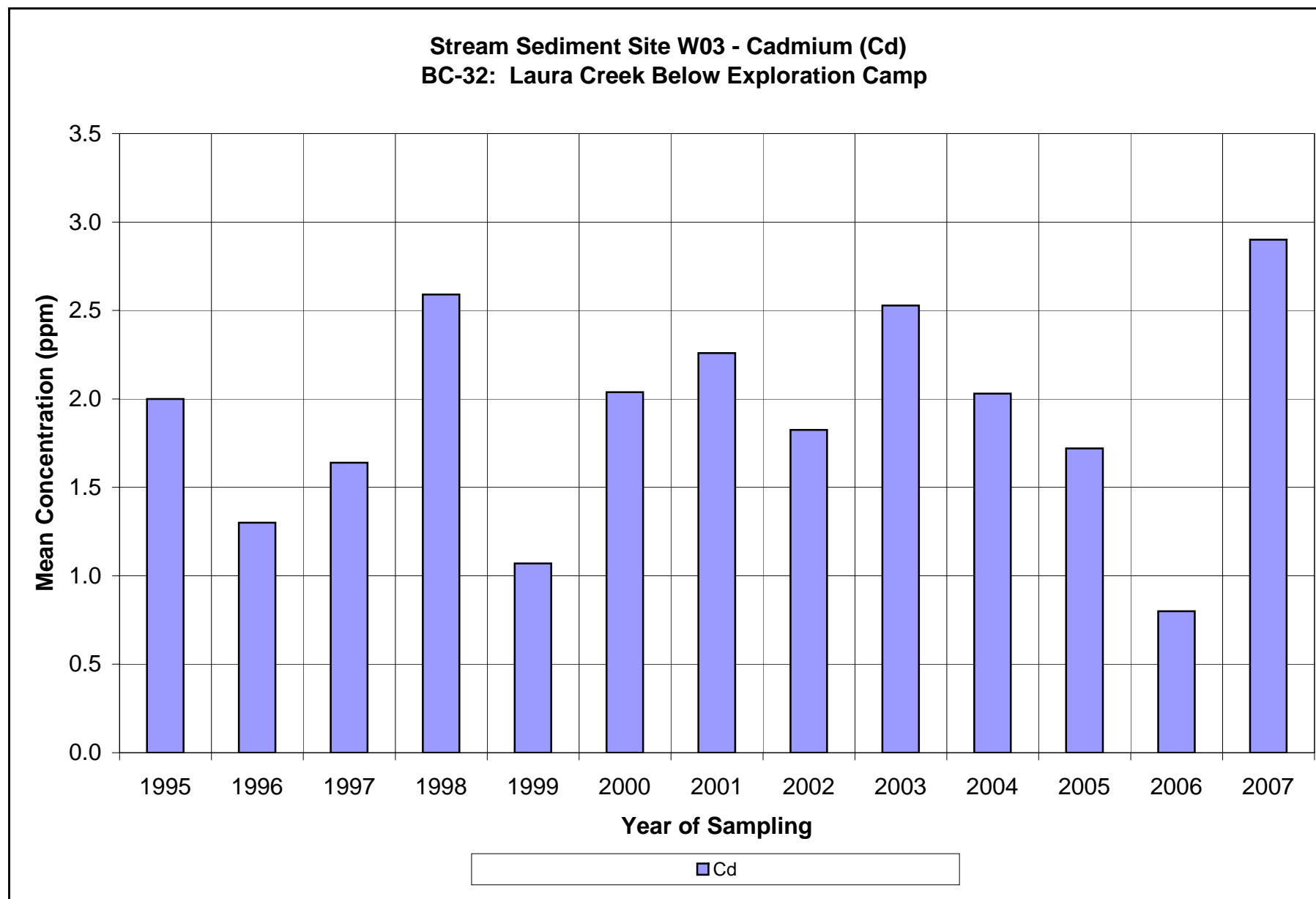


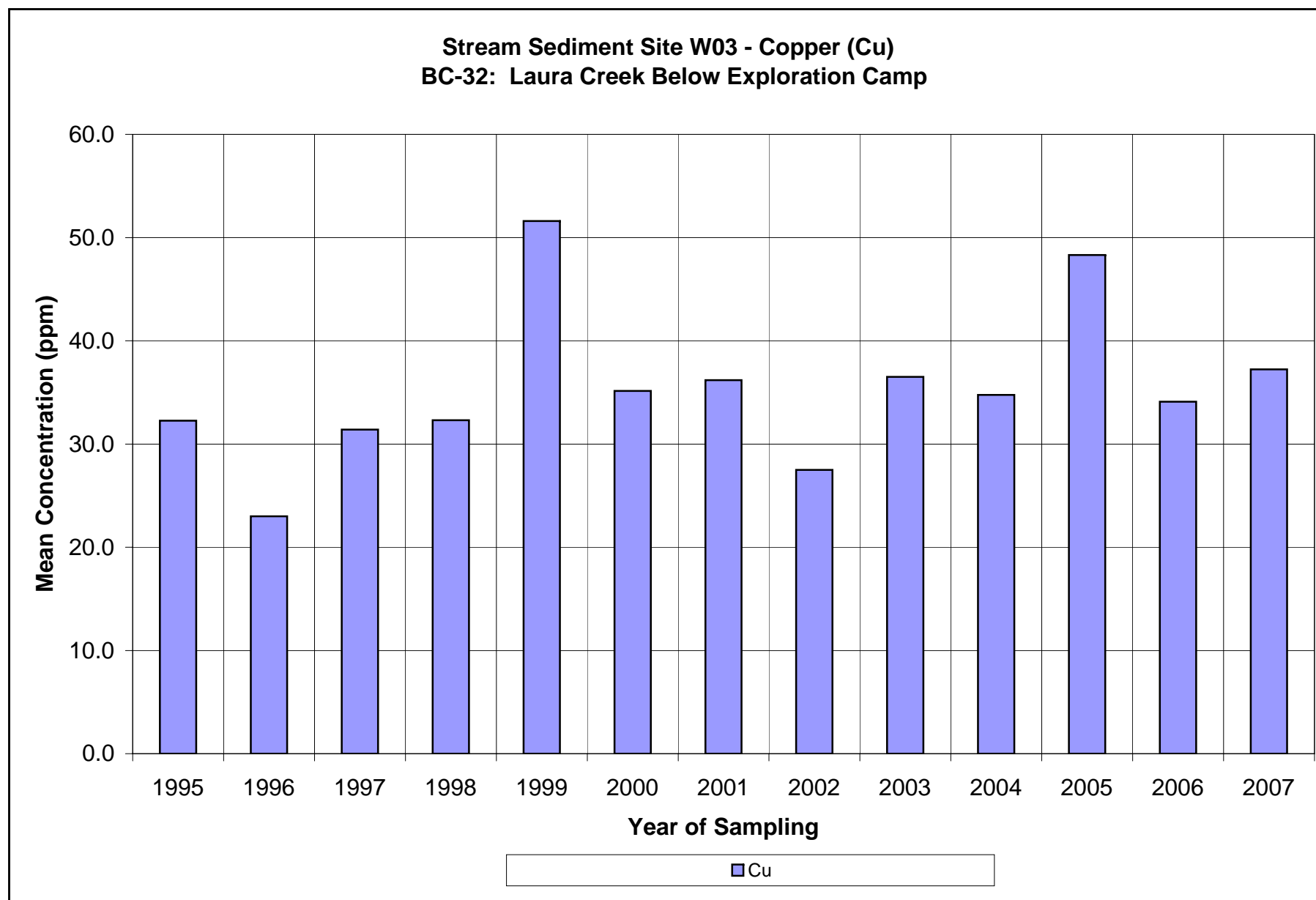


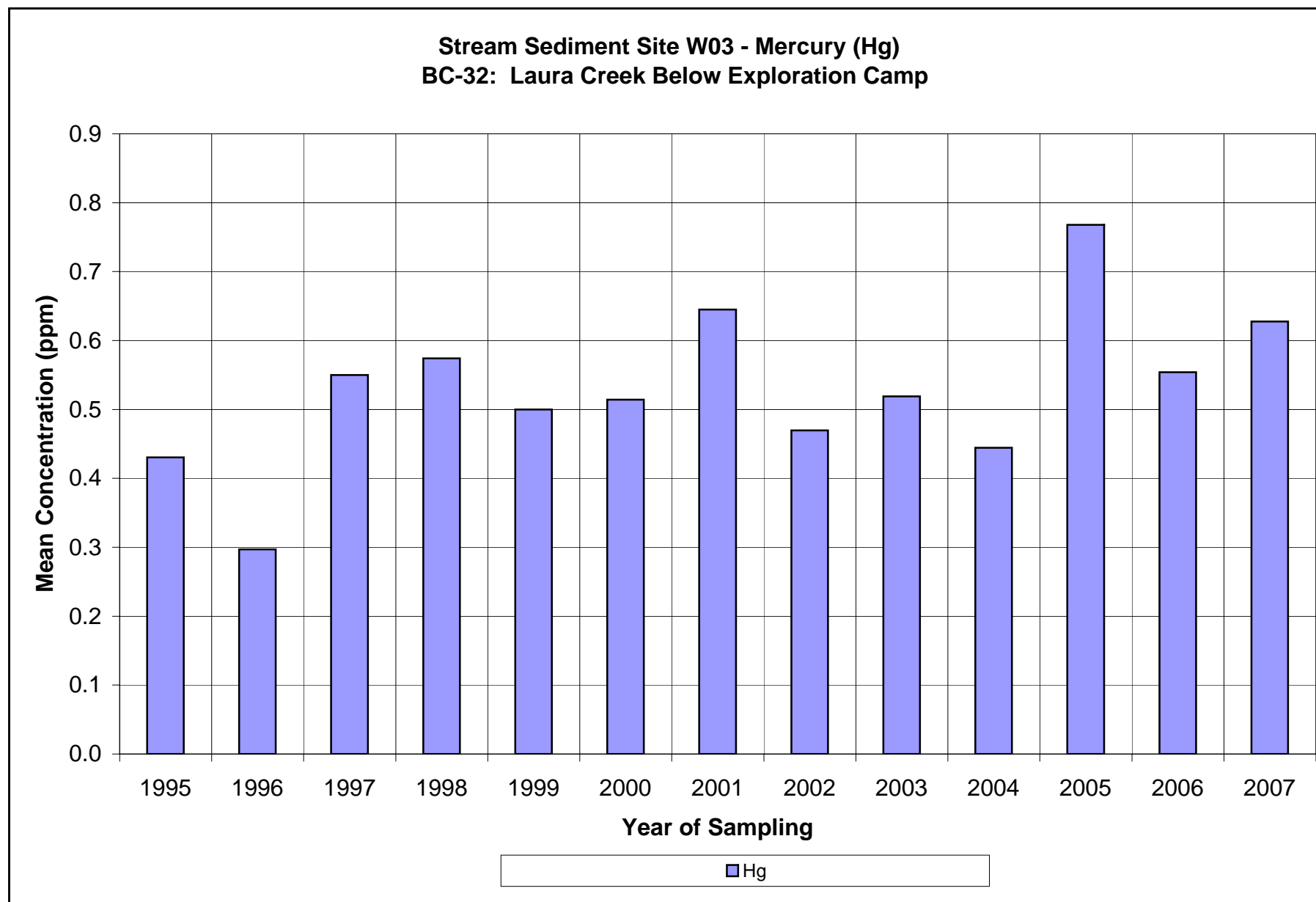
**Stream Sediment Site W03 - Arsenic (As)  
BC-32: Laura Creek Below Exploration Camp**



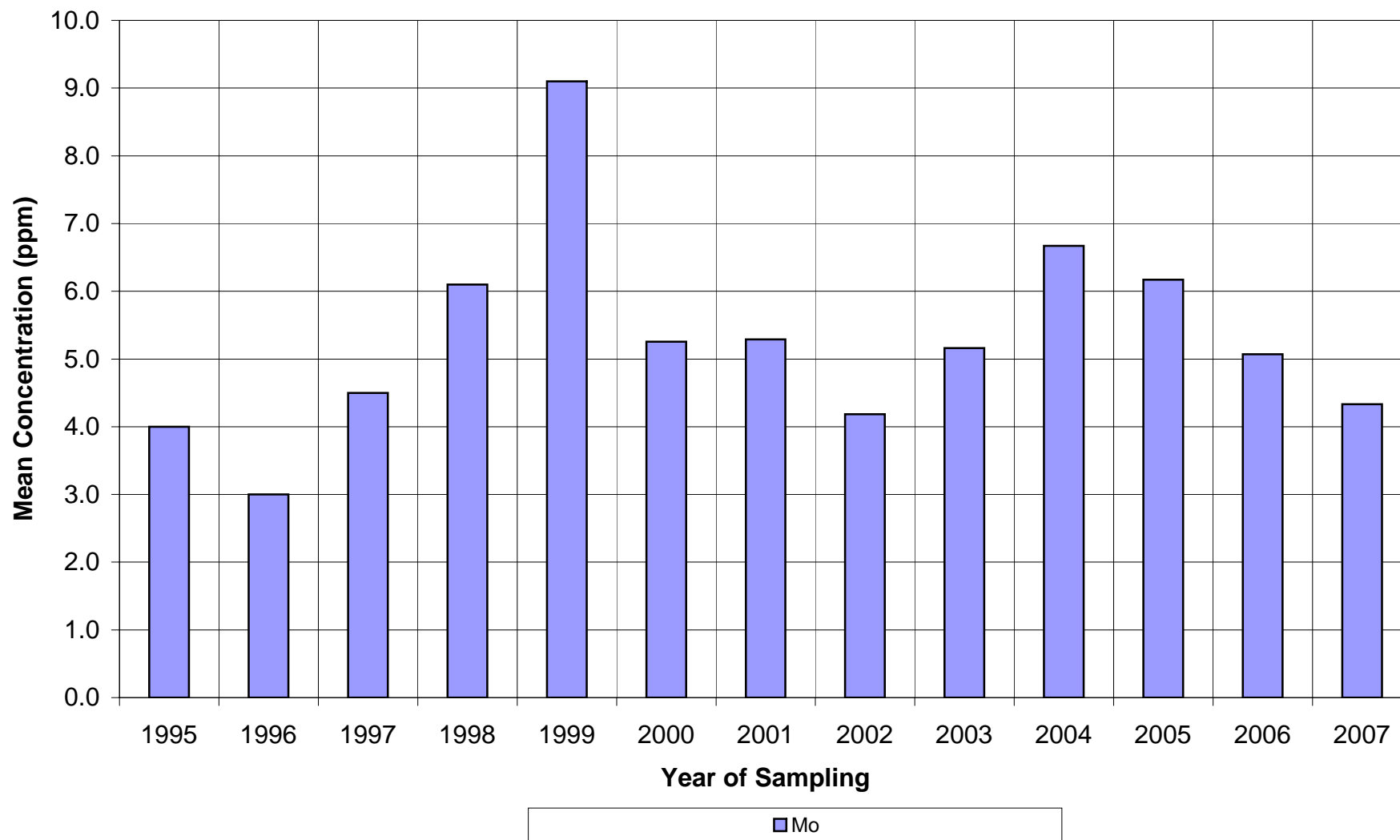


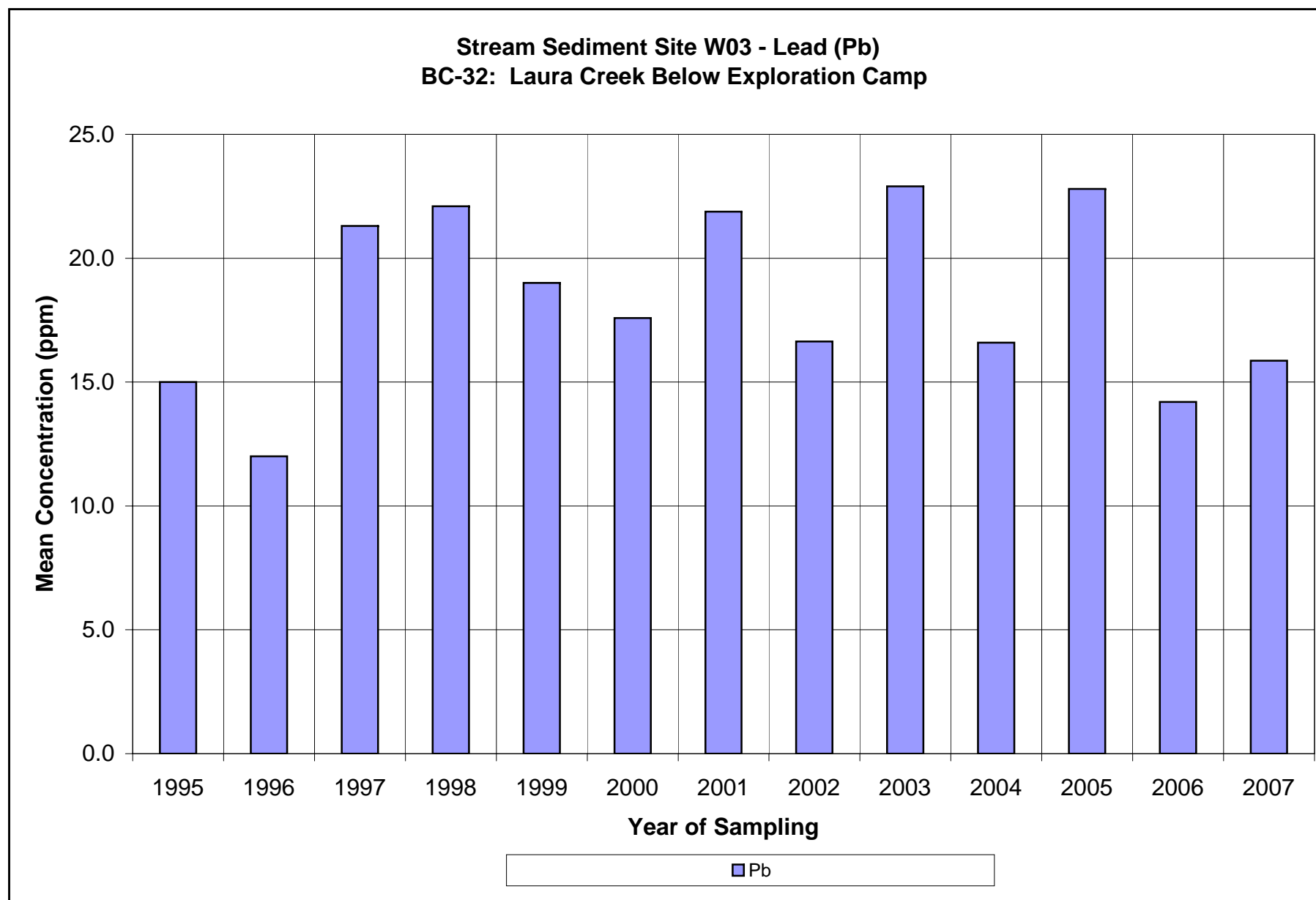




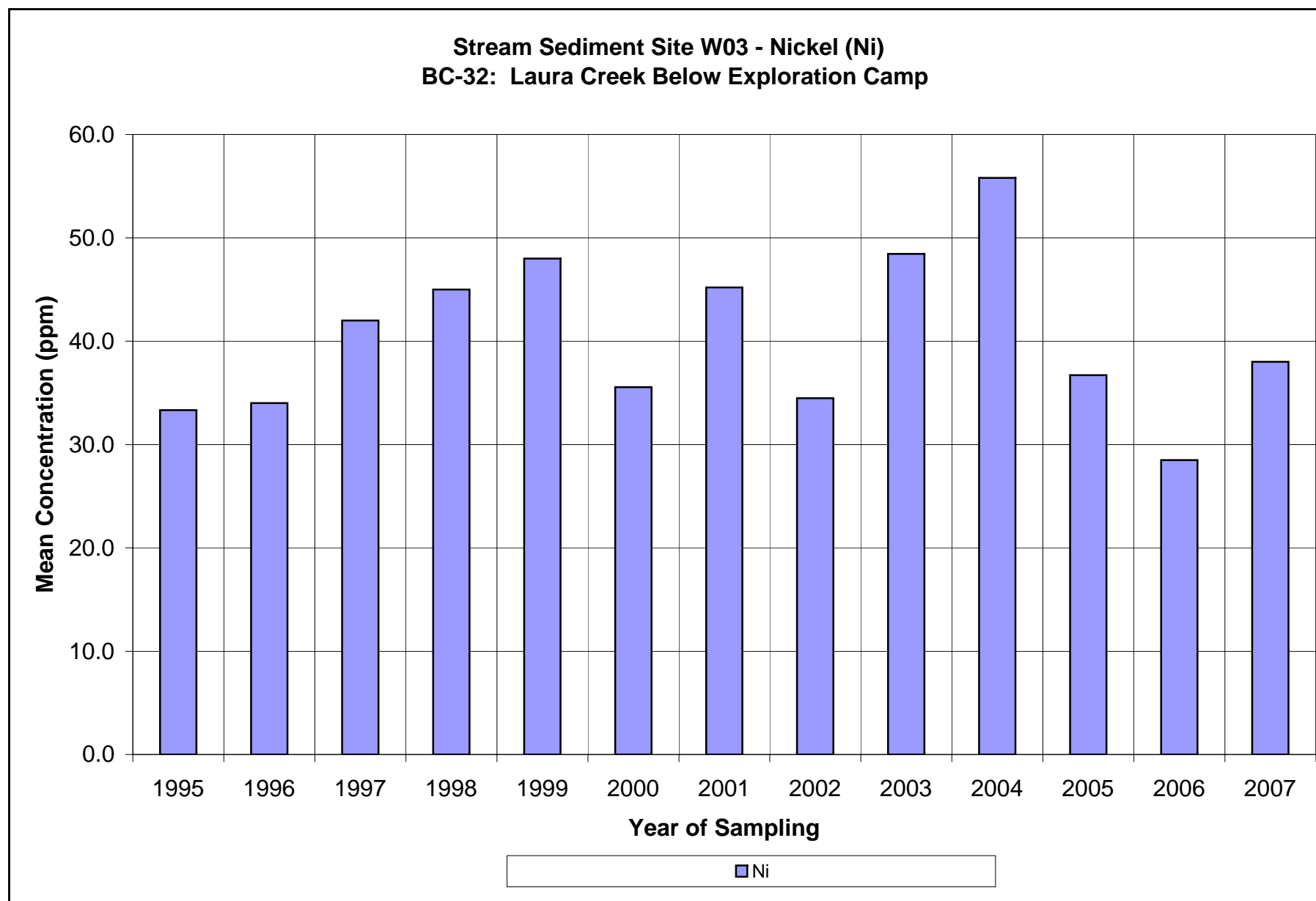


**Stream Sediment Site W03 - Molybdenum (Mo)  
BC-32: Laura Creek Below Exploration Camp**

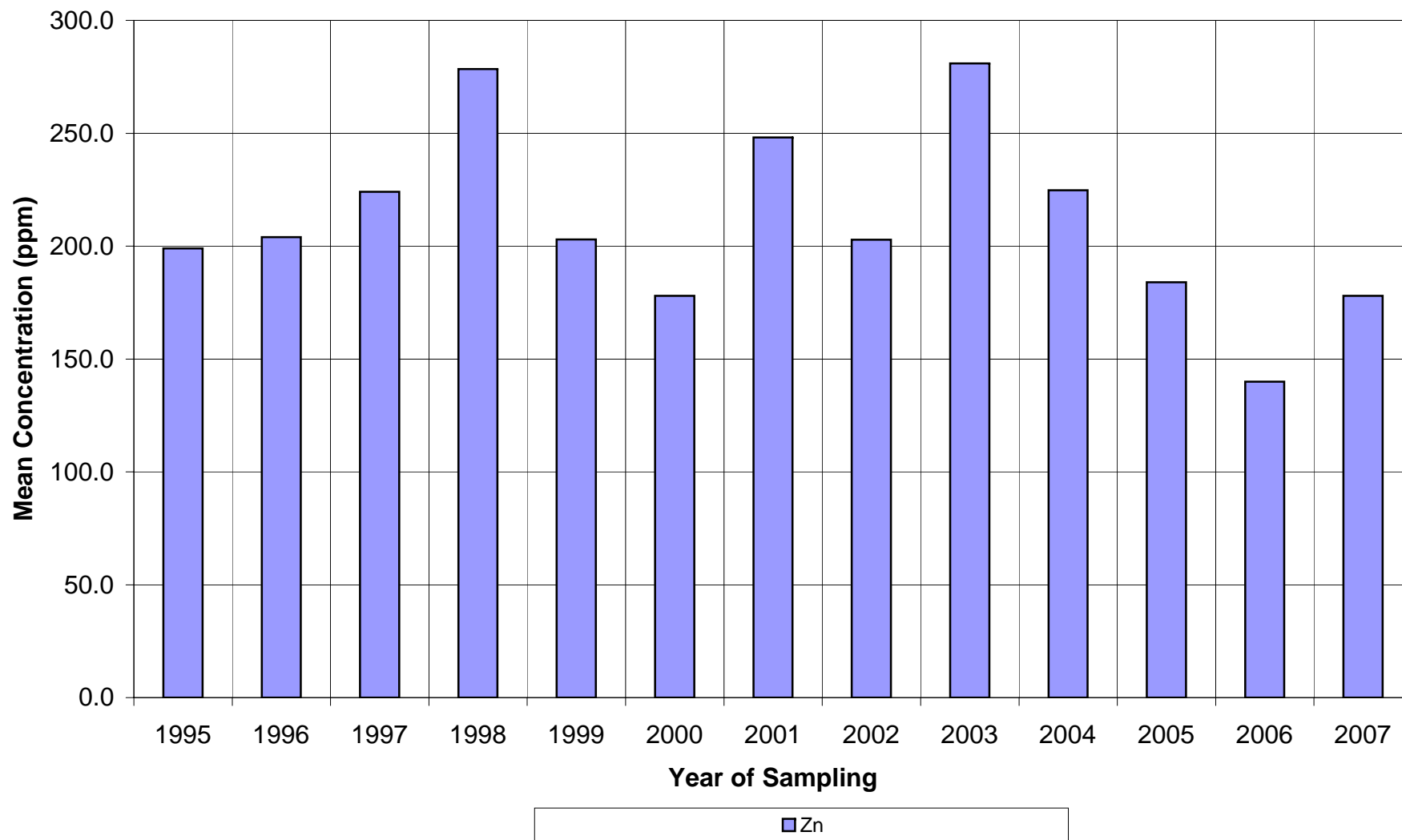


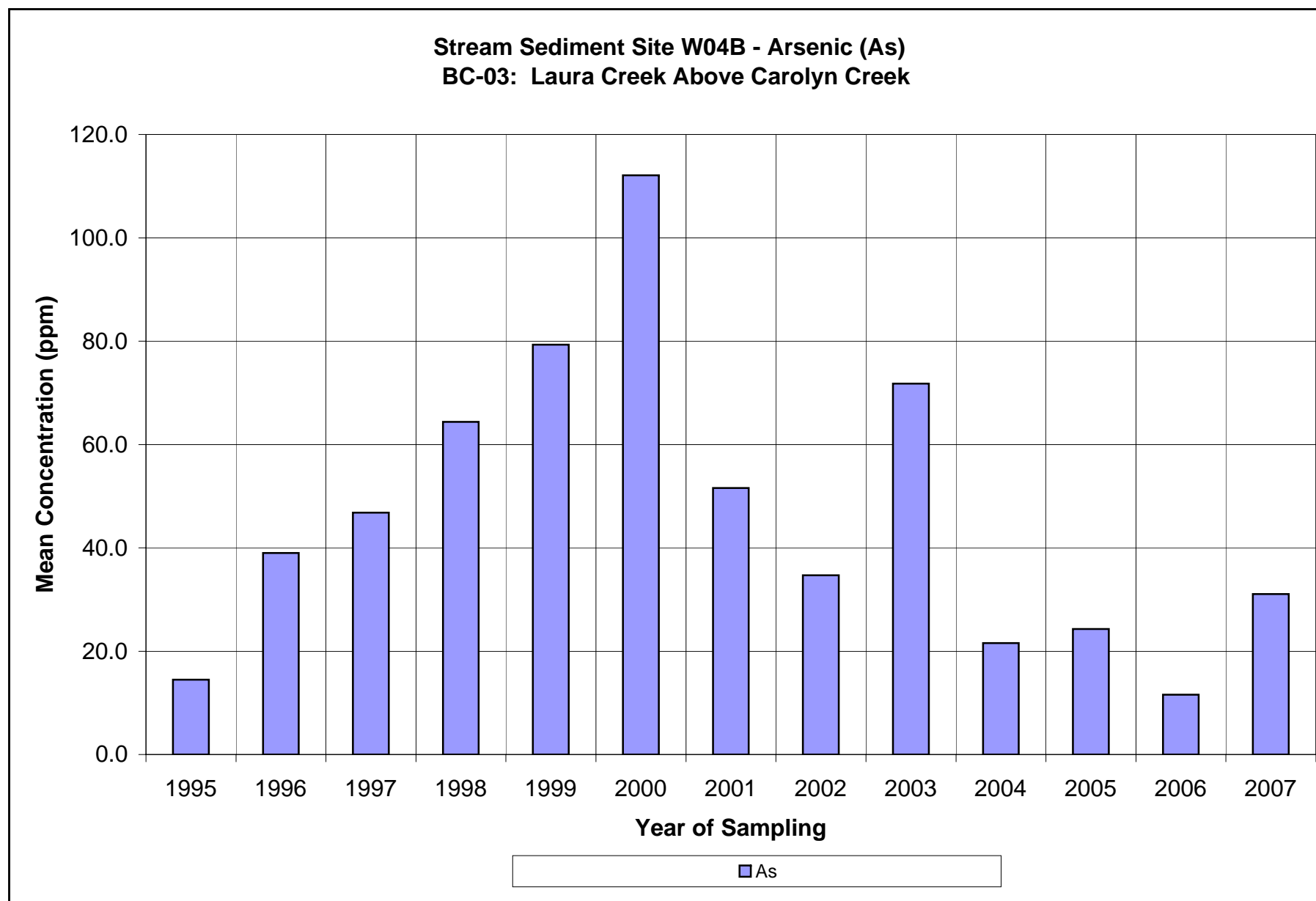


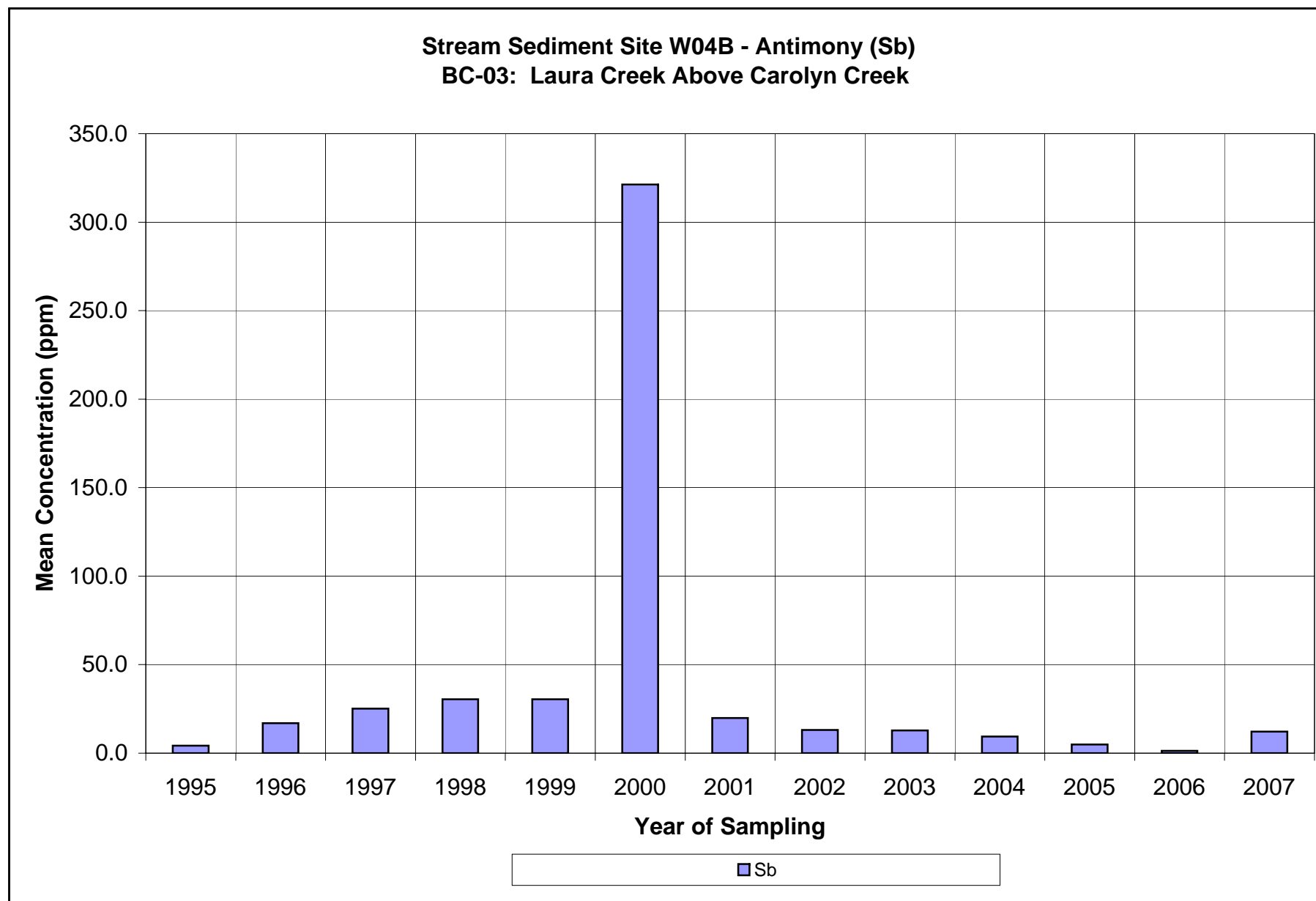


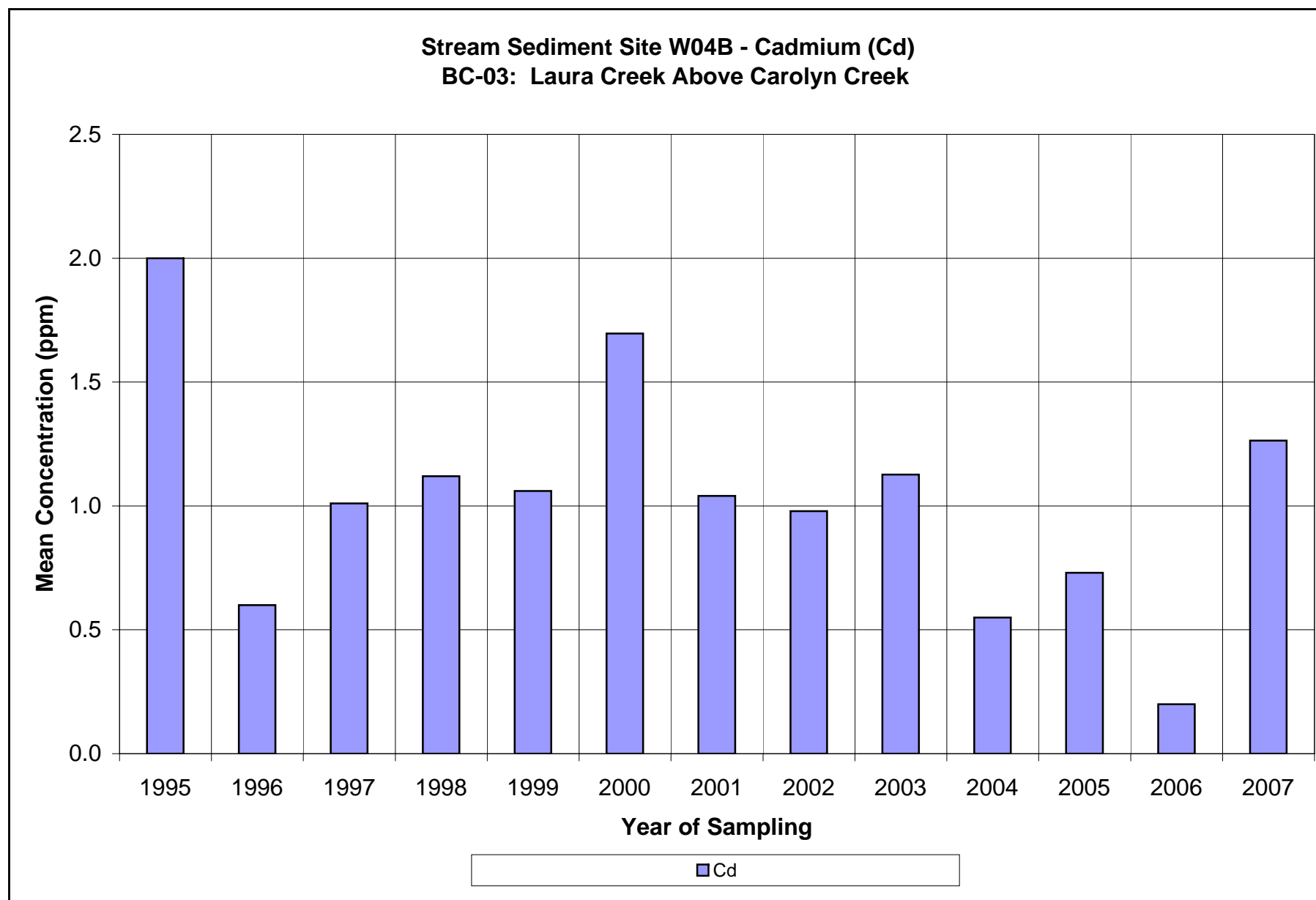


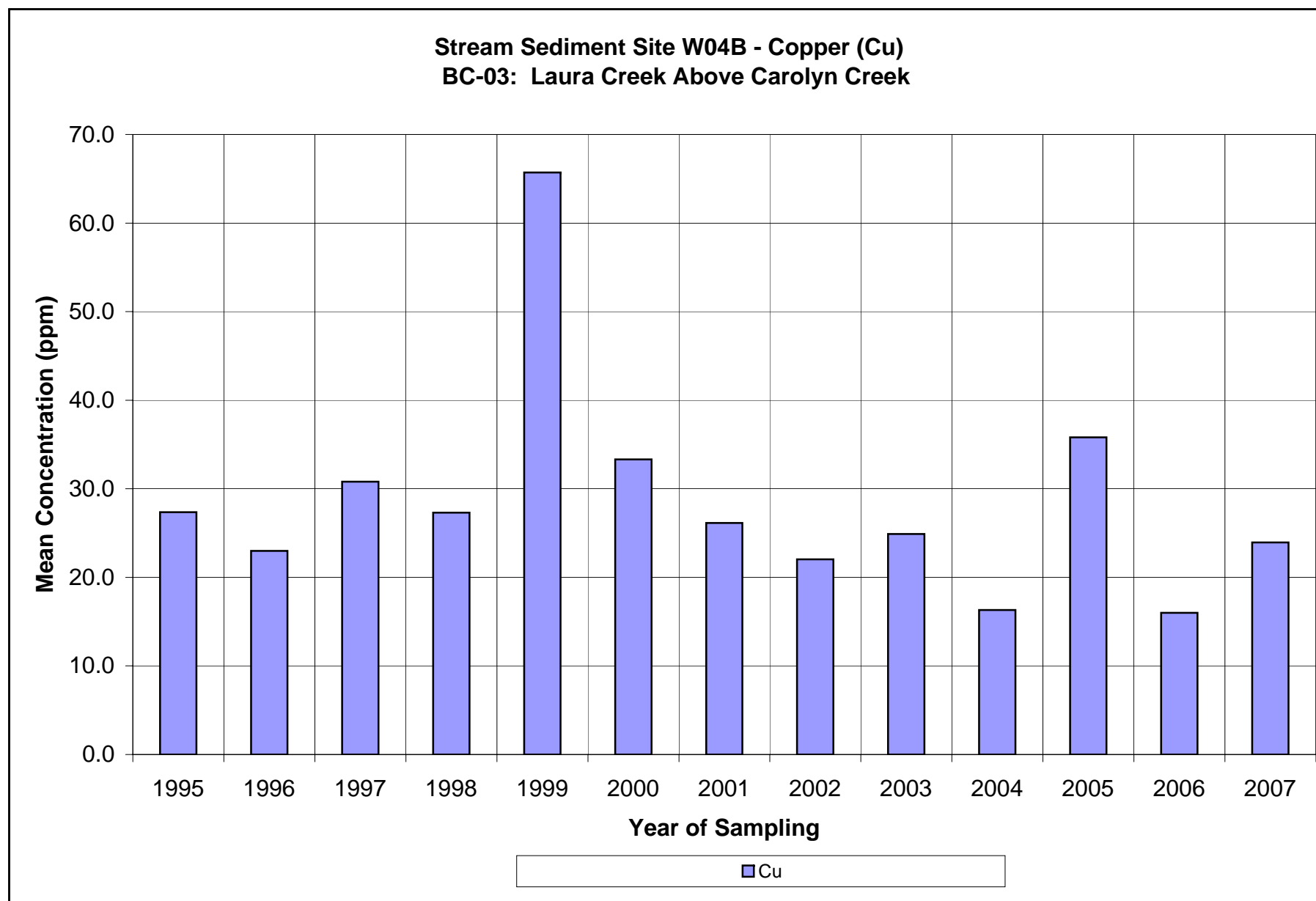
**Stream Sediment Site W03 - Zinc (Zn)  
BC-32: Laura Creek Below Exploration Camp**

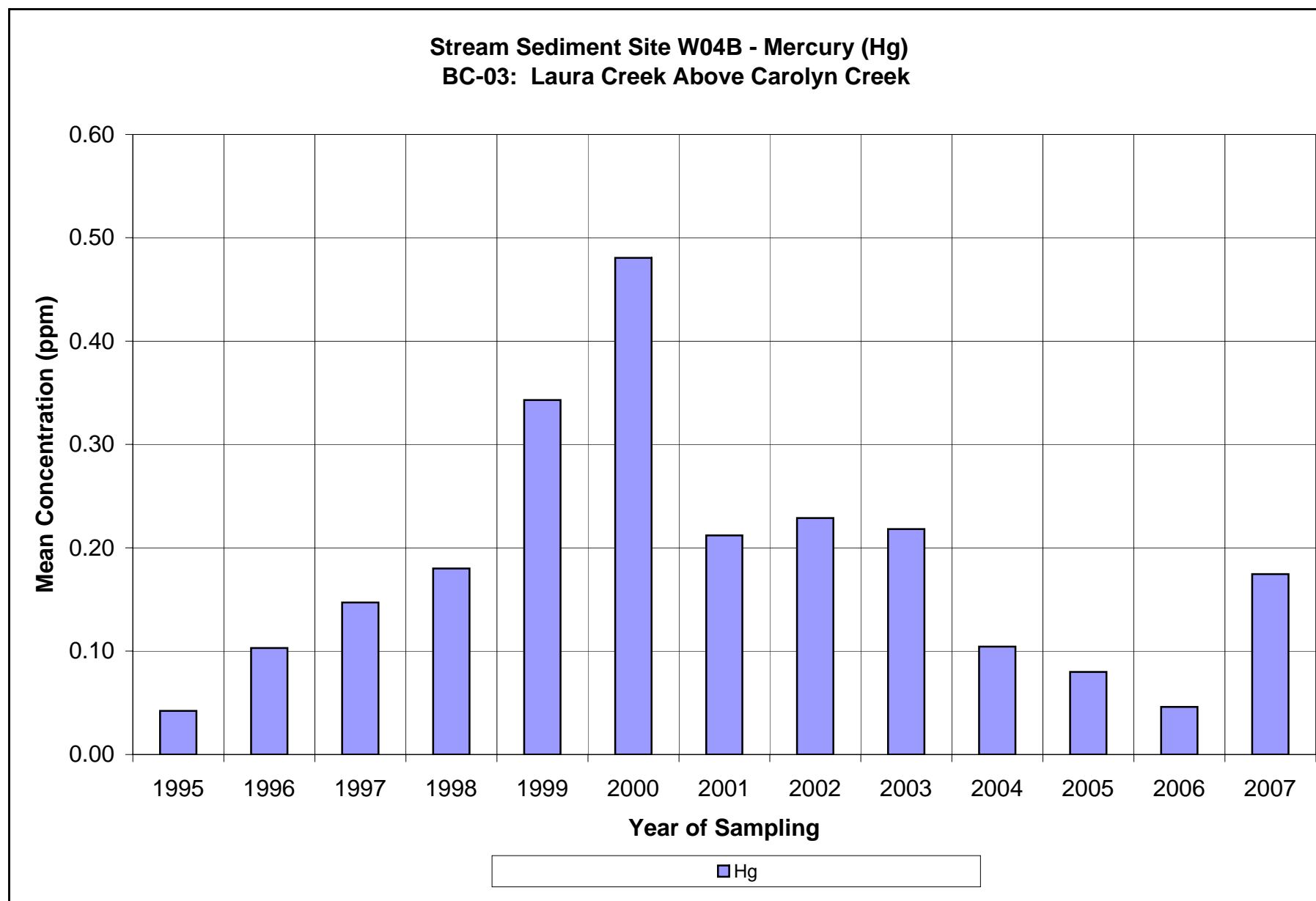




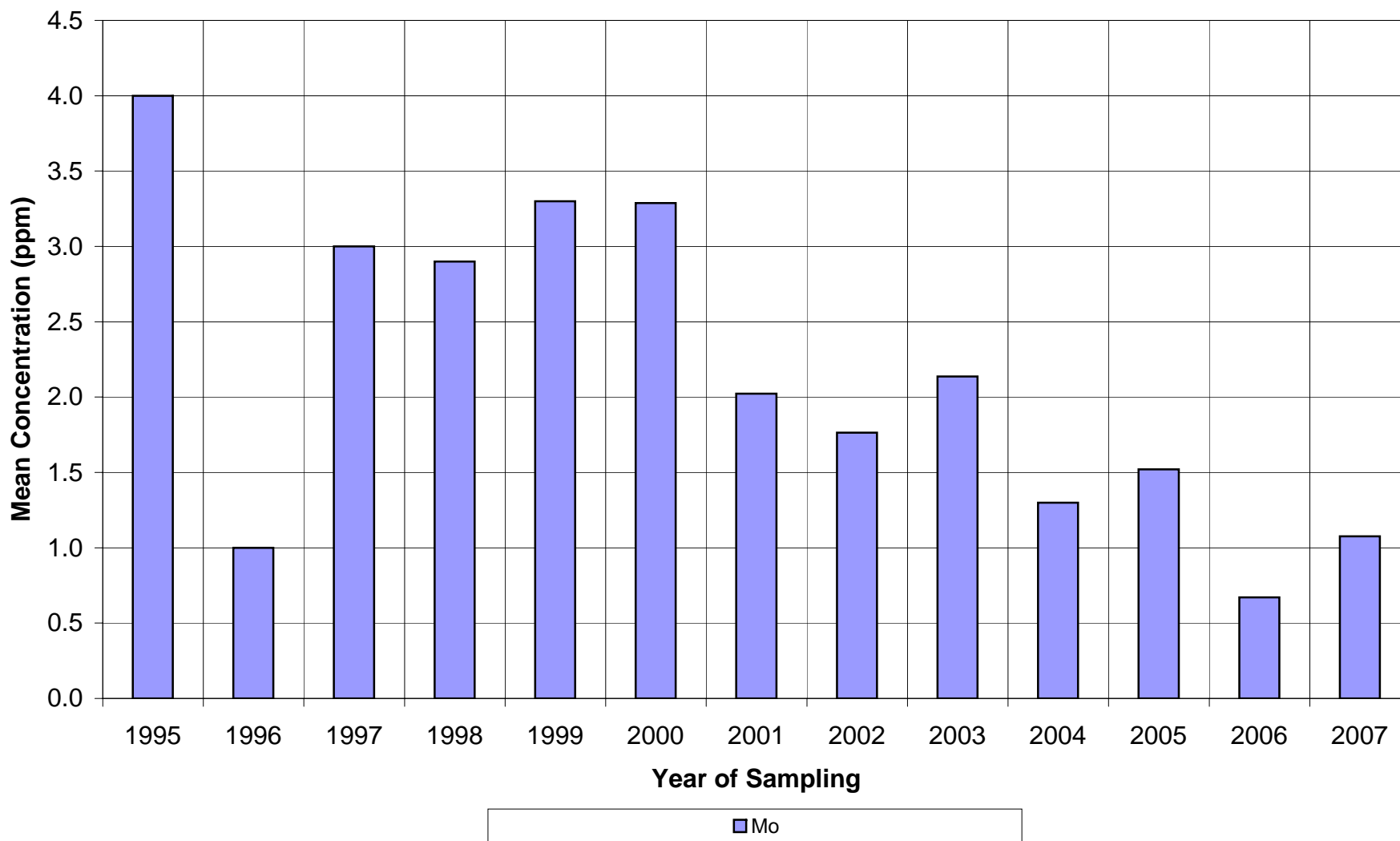




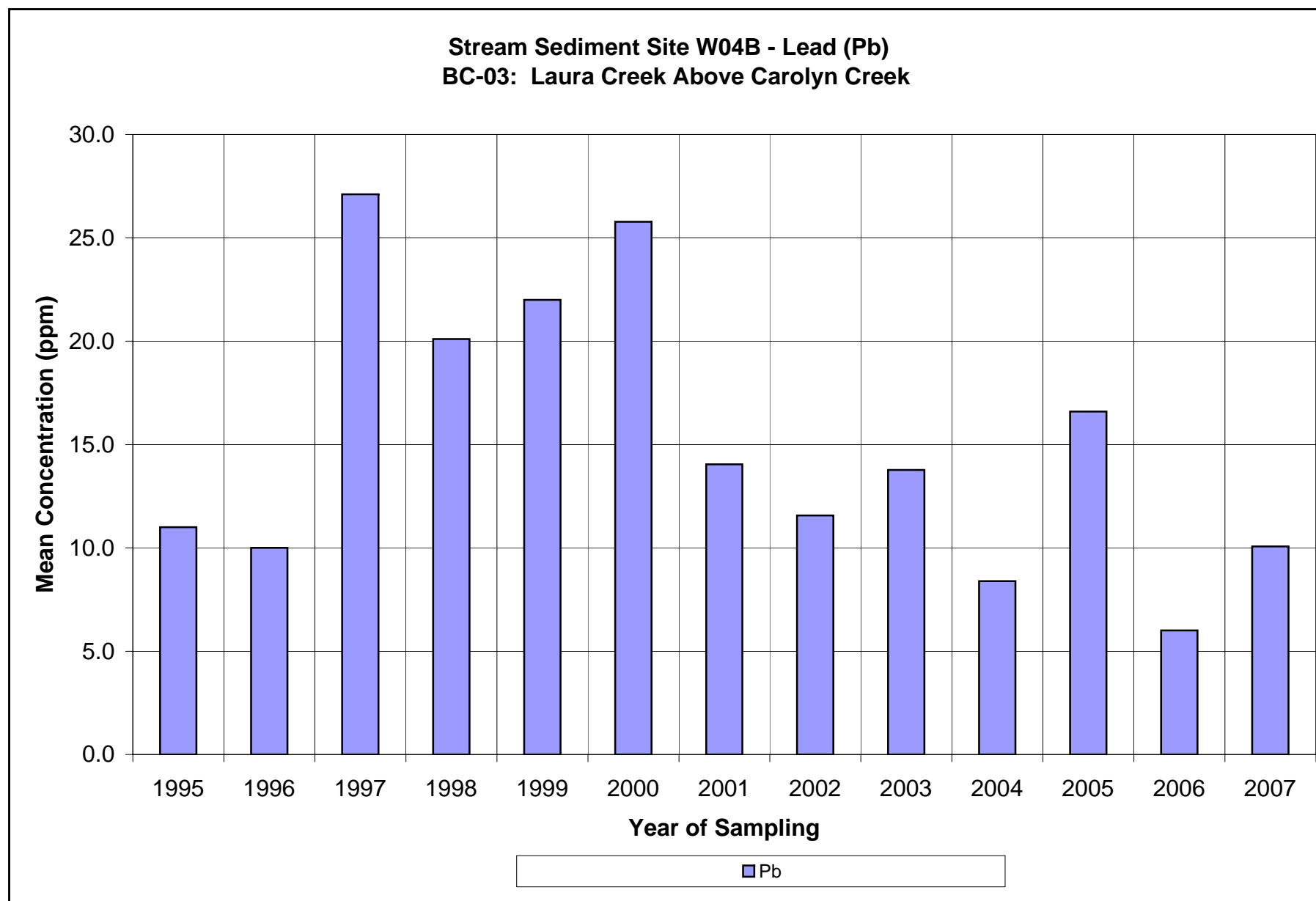


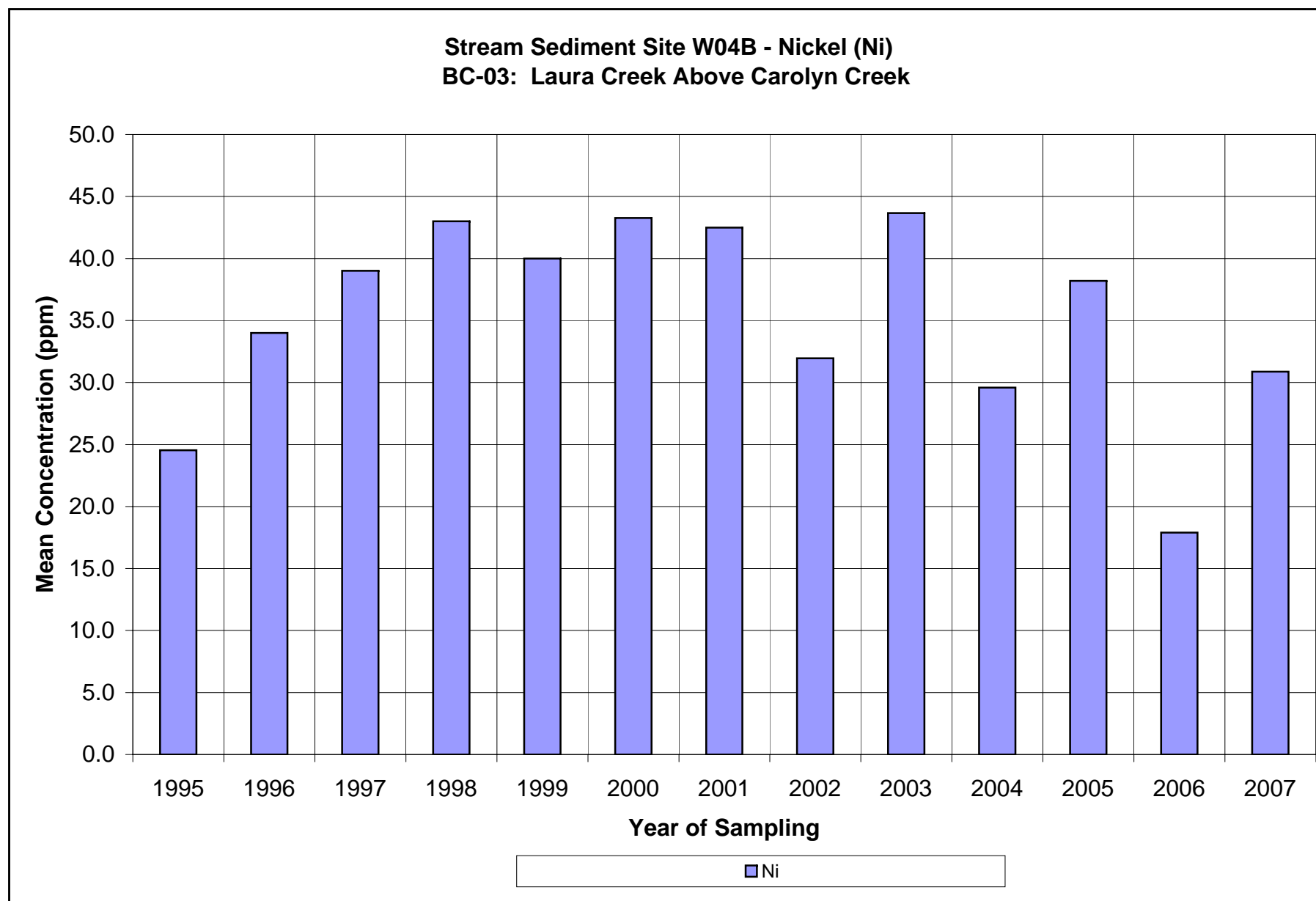


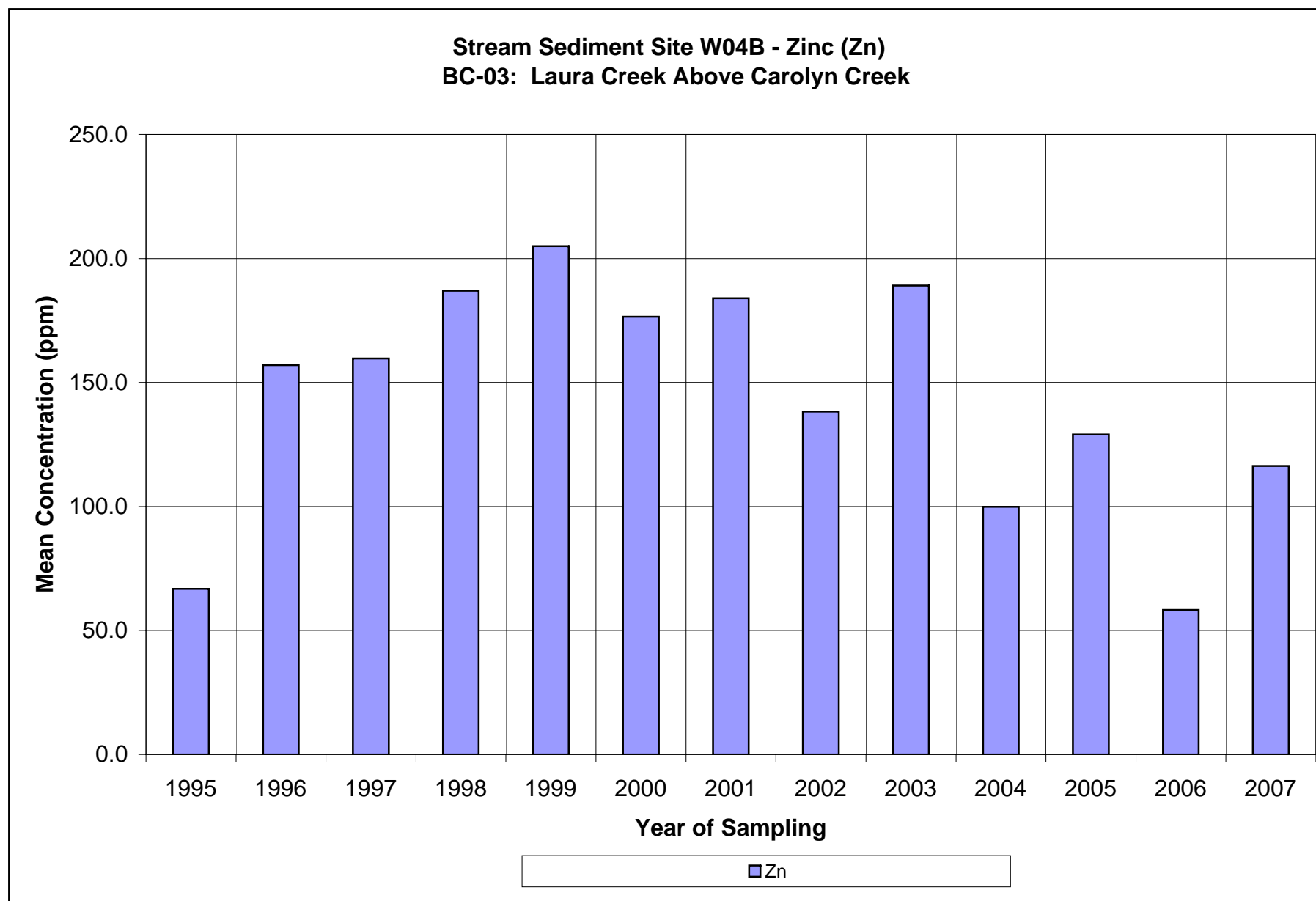
**Stream Sediment Site W04B - Molybdenum (Mo)  
BC-03: Laura Creek Above Carolyn Creek**

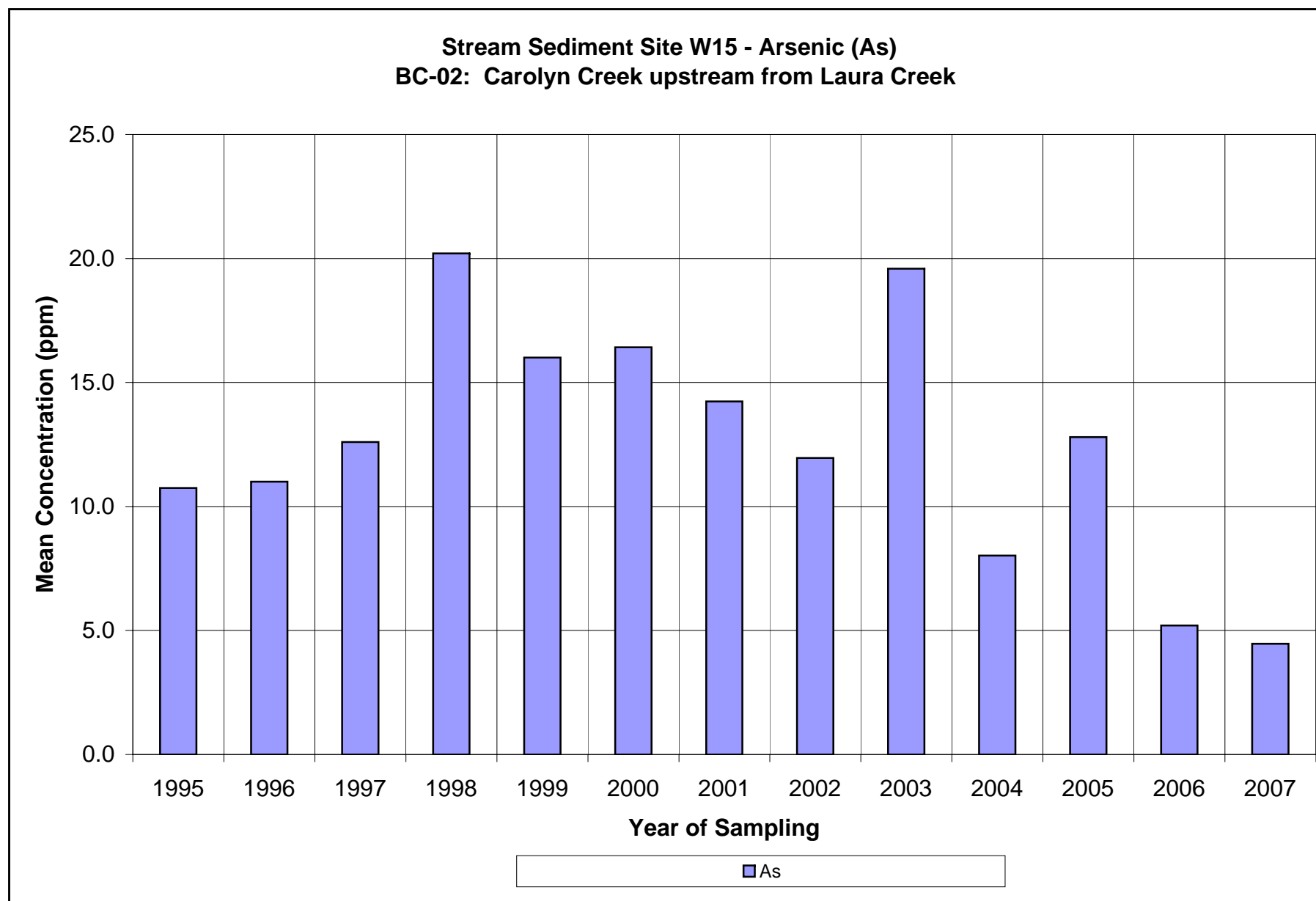


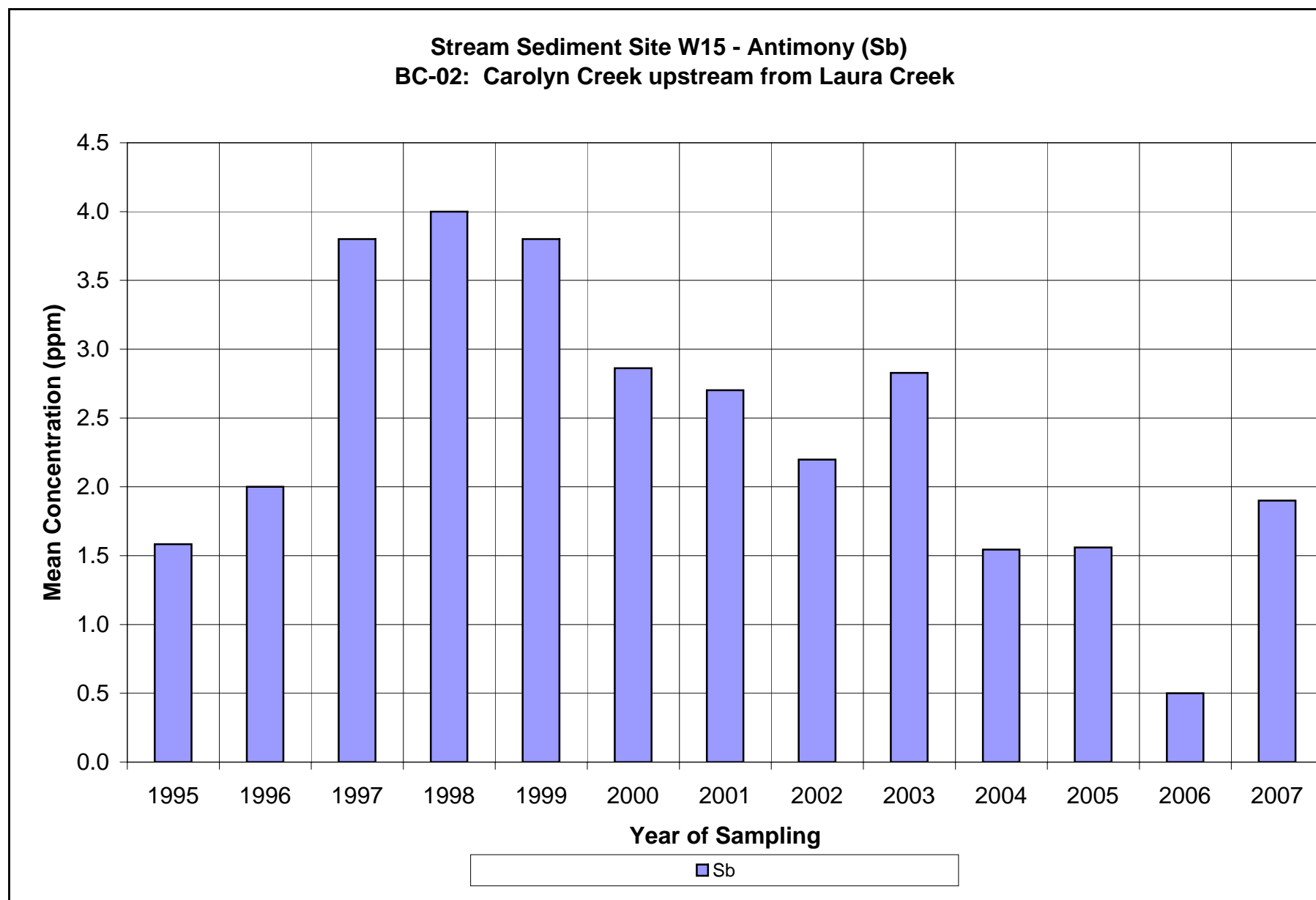


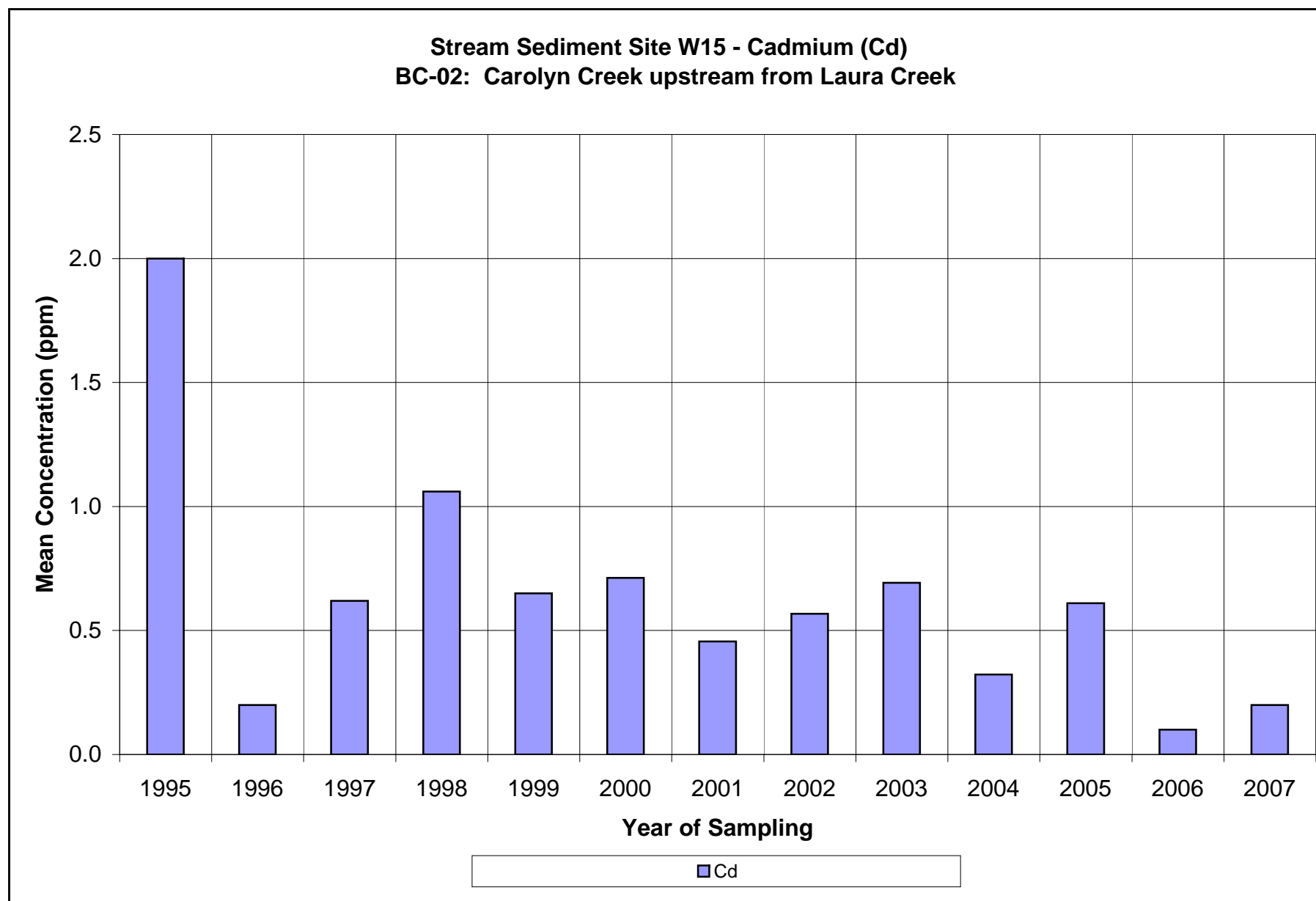


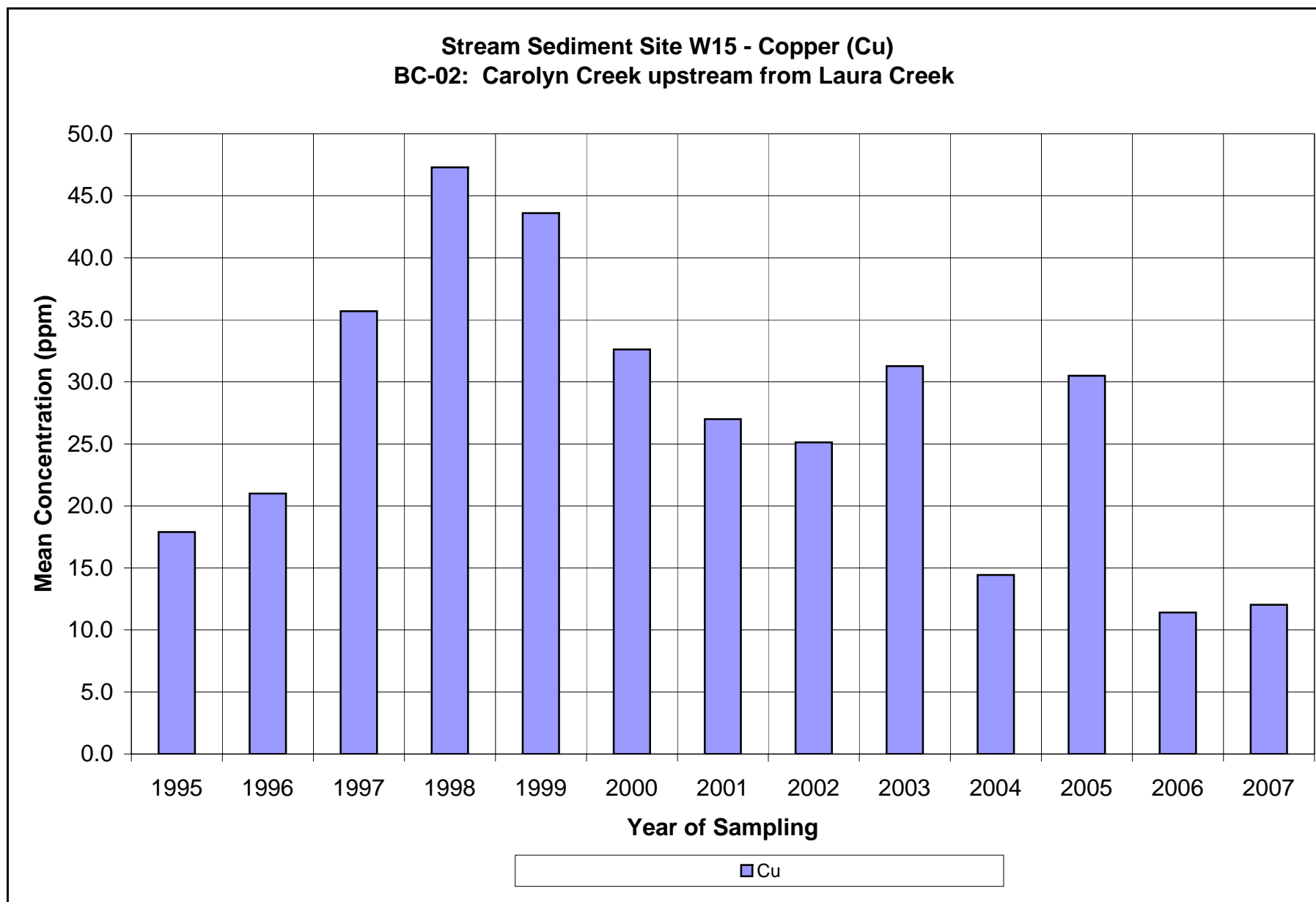




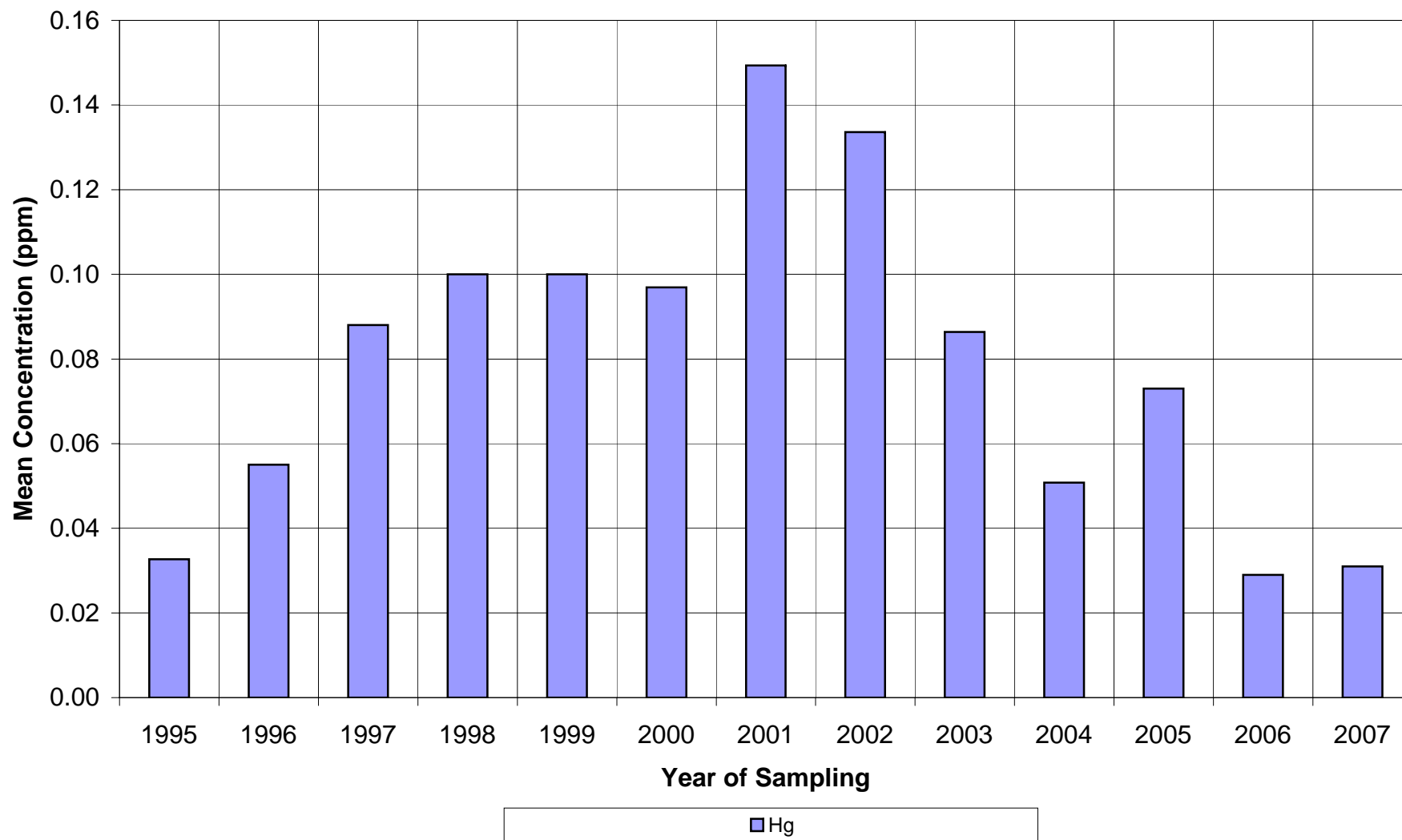






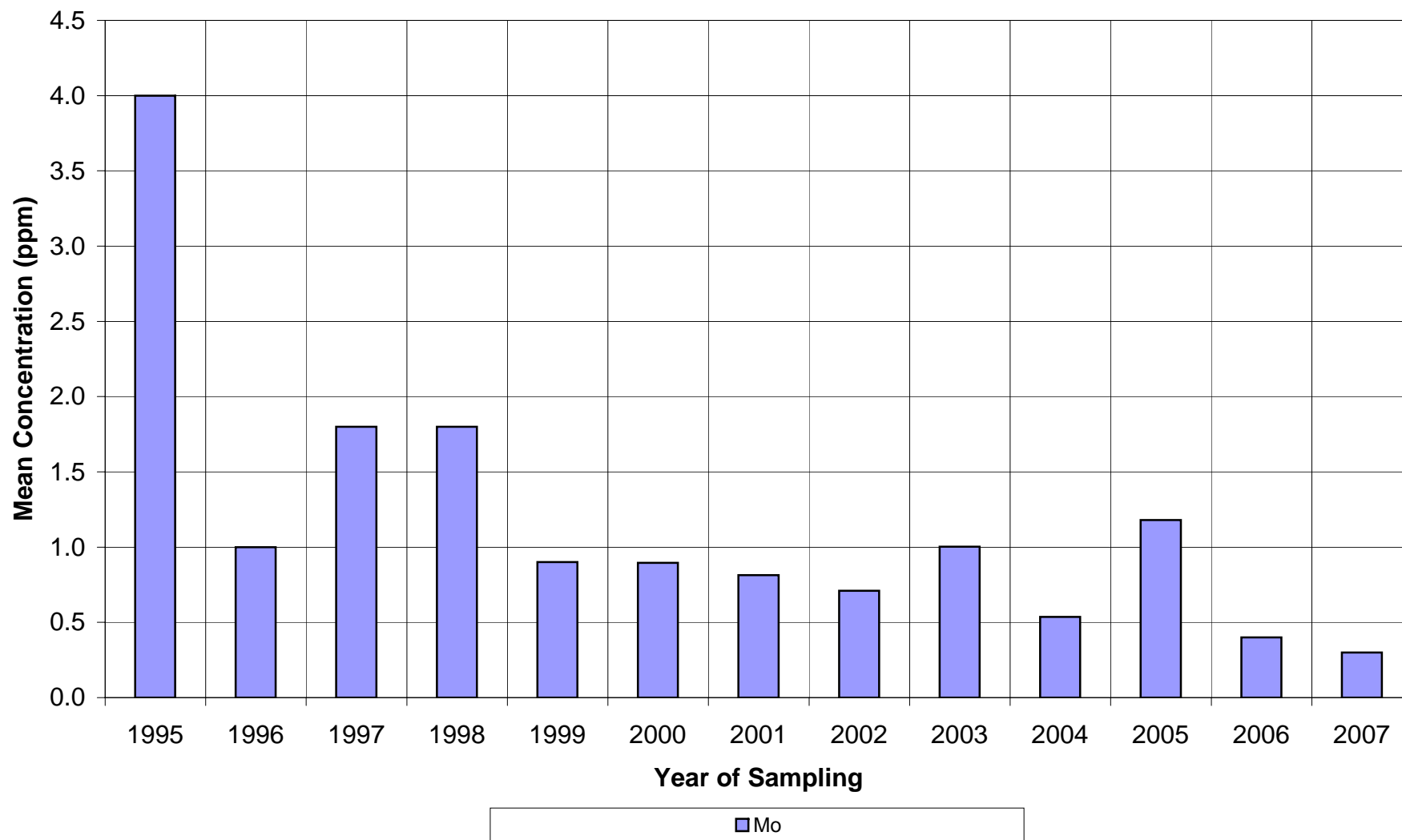


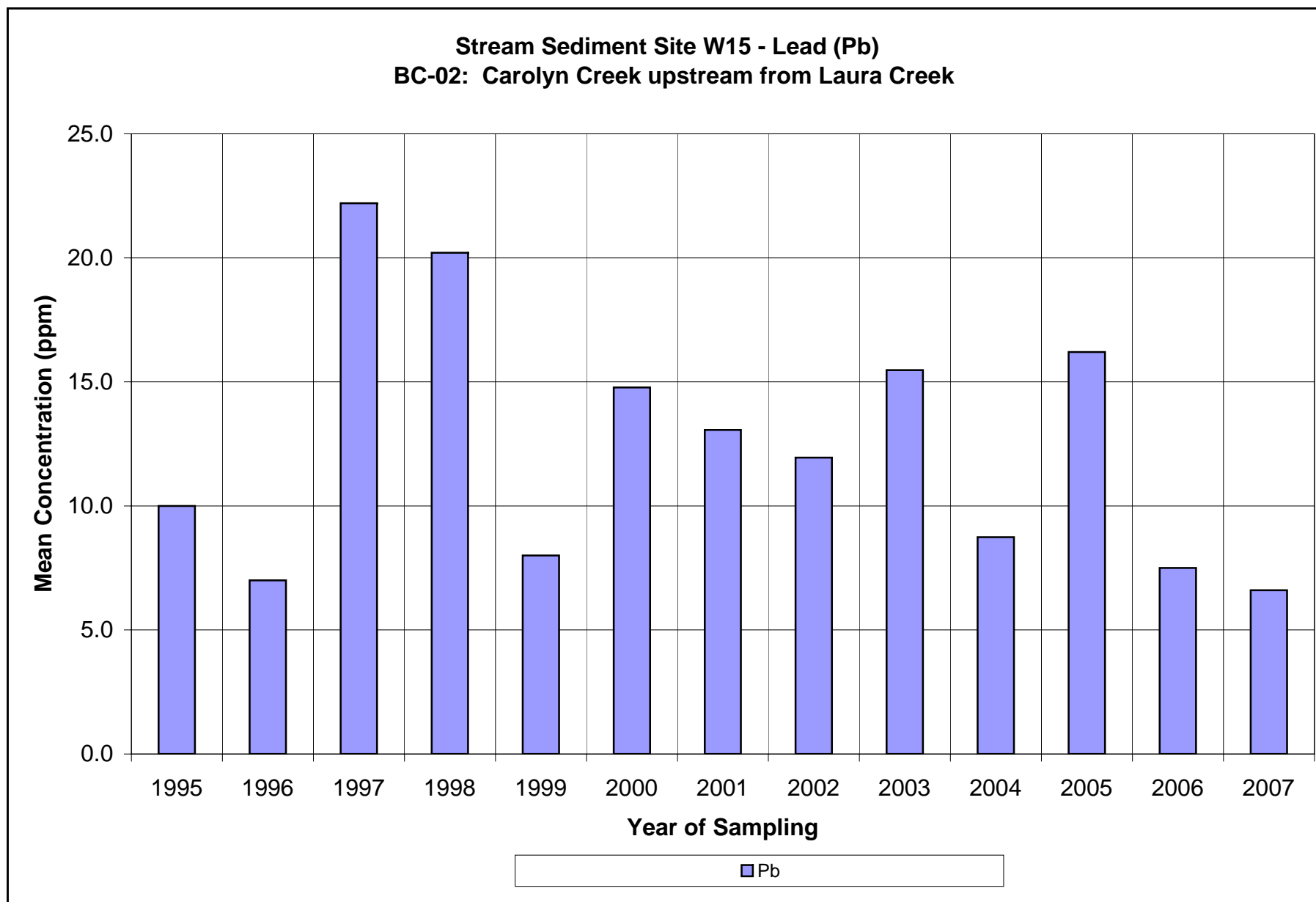
**Stream Sediment Site W15 - Mercury (Hg)  
BC-02: Carolyn Creek upstream from Laura Creek**

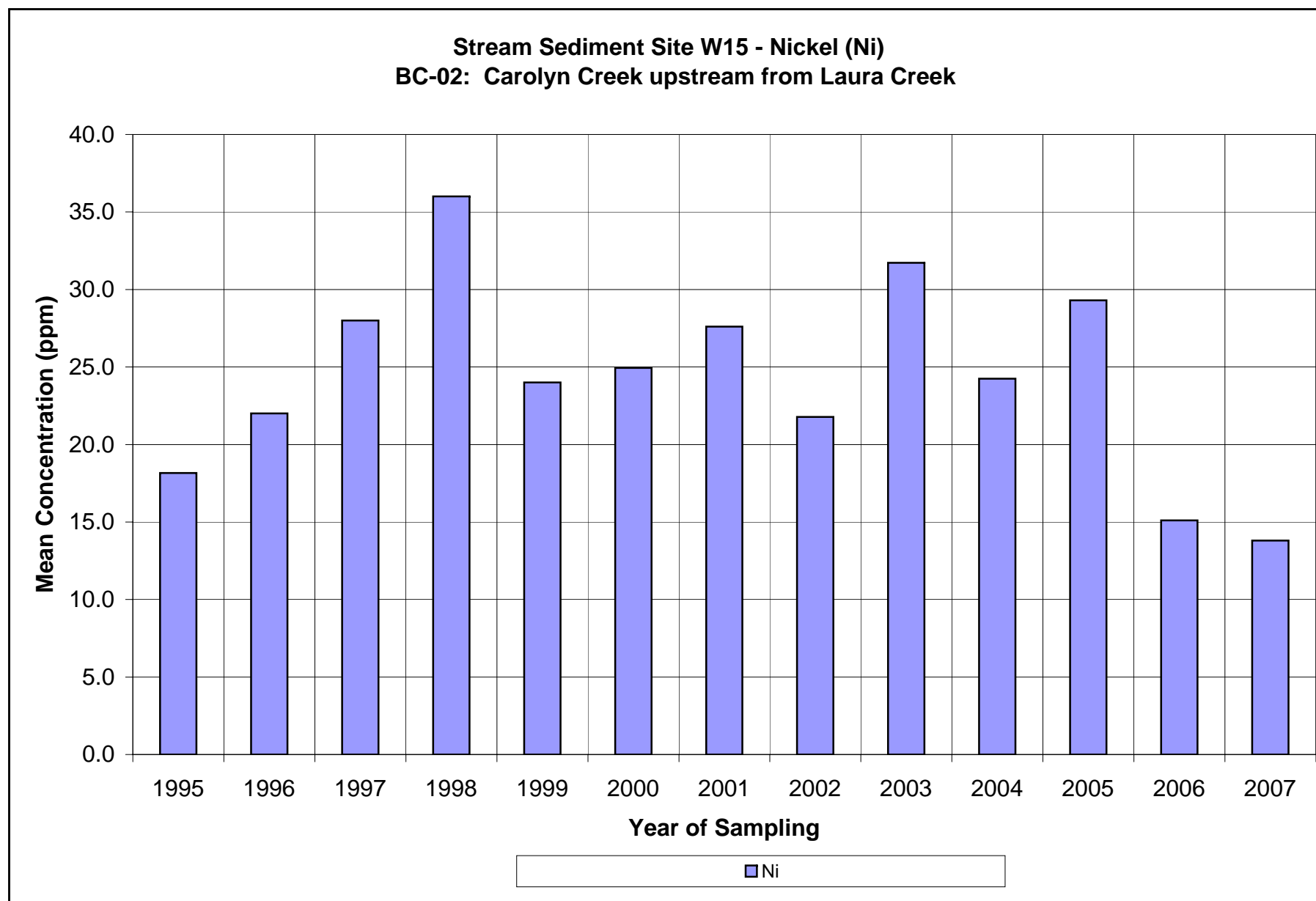




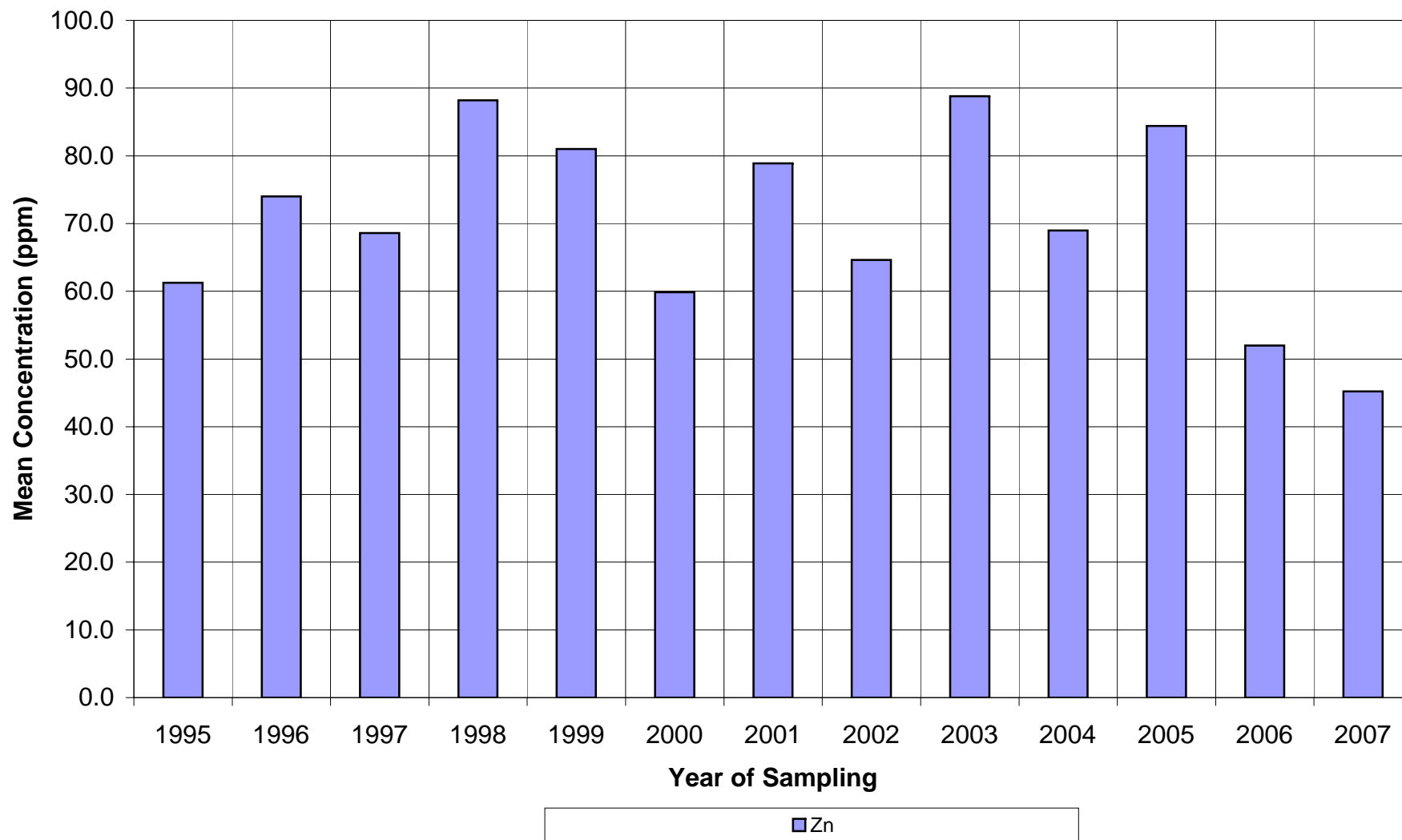
**Stream Sediment Site W15 - Molybdenum (Mo)**  
**BC-02: Carolyn Creek upstream from Laura Creek**

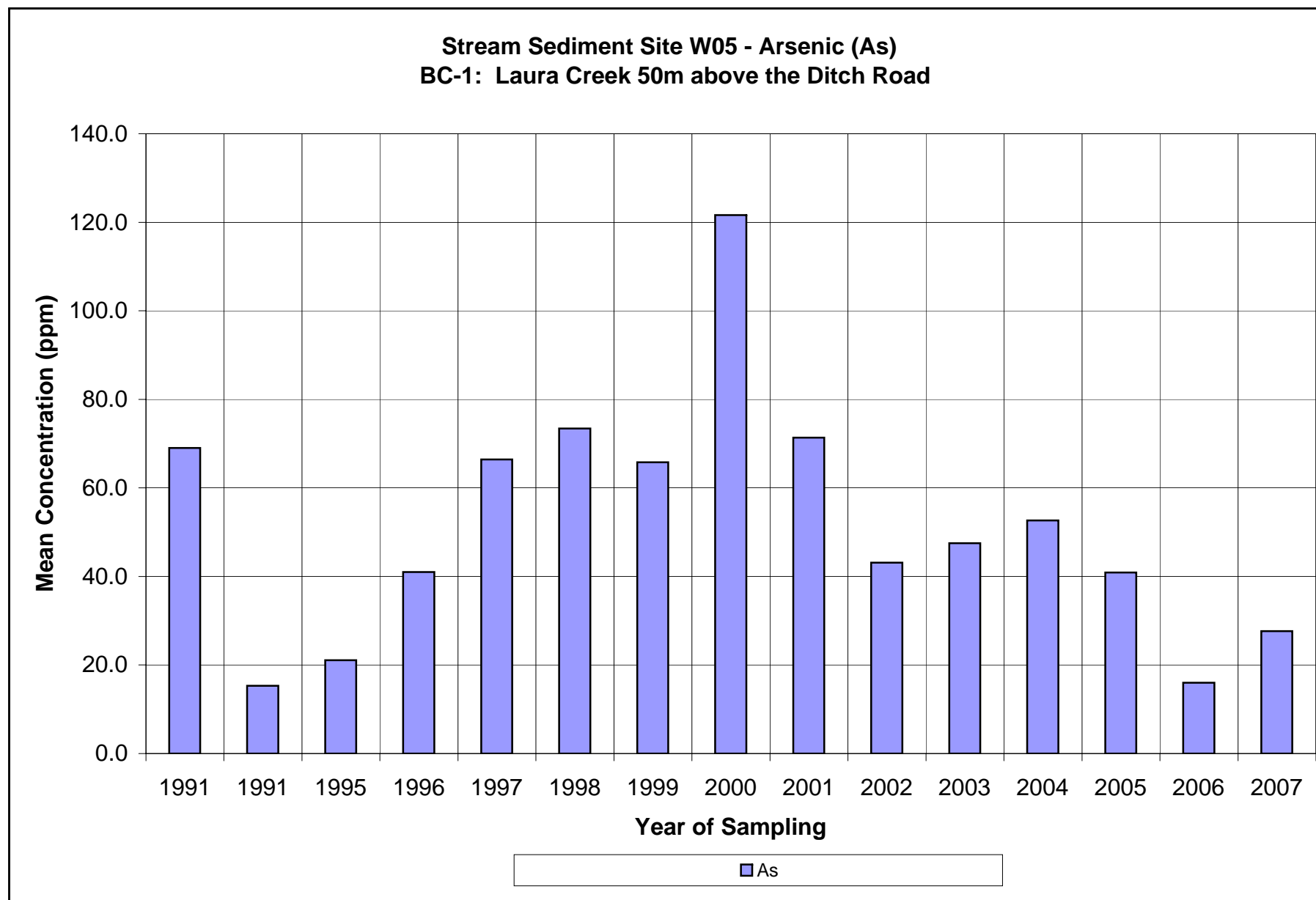


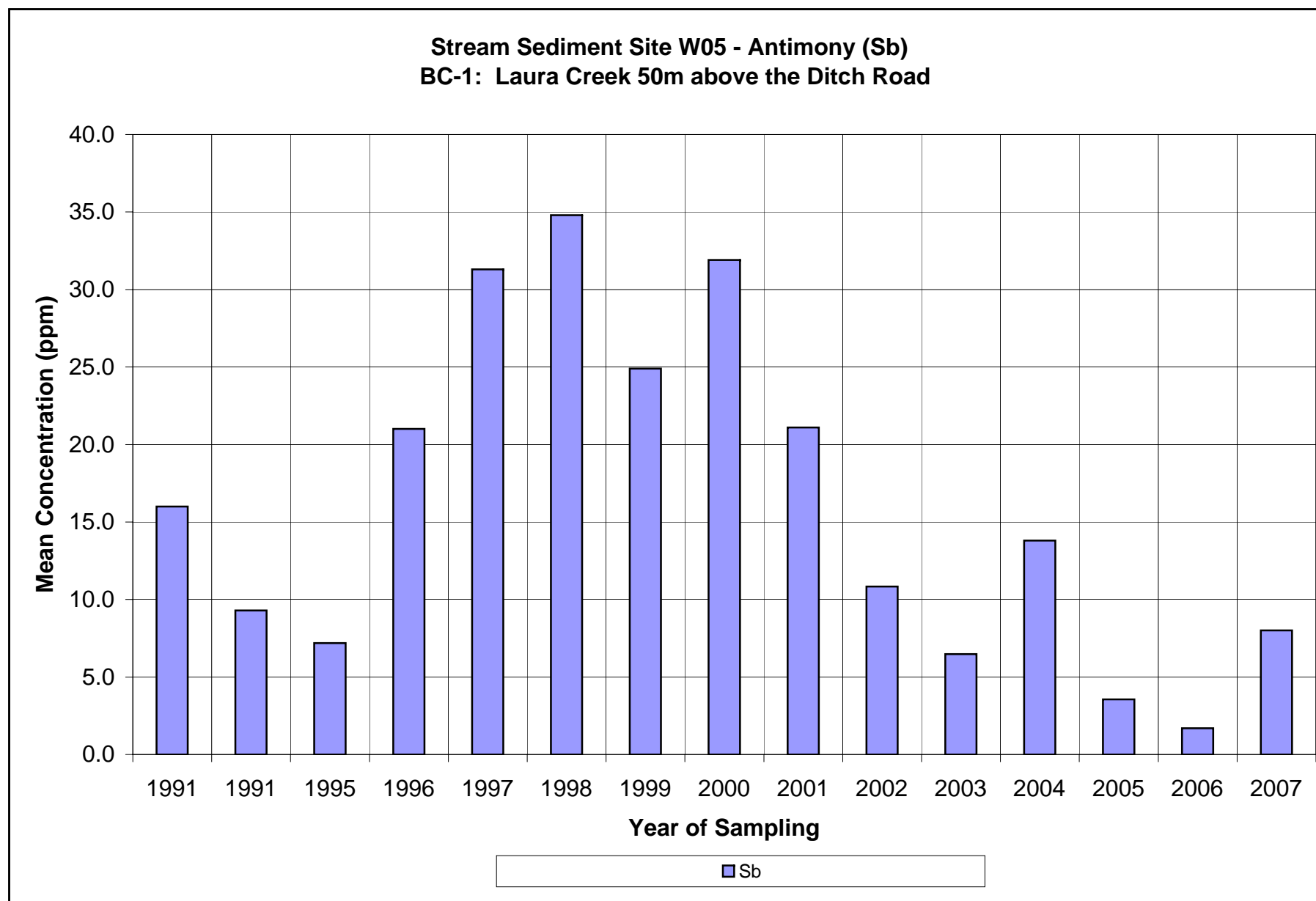


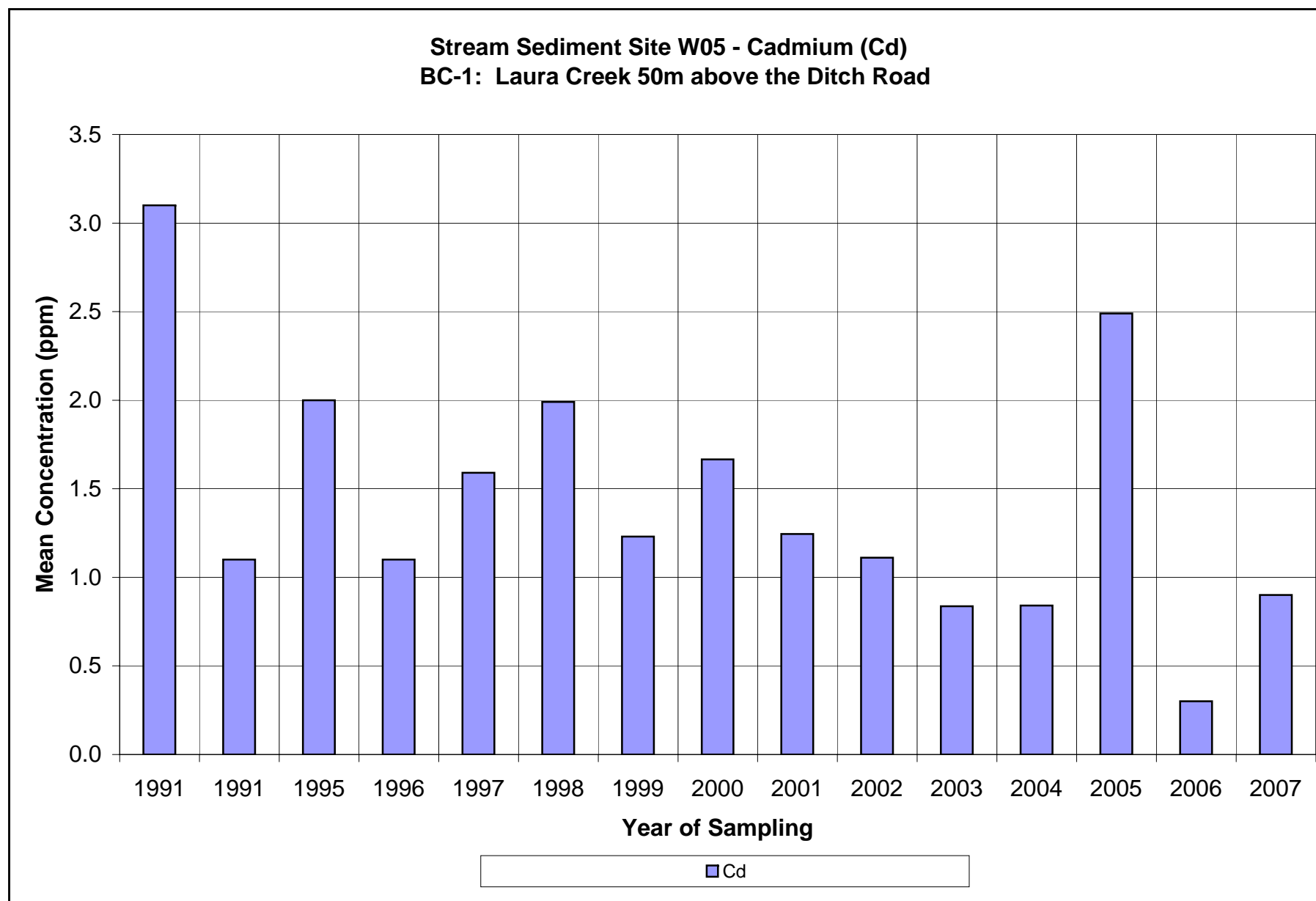


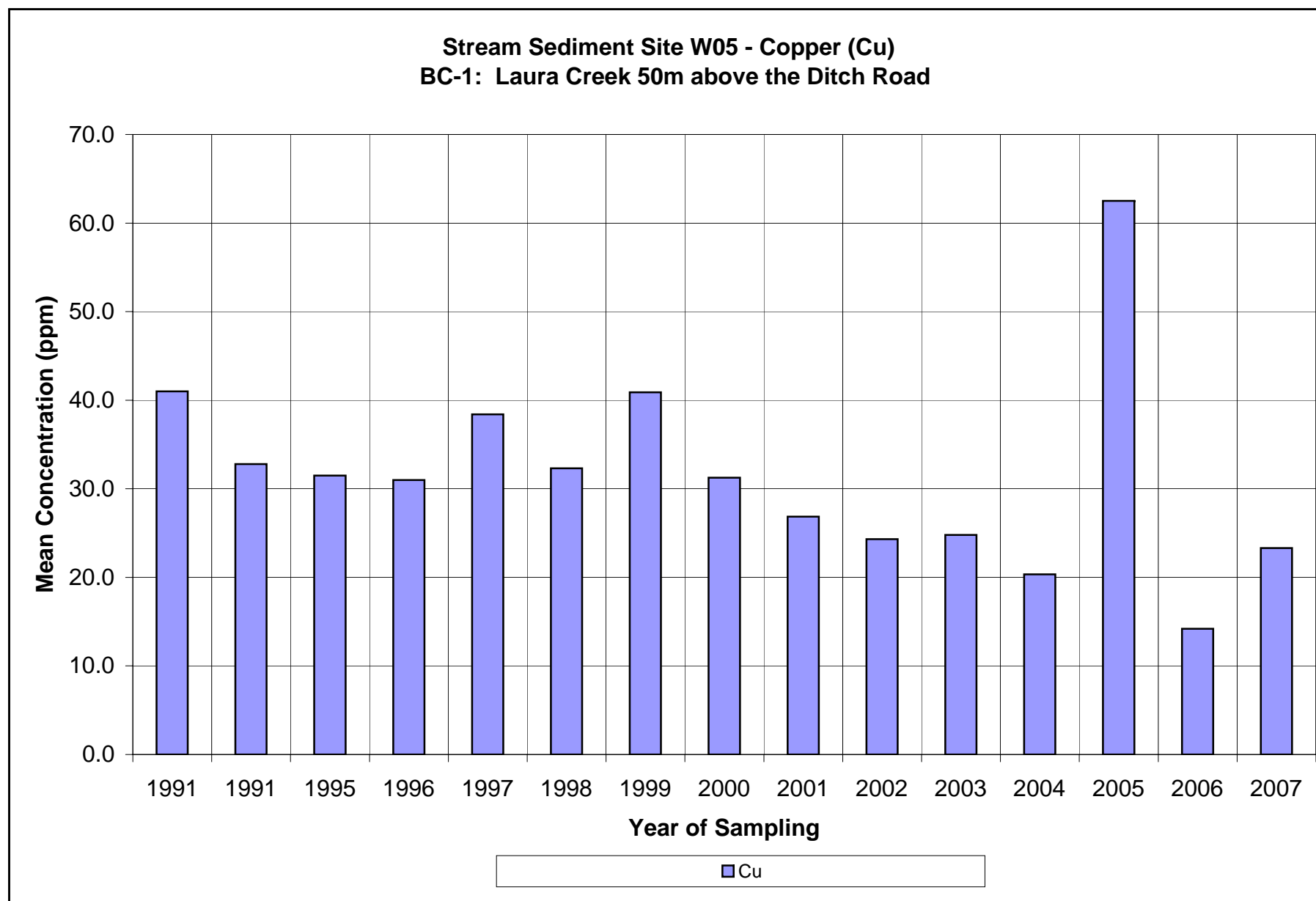
**Stream Sediment Site W15 - Zinc (Zn)  
BC-02: Carolyn Creek upstream from Laura Creek**



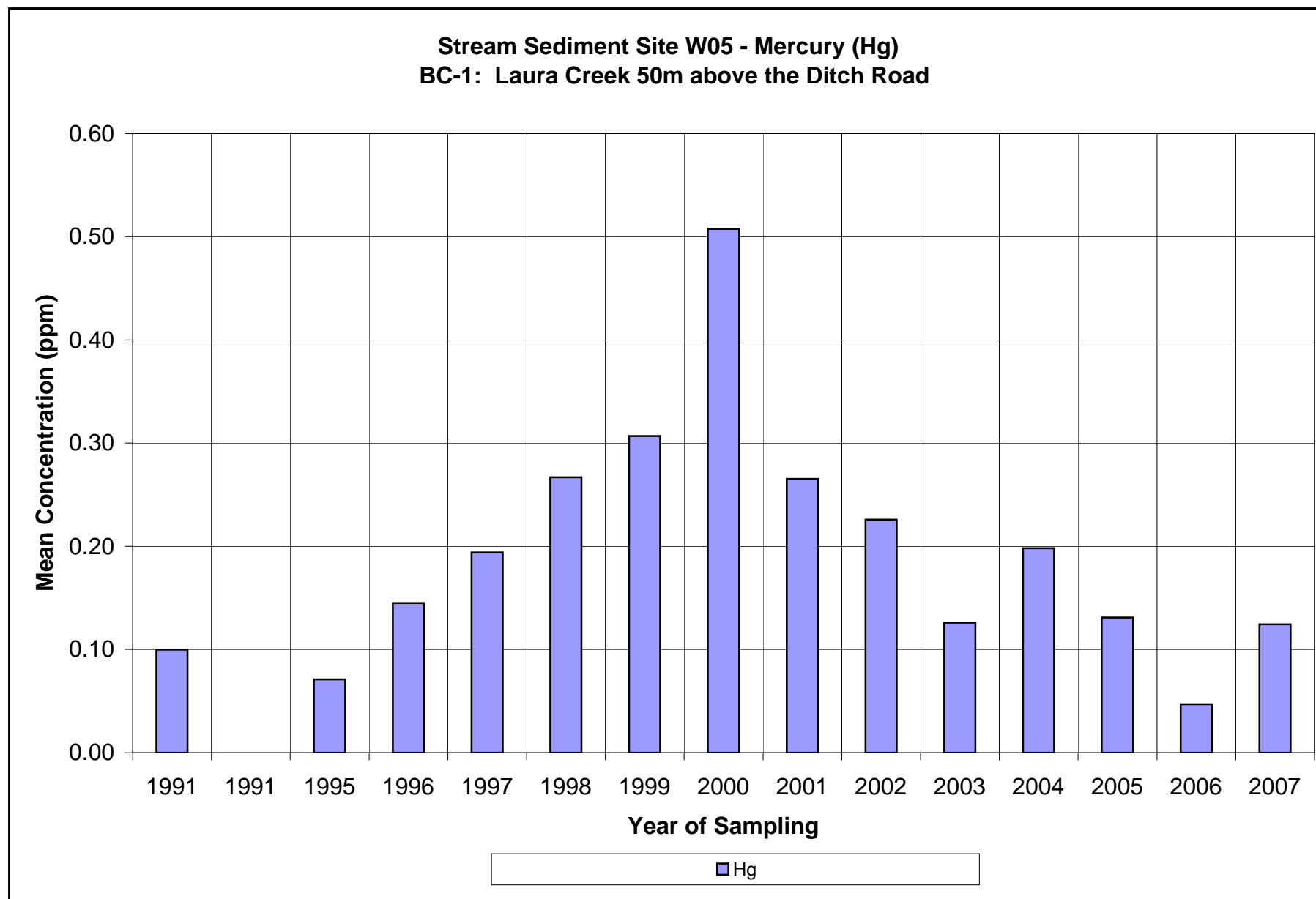


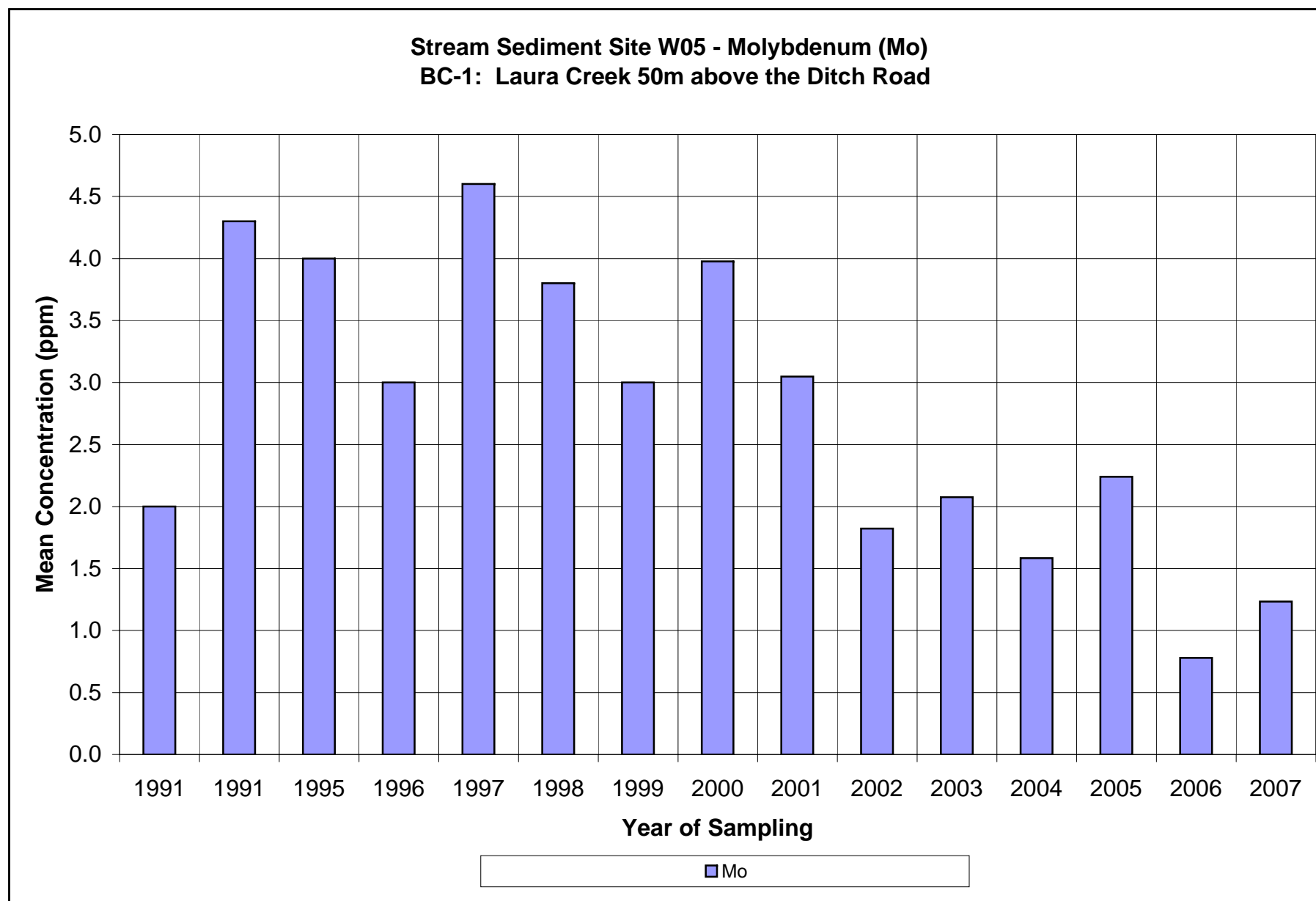


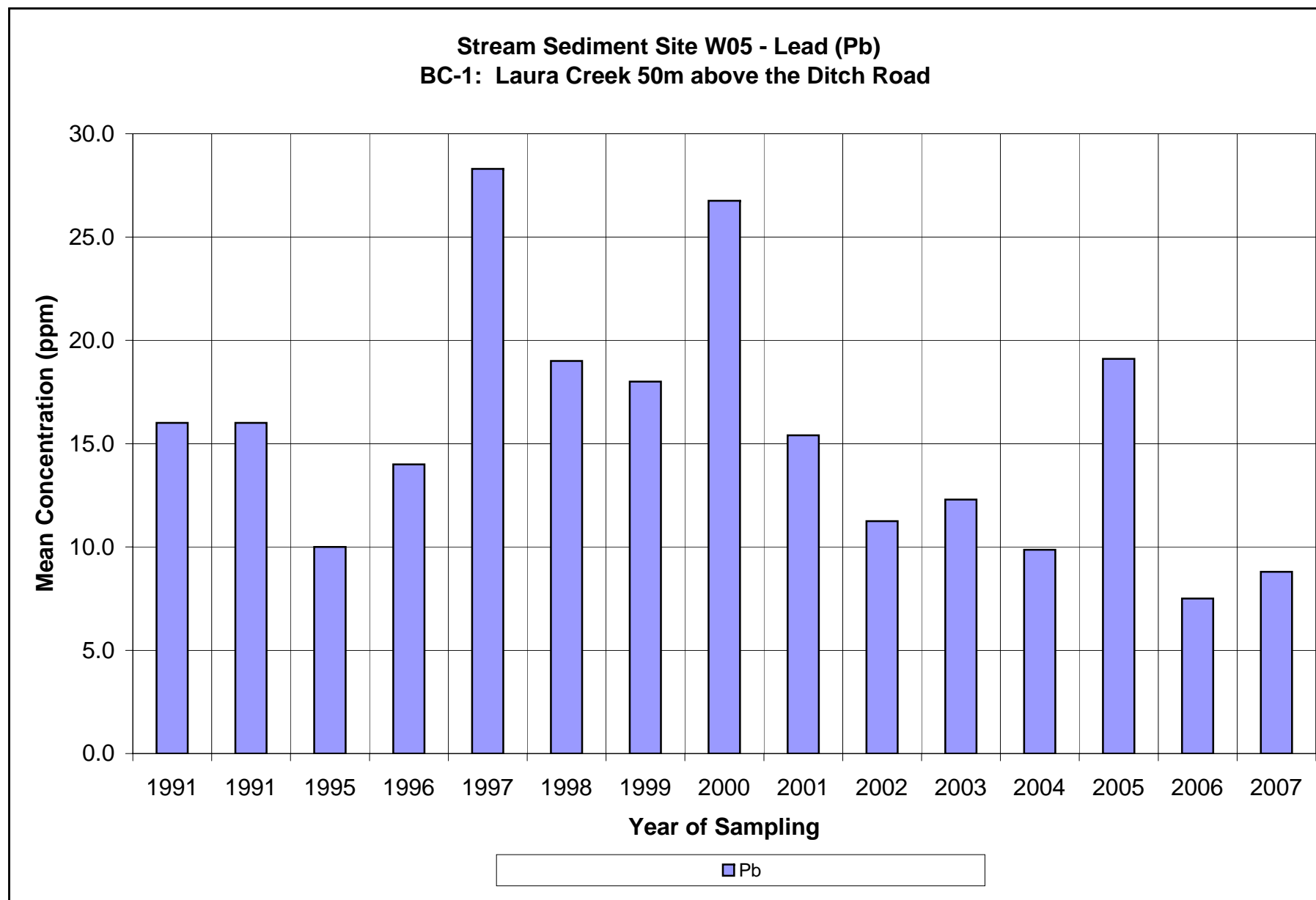


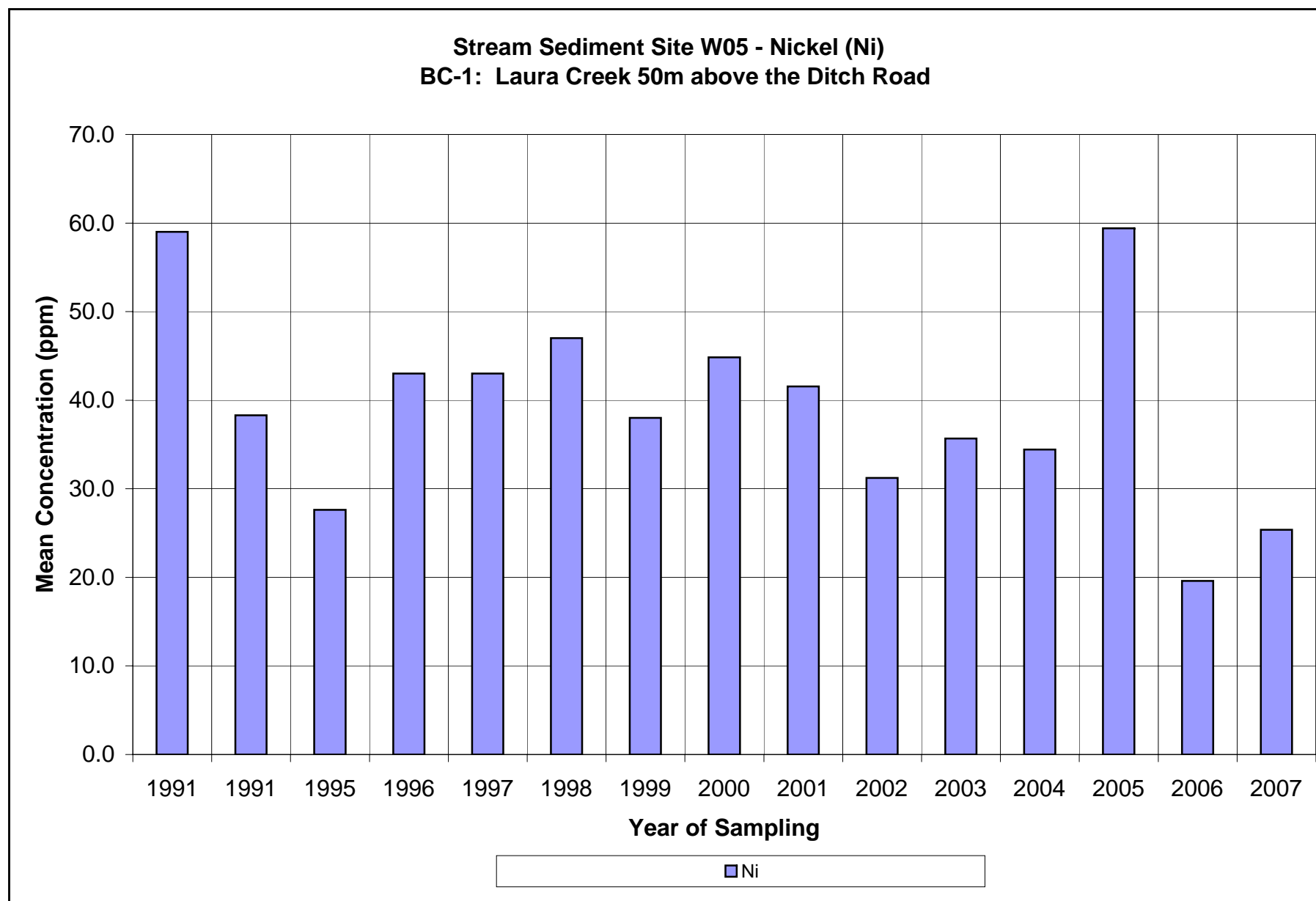


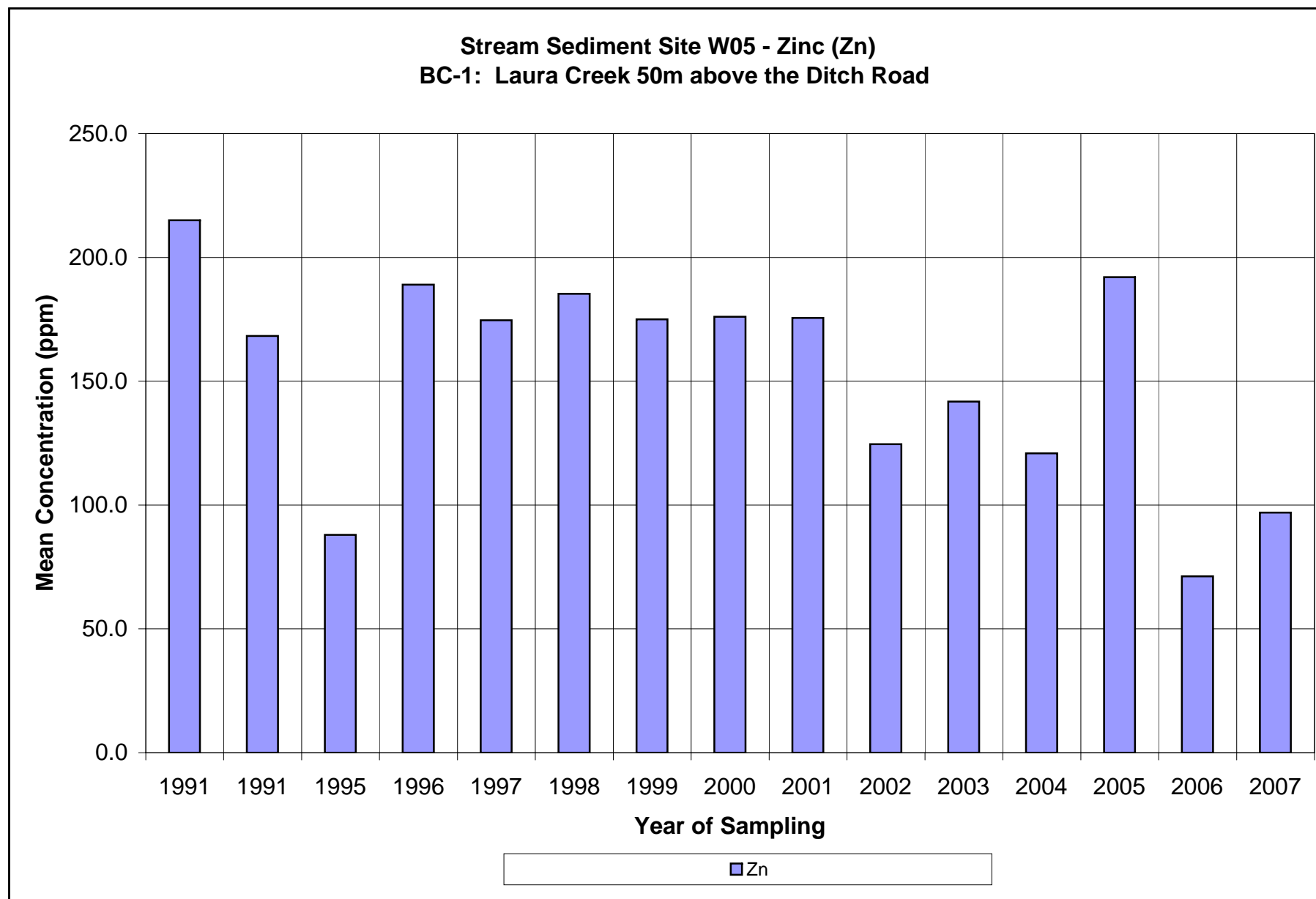


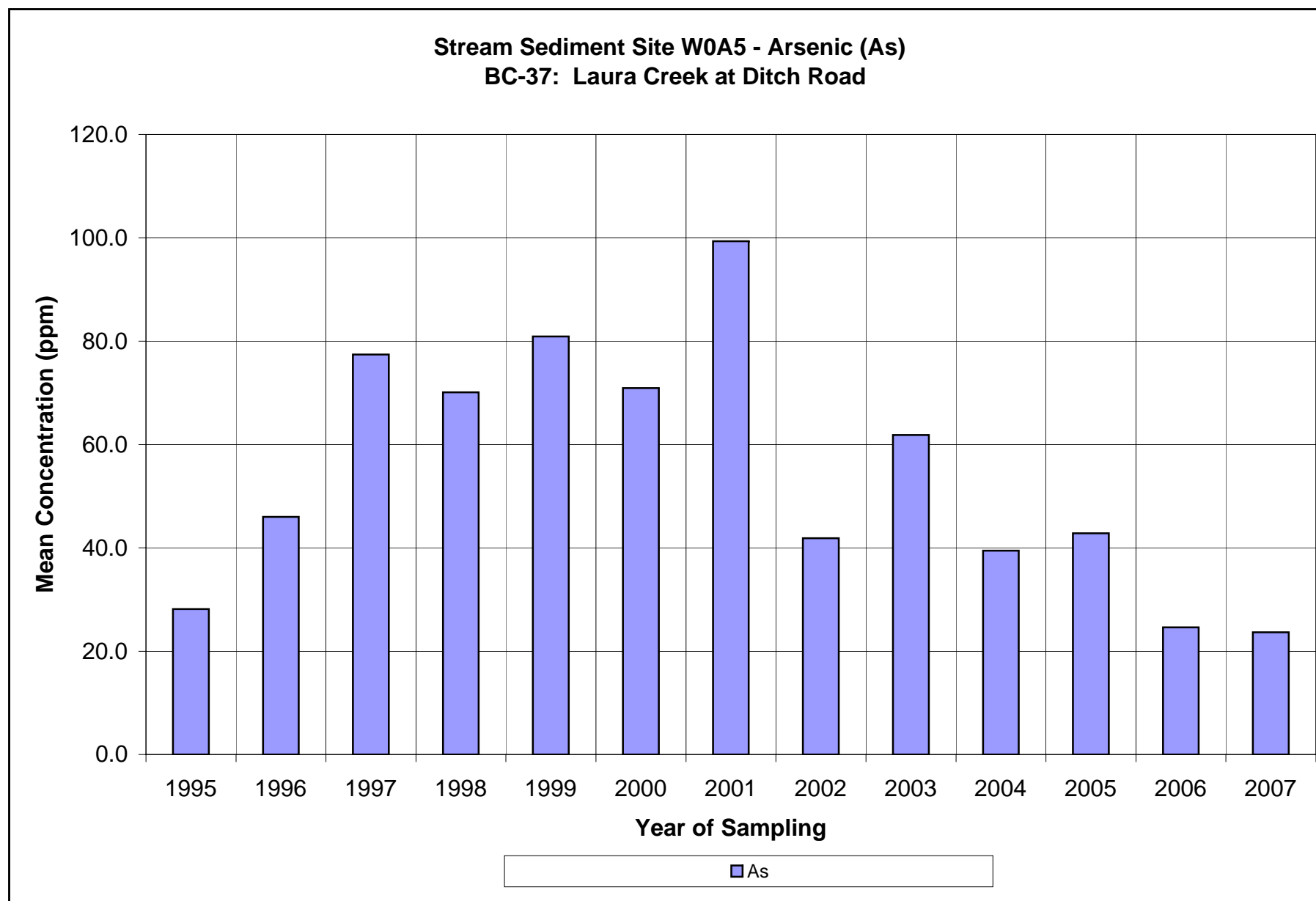


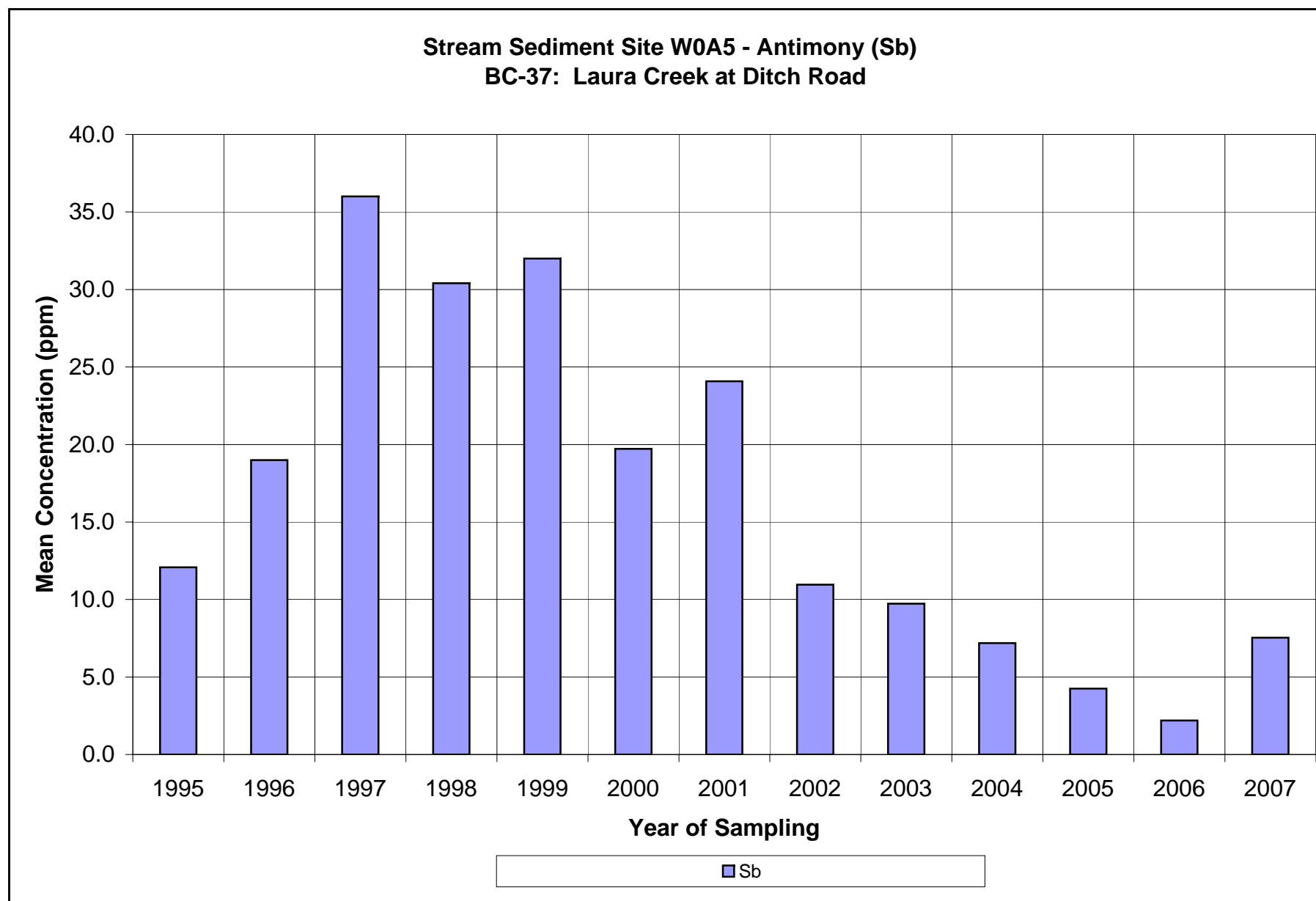


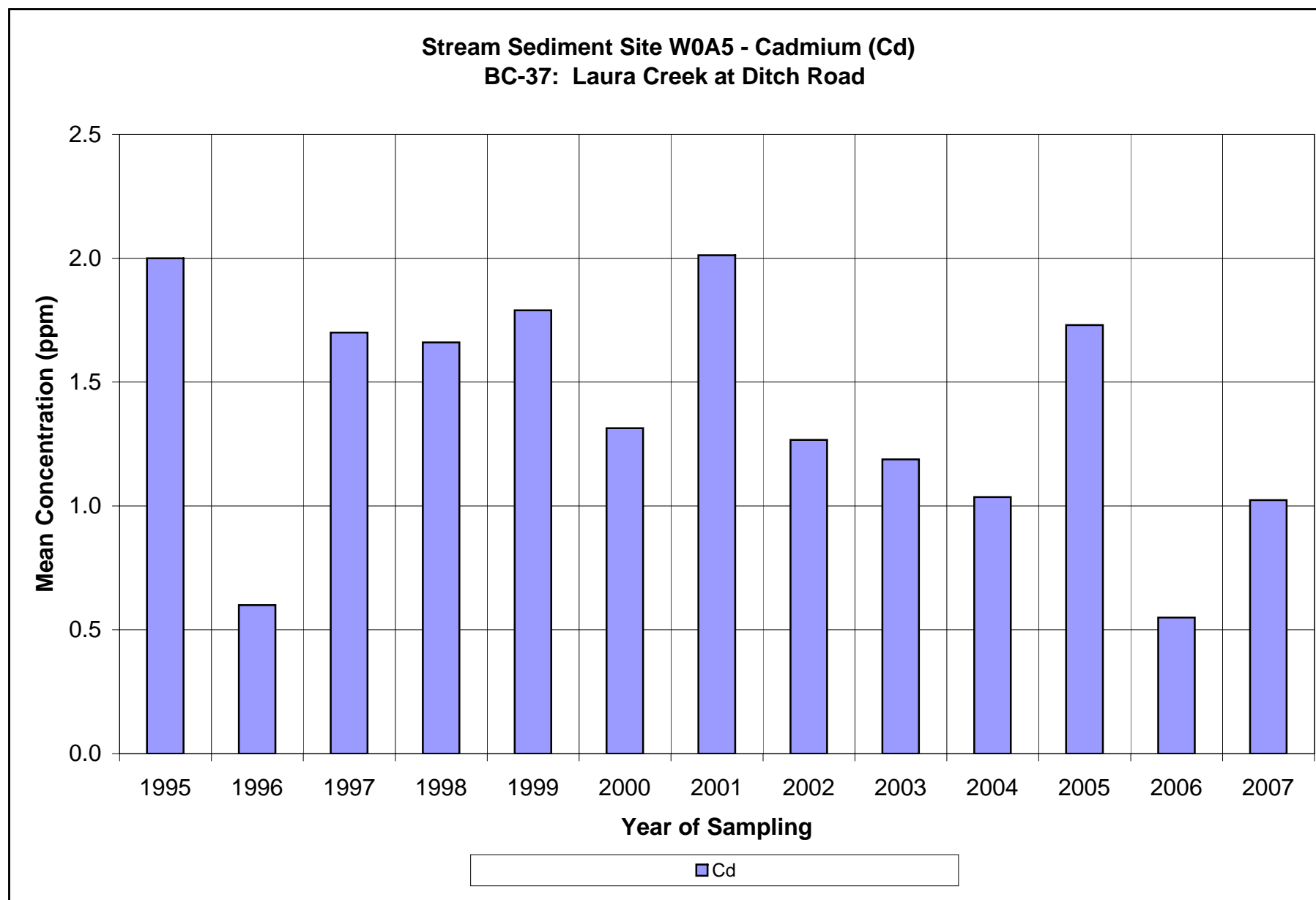






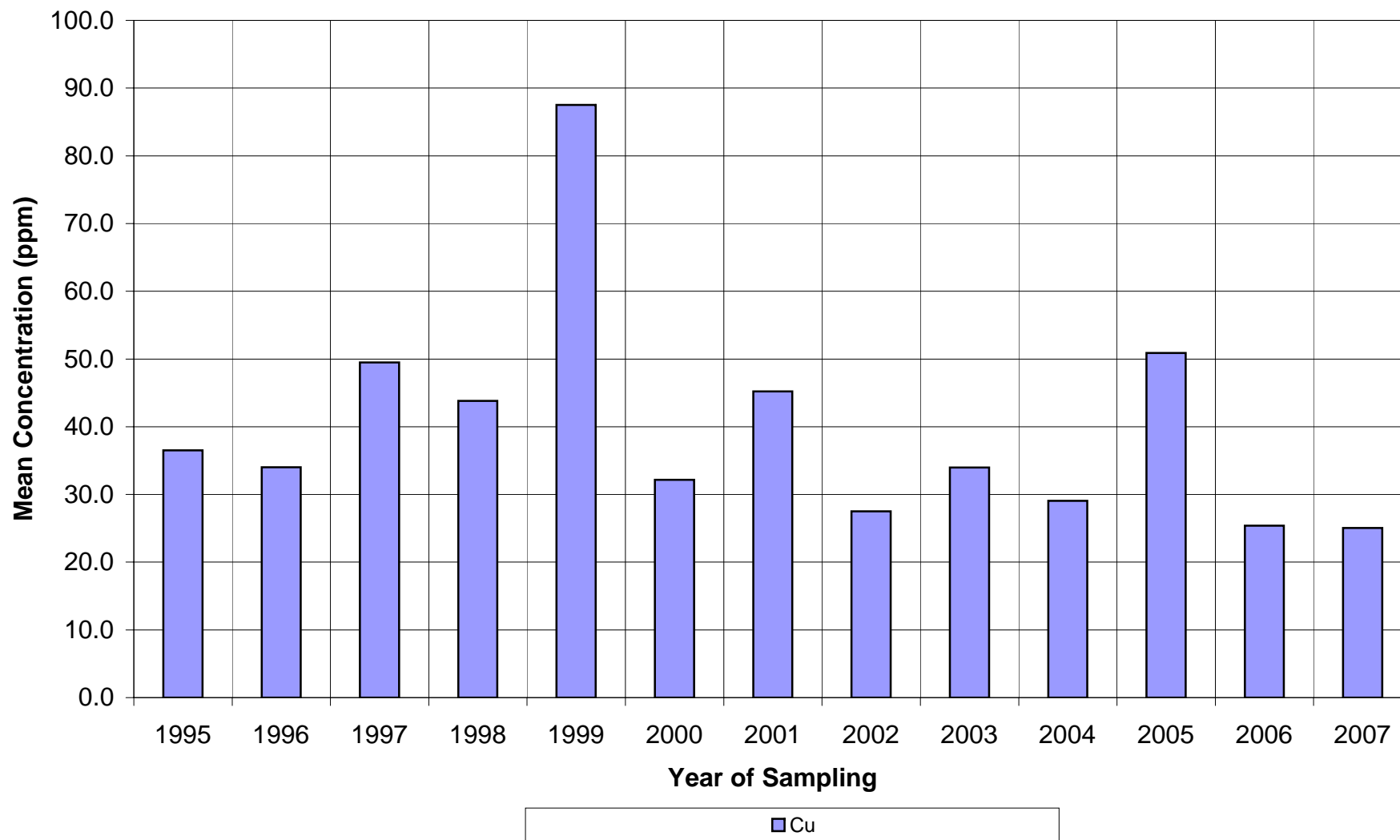


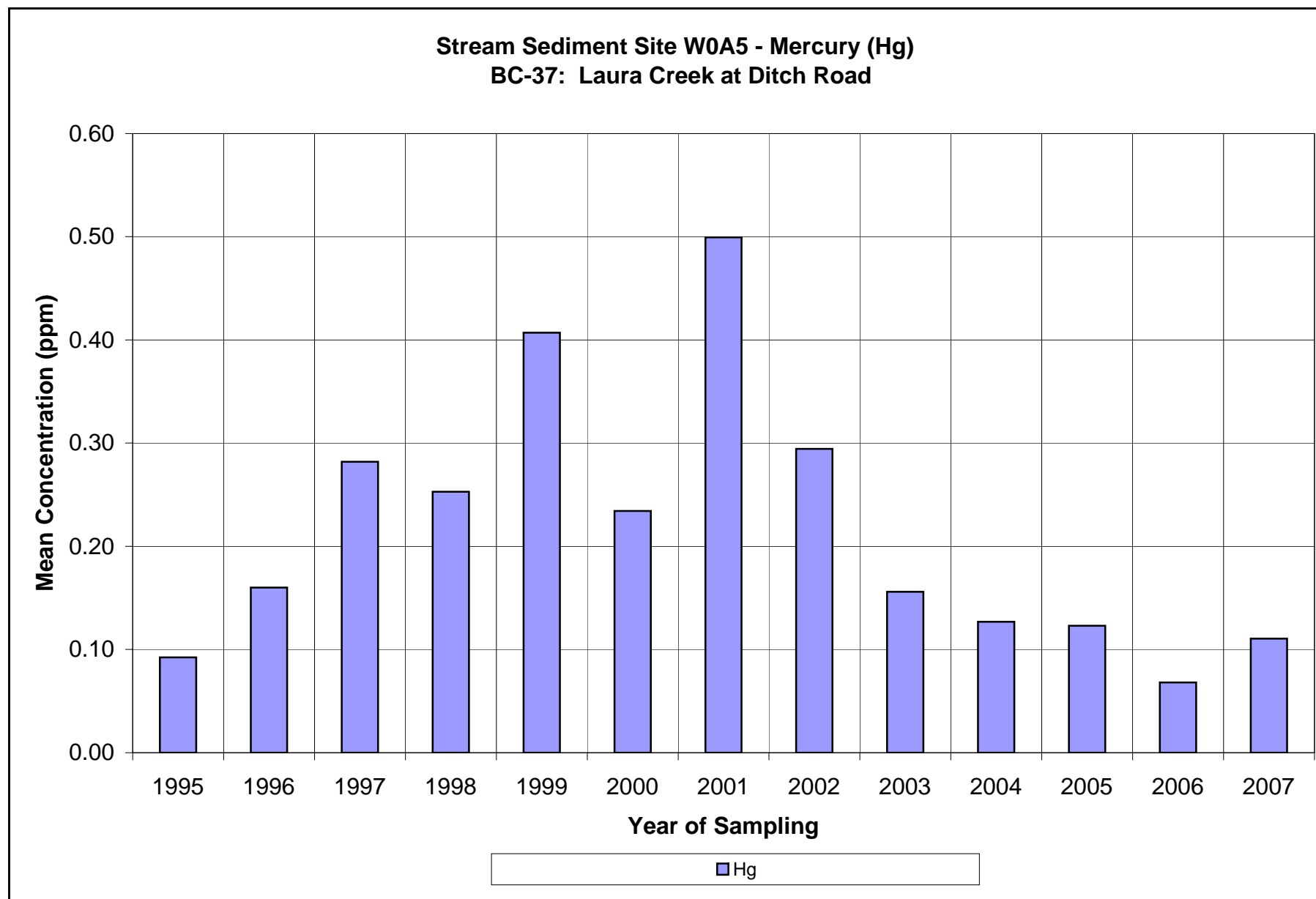


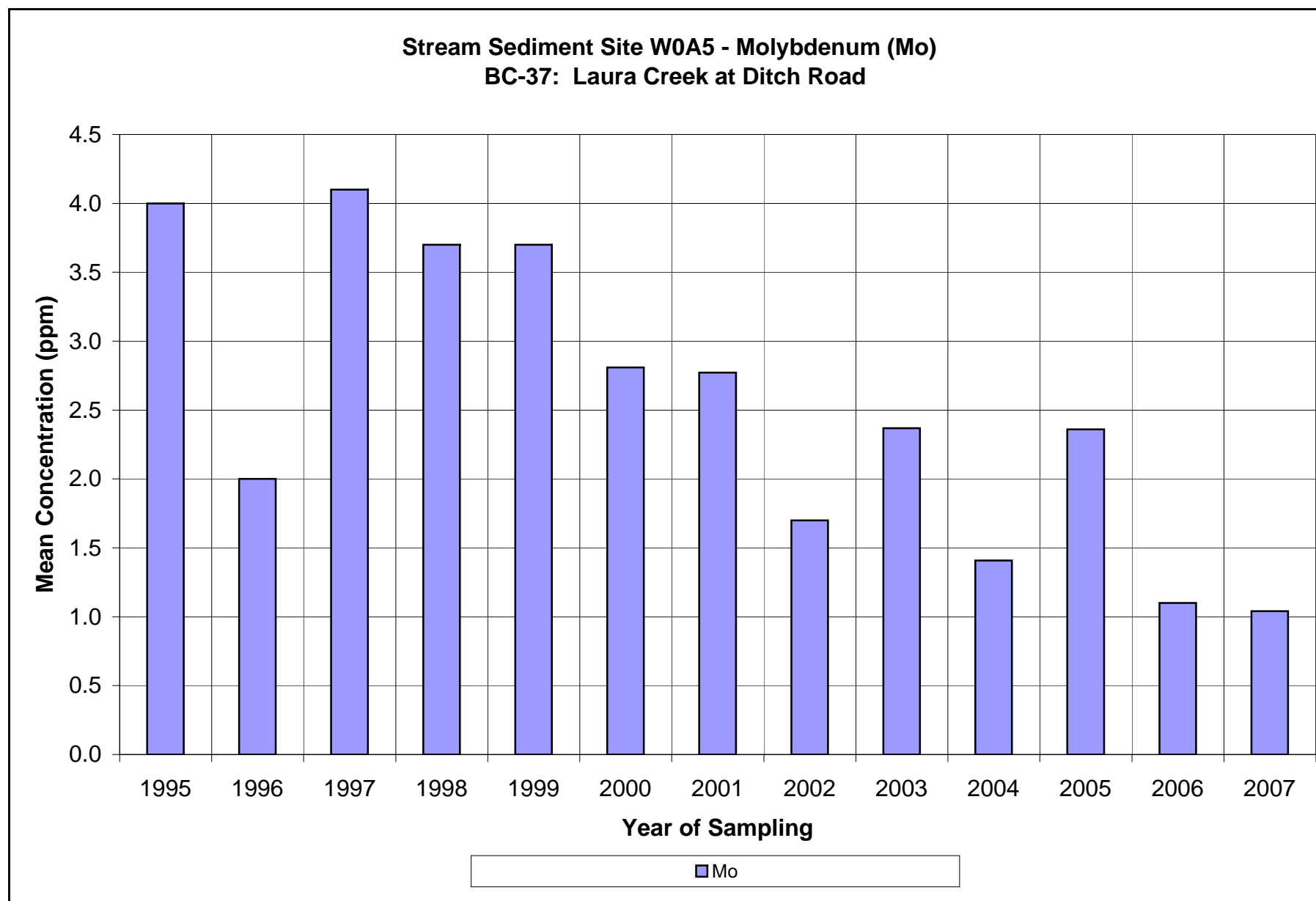


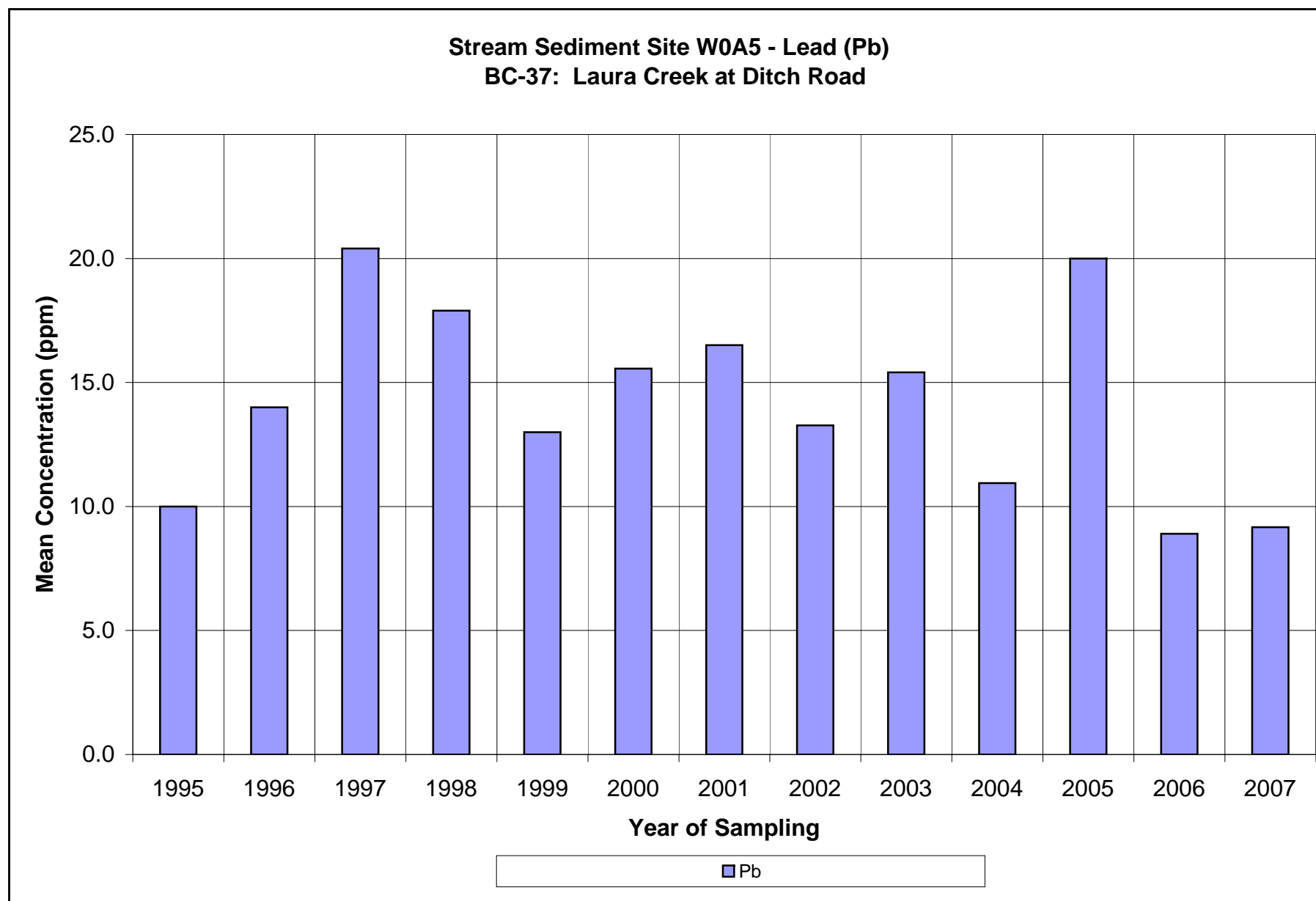


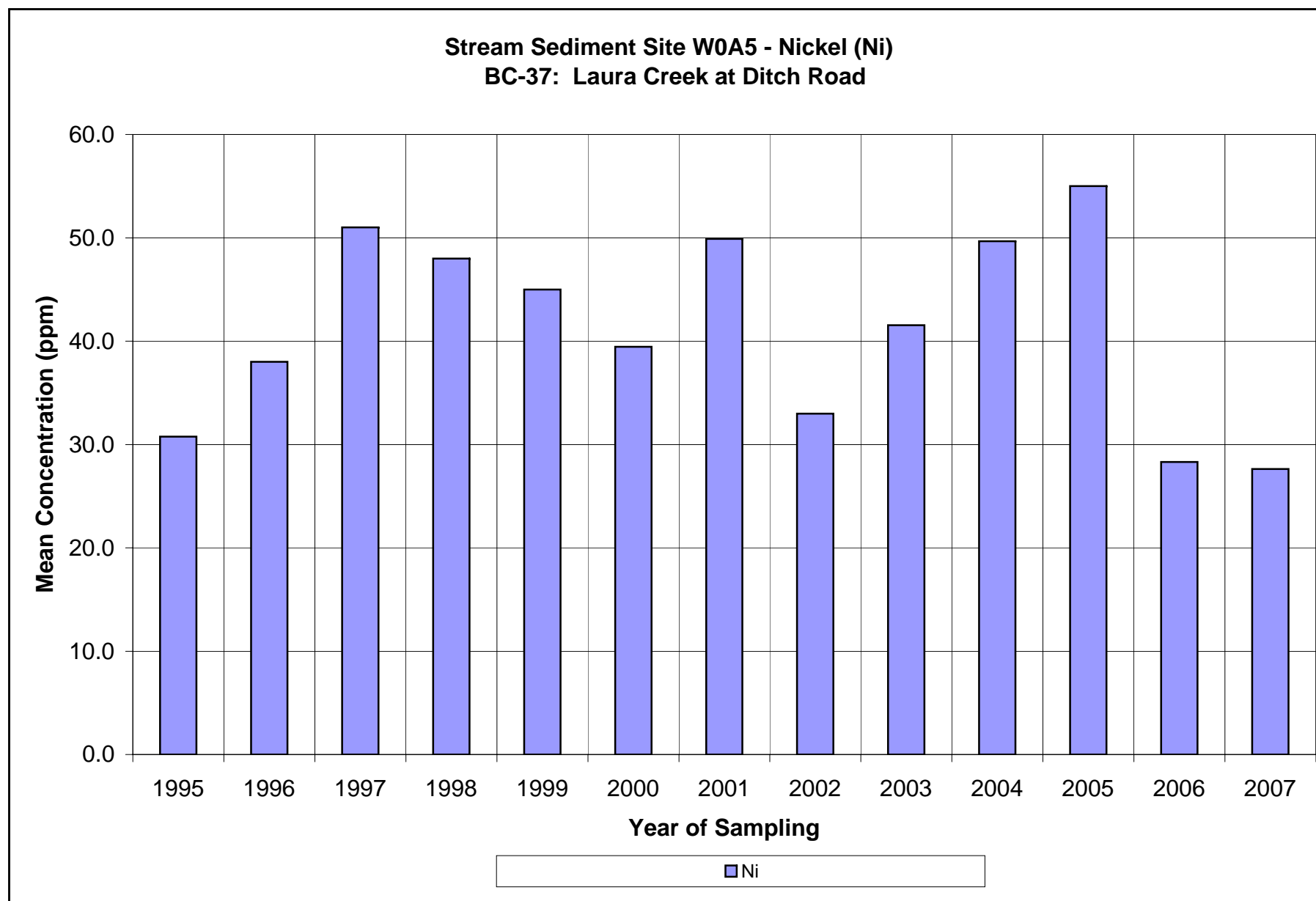
**Stream Sediment Site W0A5 - Copper (Cu)  
BC-37: Laura Creek at Ditch Road**

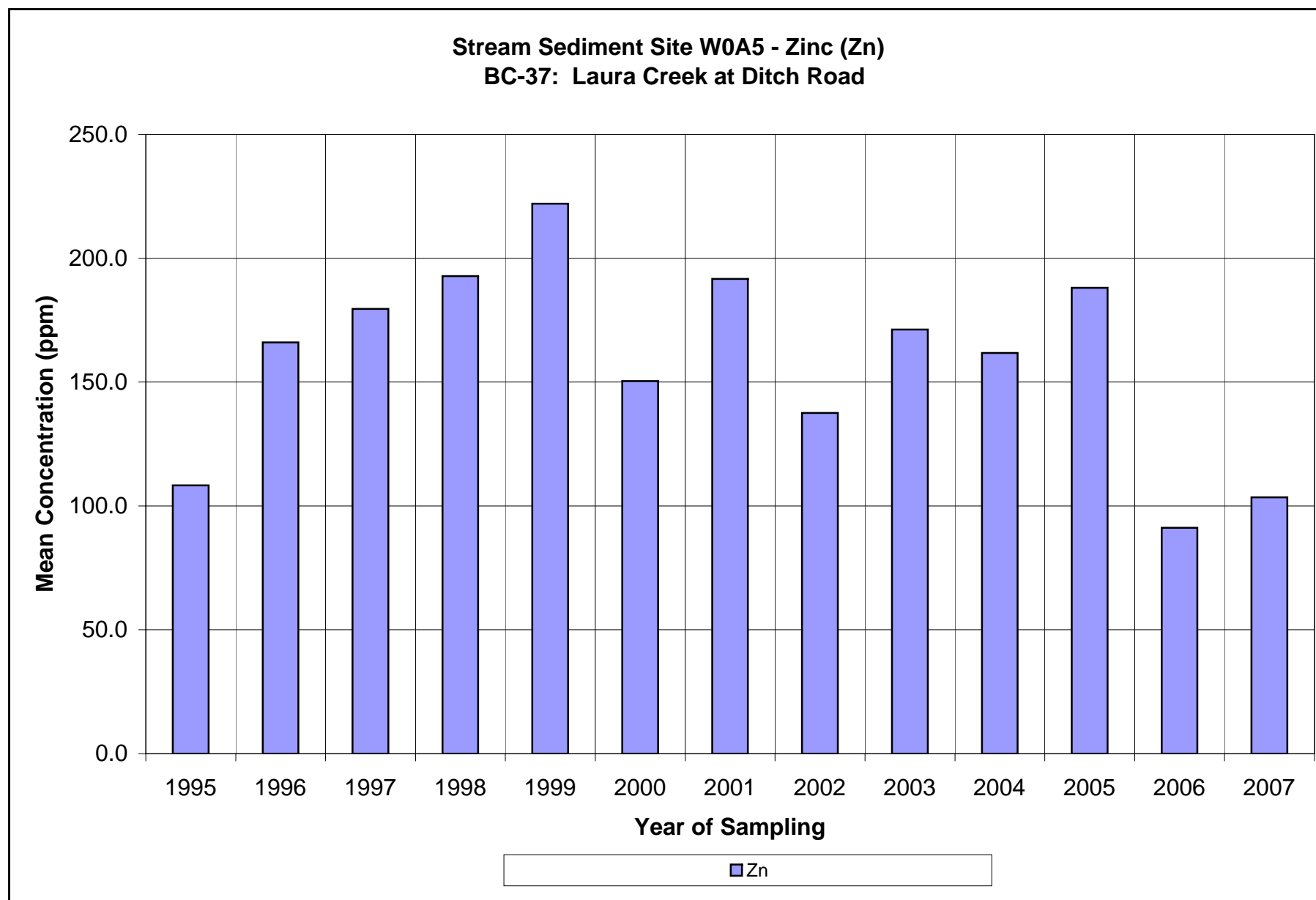




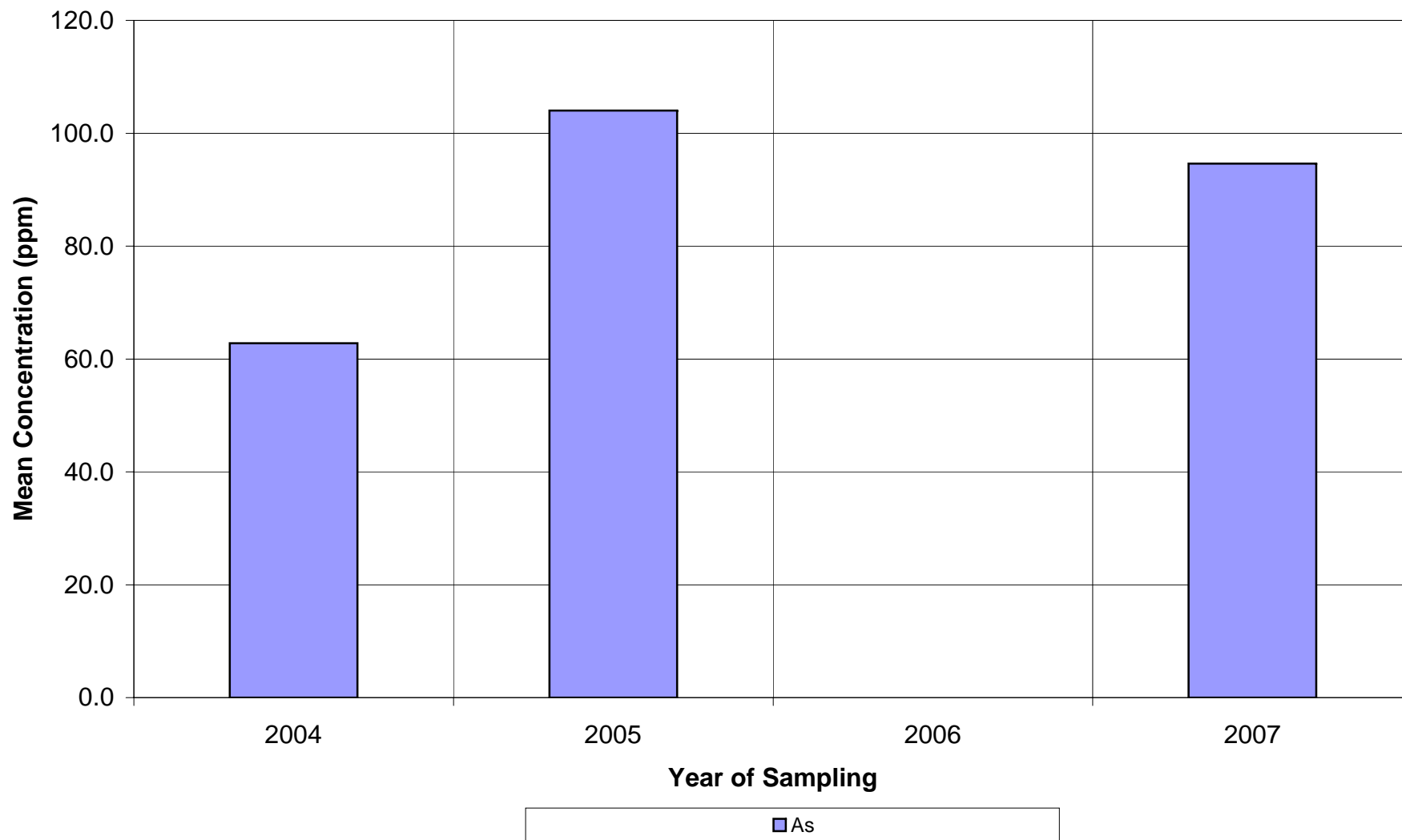


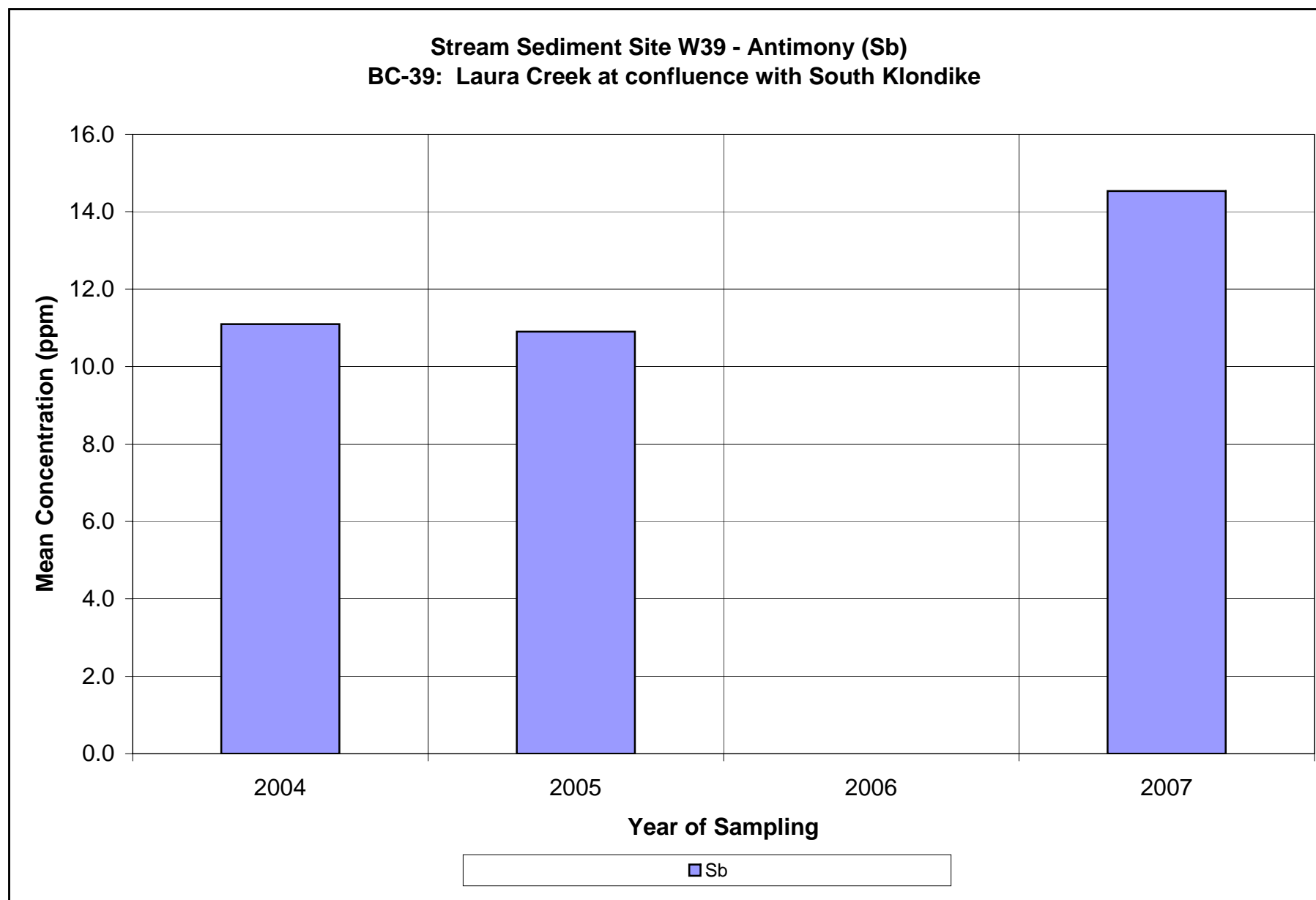




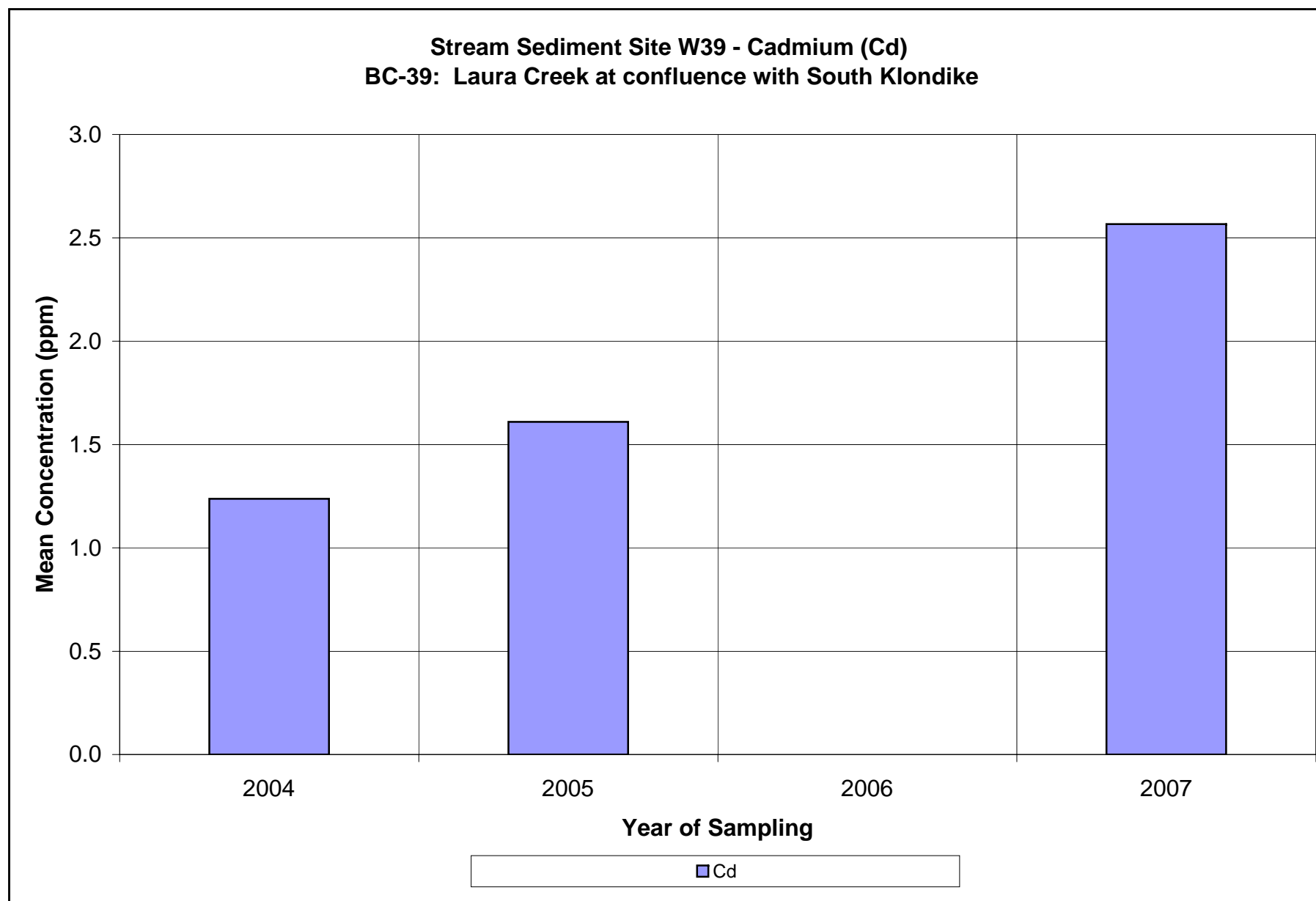


**Stream Sediment Site W39 - Arsenic (As)**  
**BC-39: Laura Creek at confluence with South Klondike**

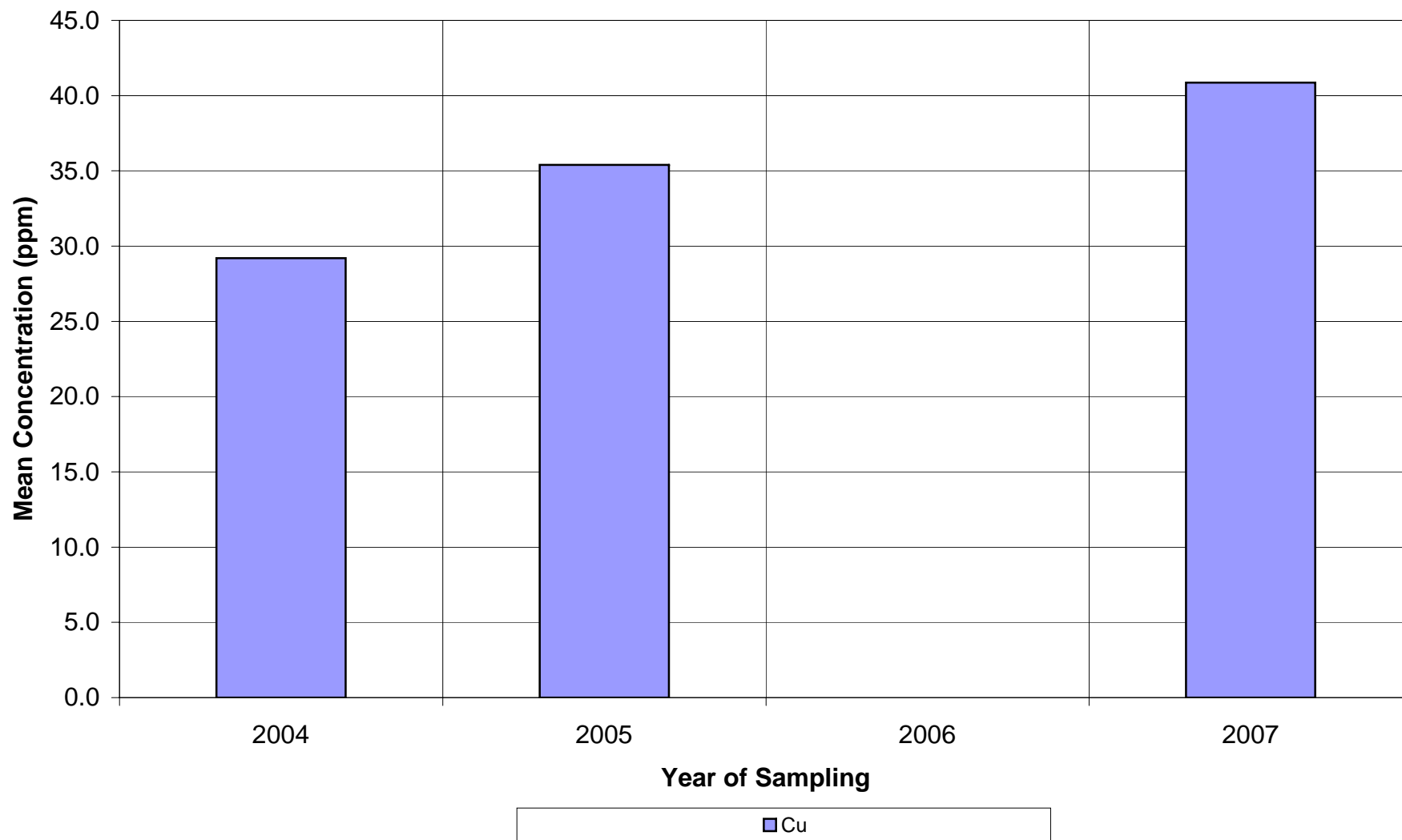


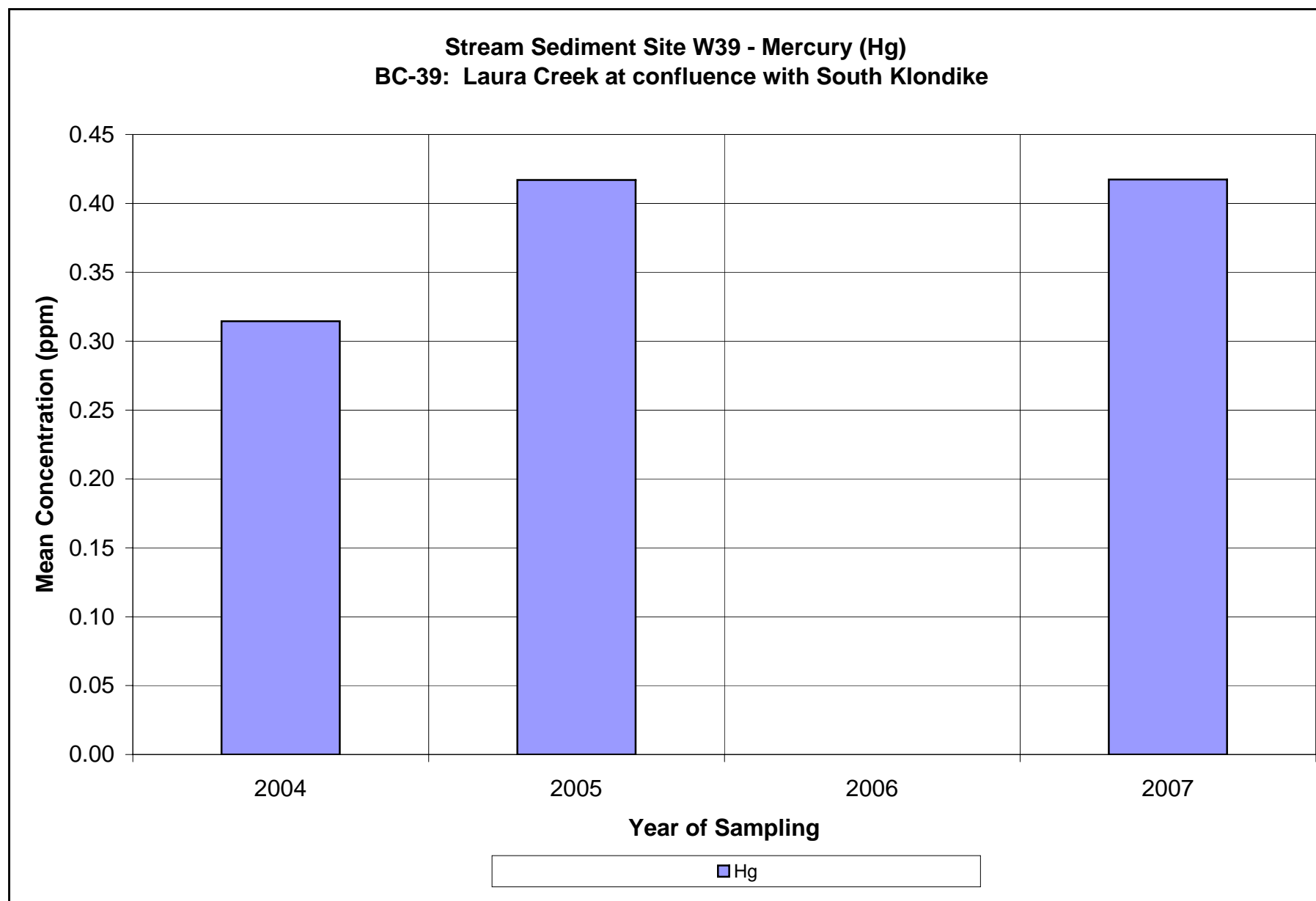


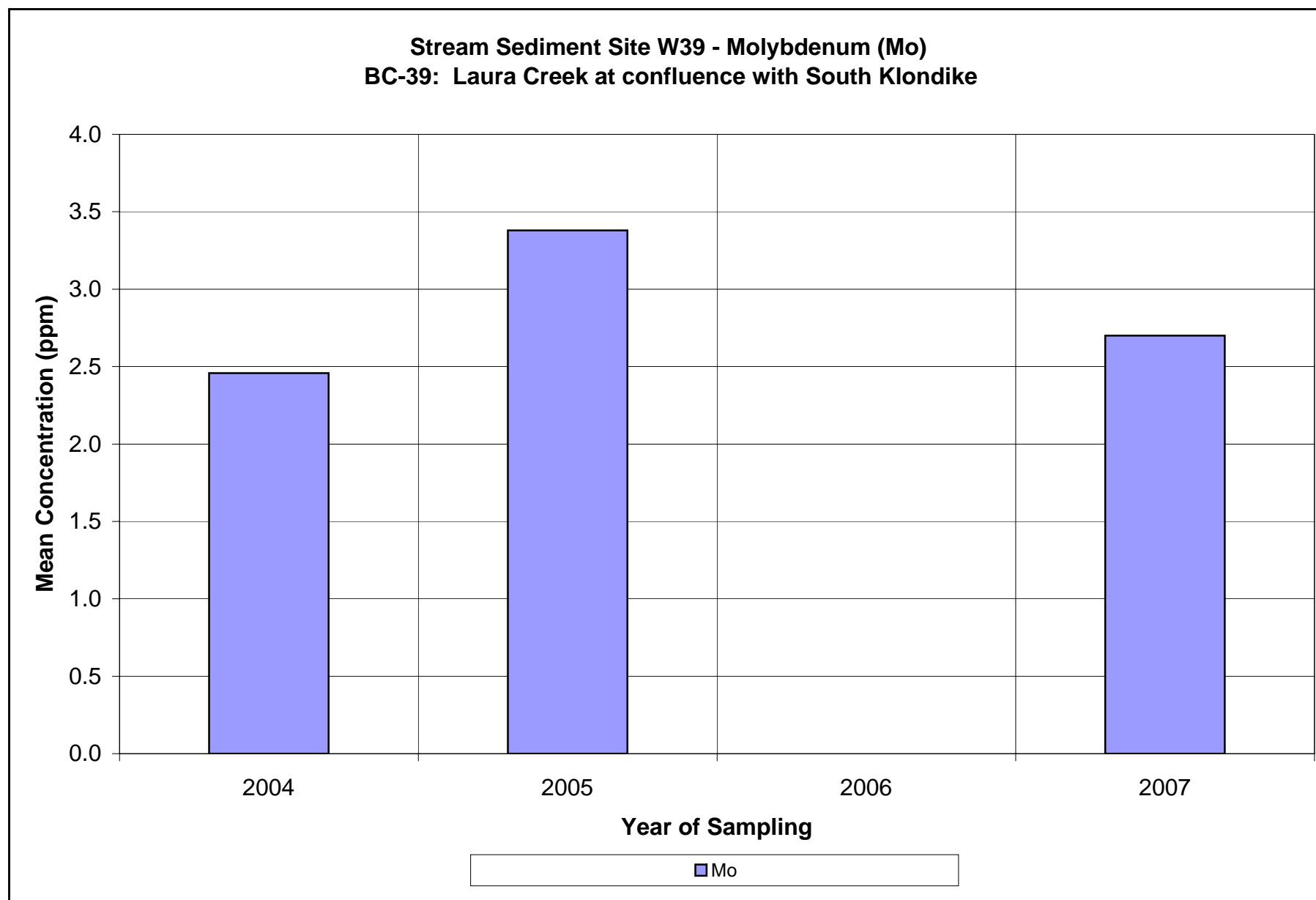


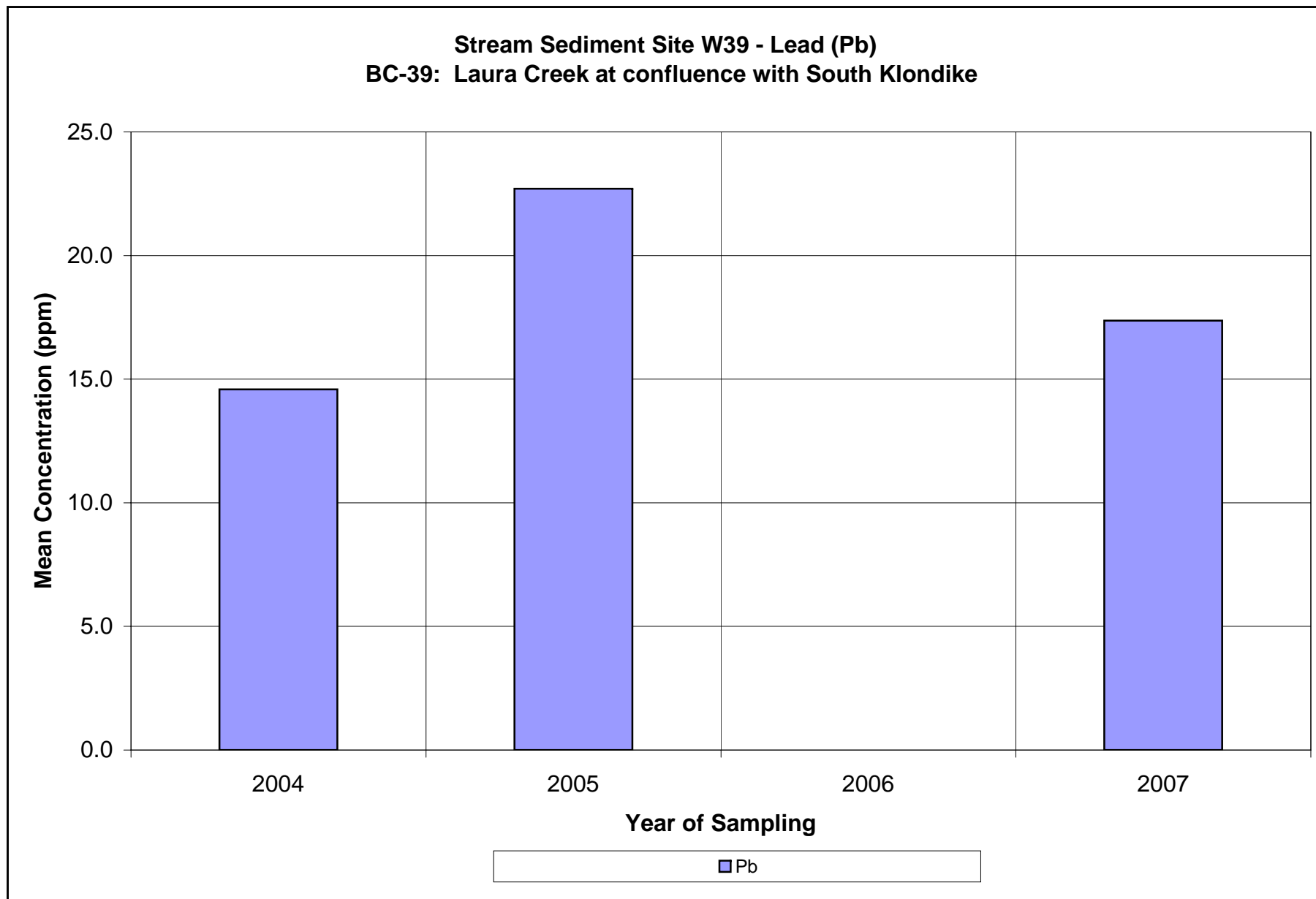


**Stream Sediment Site W39 - Copper (Cu)  
BC-39: Laura Creek at confluence with South Klondike**

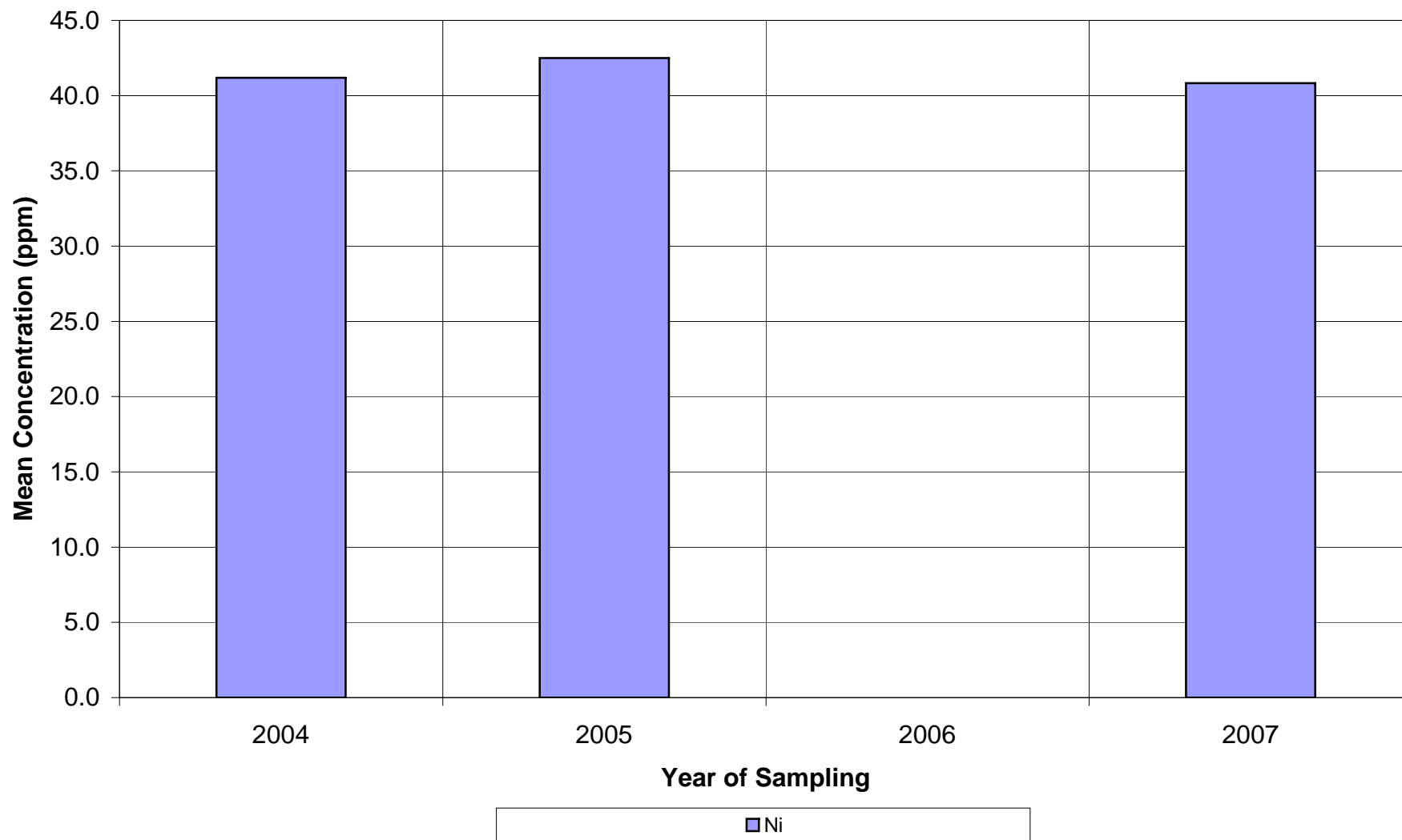


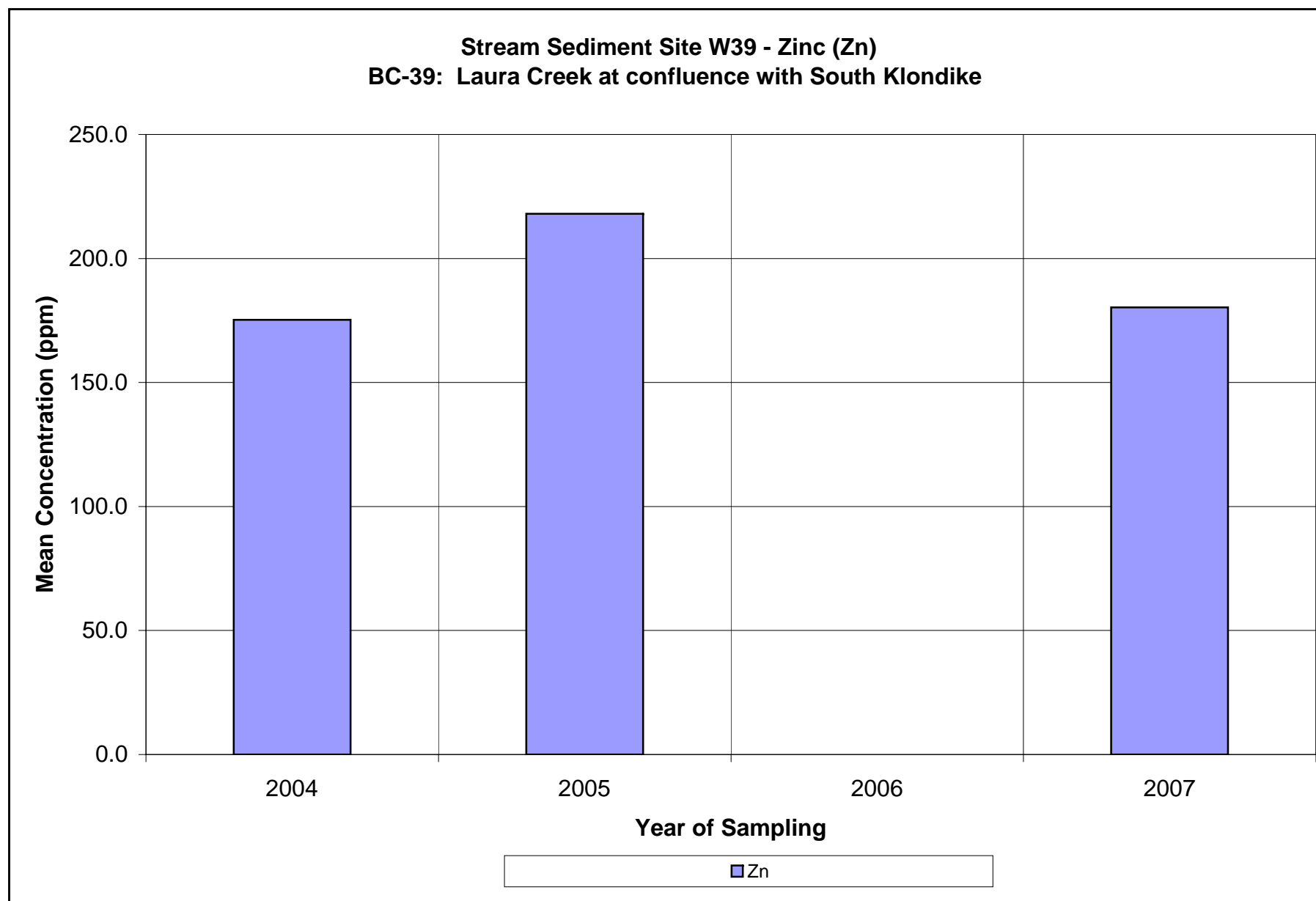




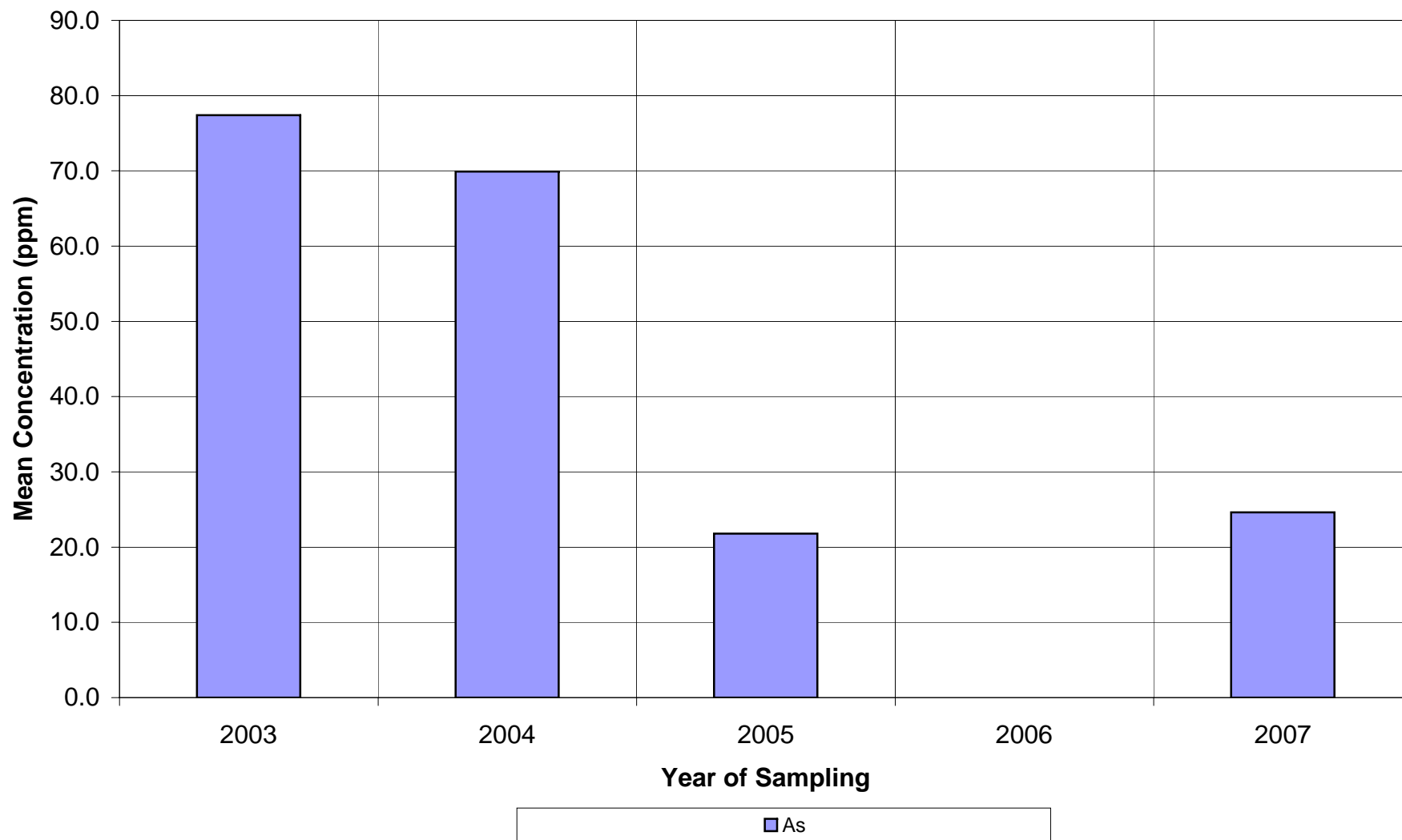


**Stream Sediment Site W39 - Nickel (Ni)  
BC-39: Laura Creek at confluence with South Klondike**



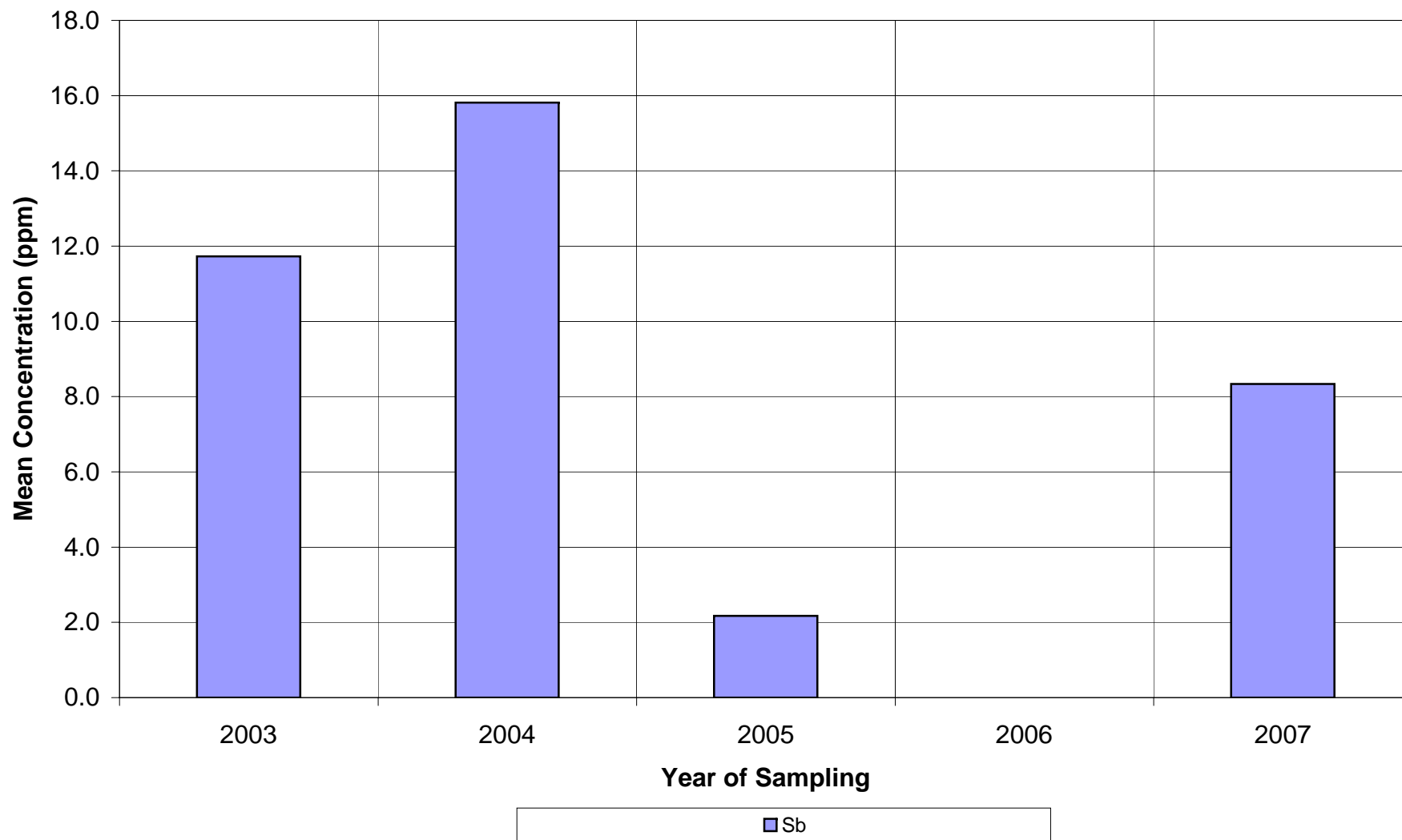


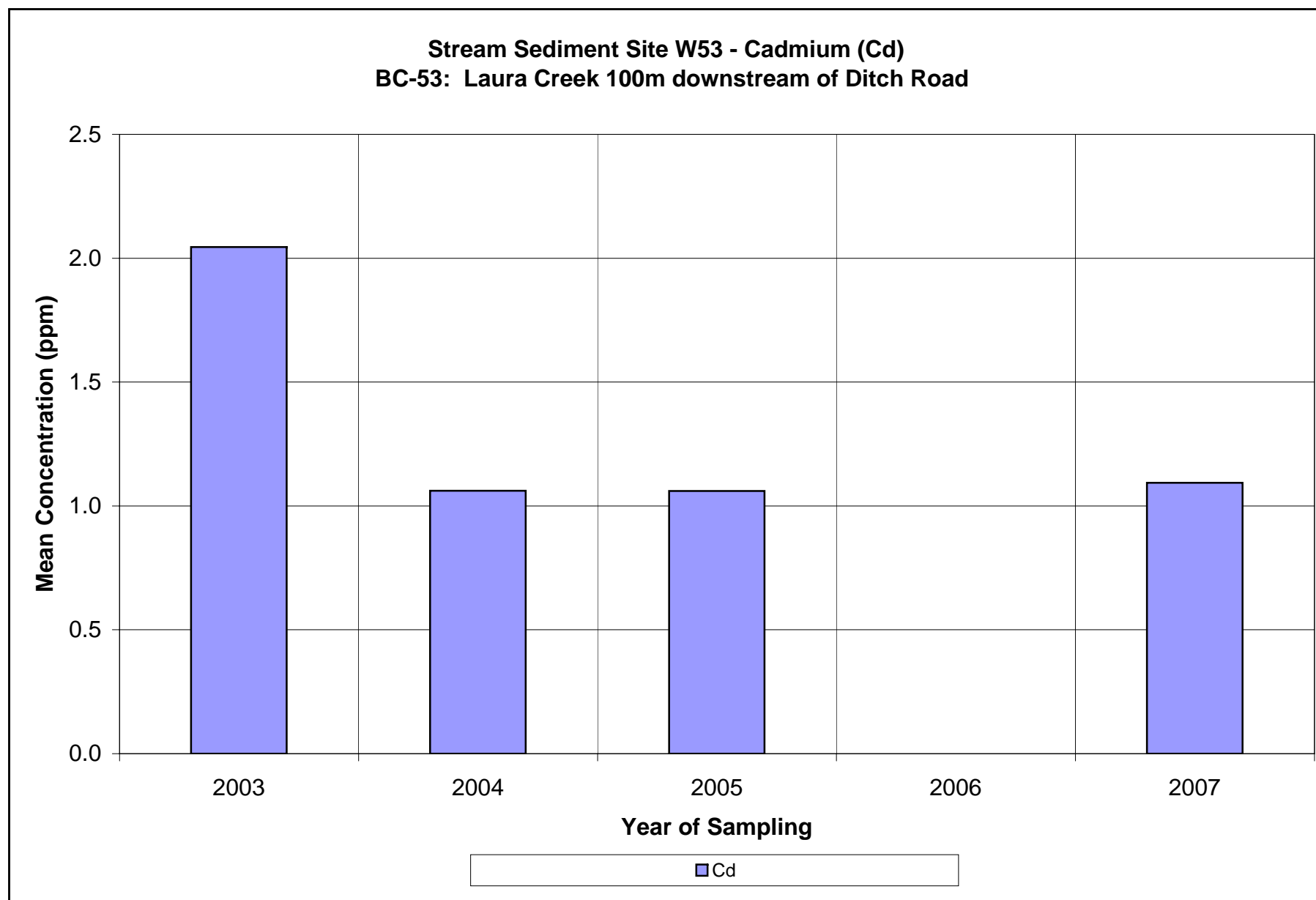
**Stream Sediment Site W53 - Arsenic (As)**  
**BC-53: Laura Creek 100m downstream of Ditch Road**



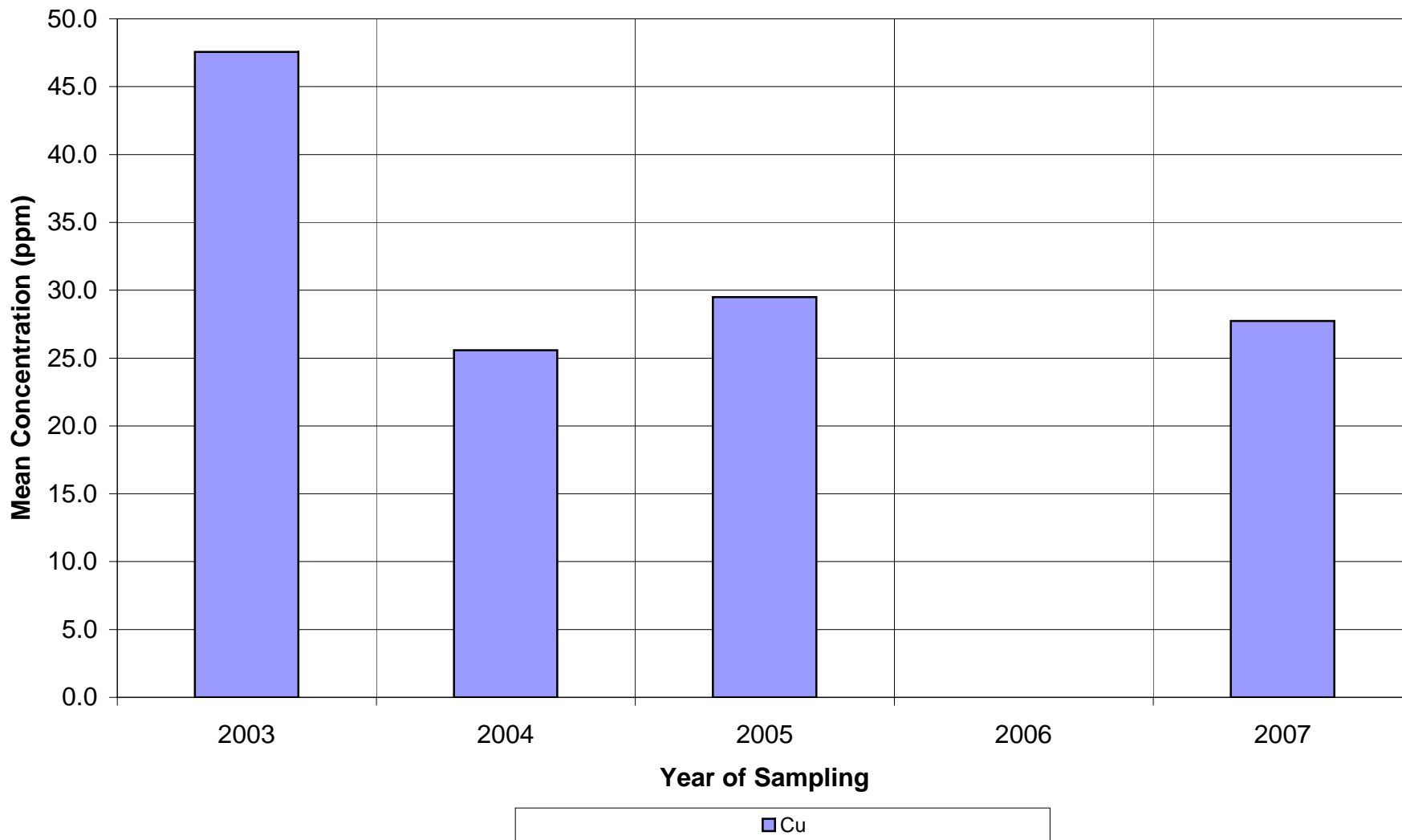


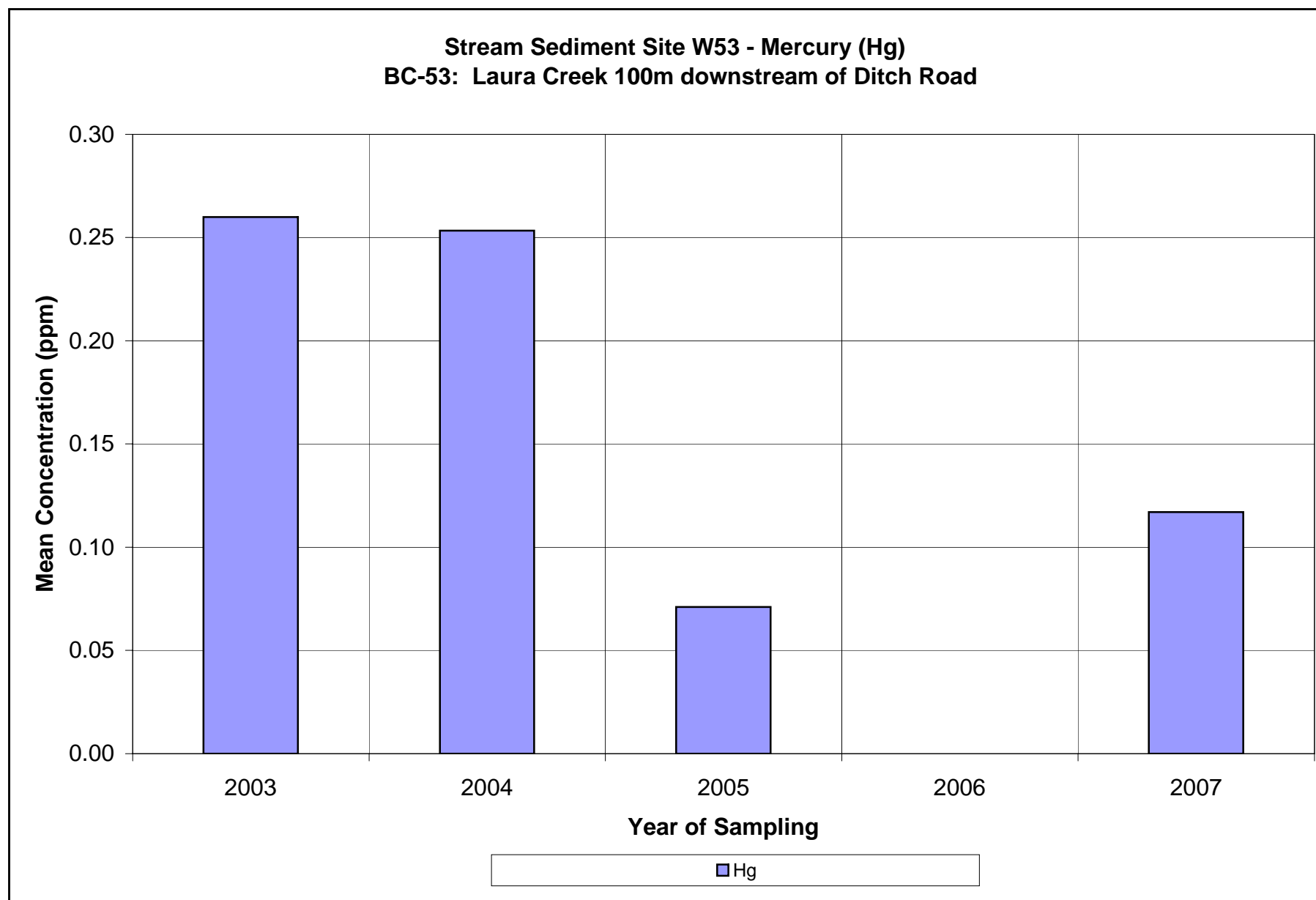
**Stream Sediment Site W53 - Antimony (Sb)  
BC-53: Laura Creek 100m downstream of Ditch Road**

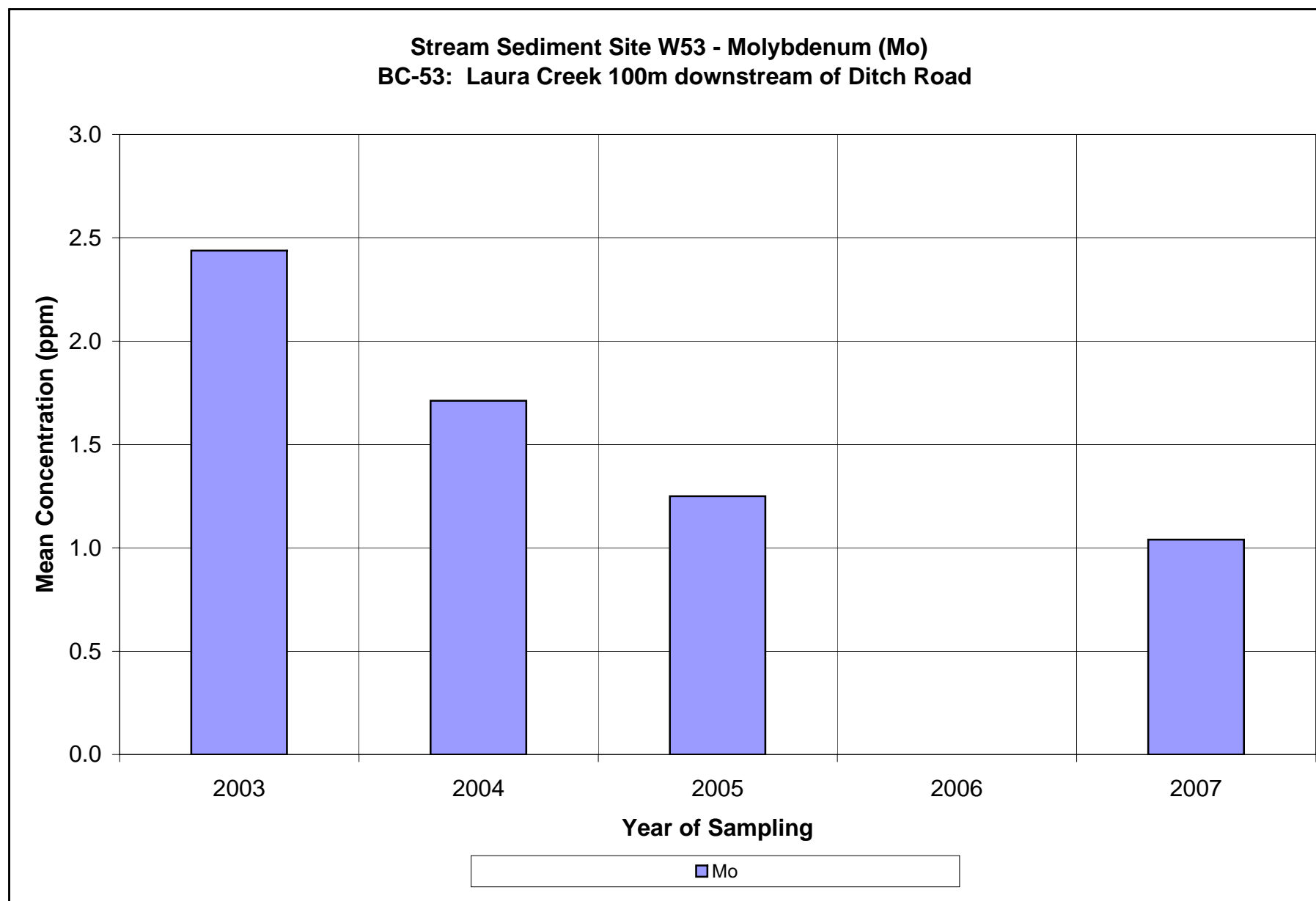




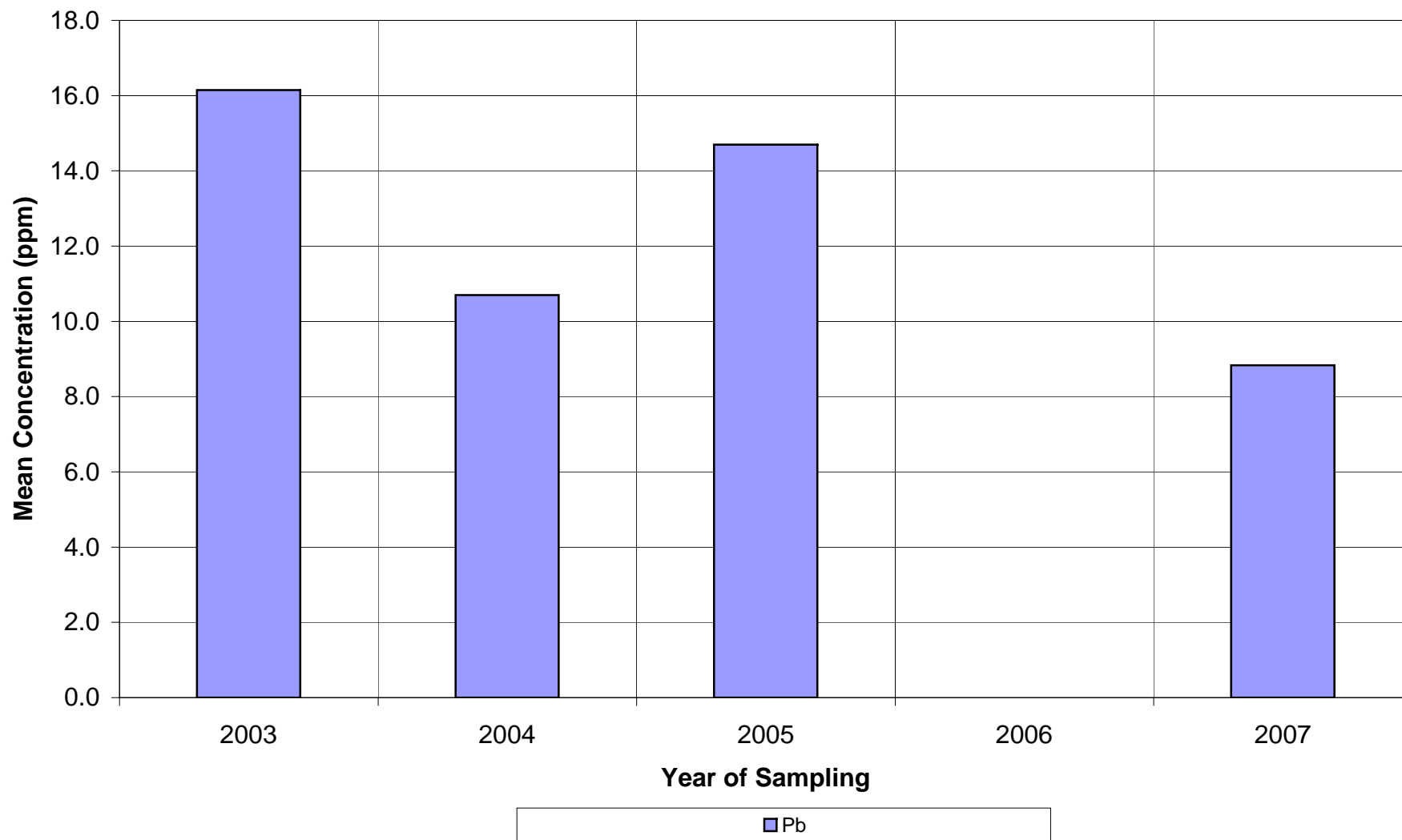
**Stream Sediment Site W53 - Copper (Cu)**  
**BC-53: Laura Creek 100m downstream of Ditch Road**

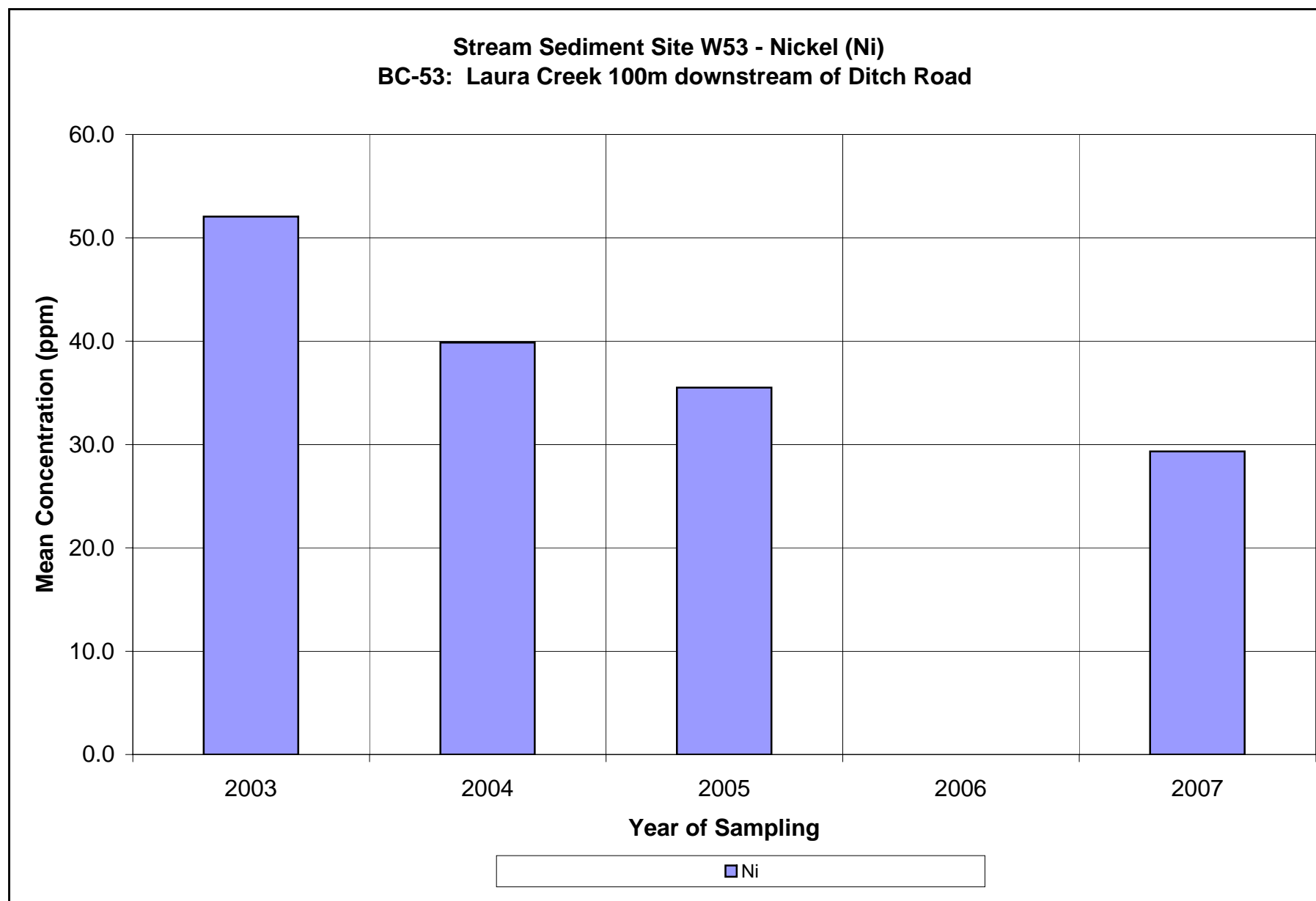


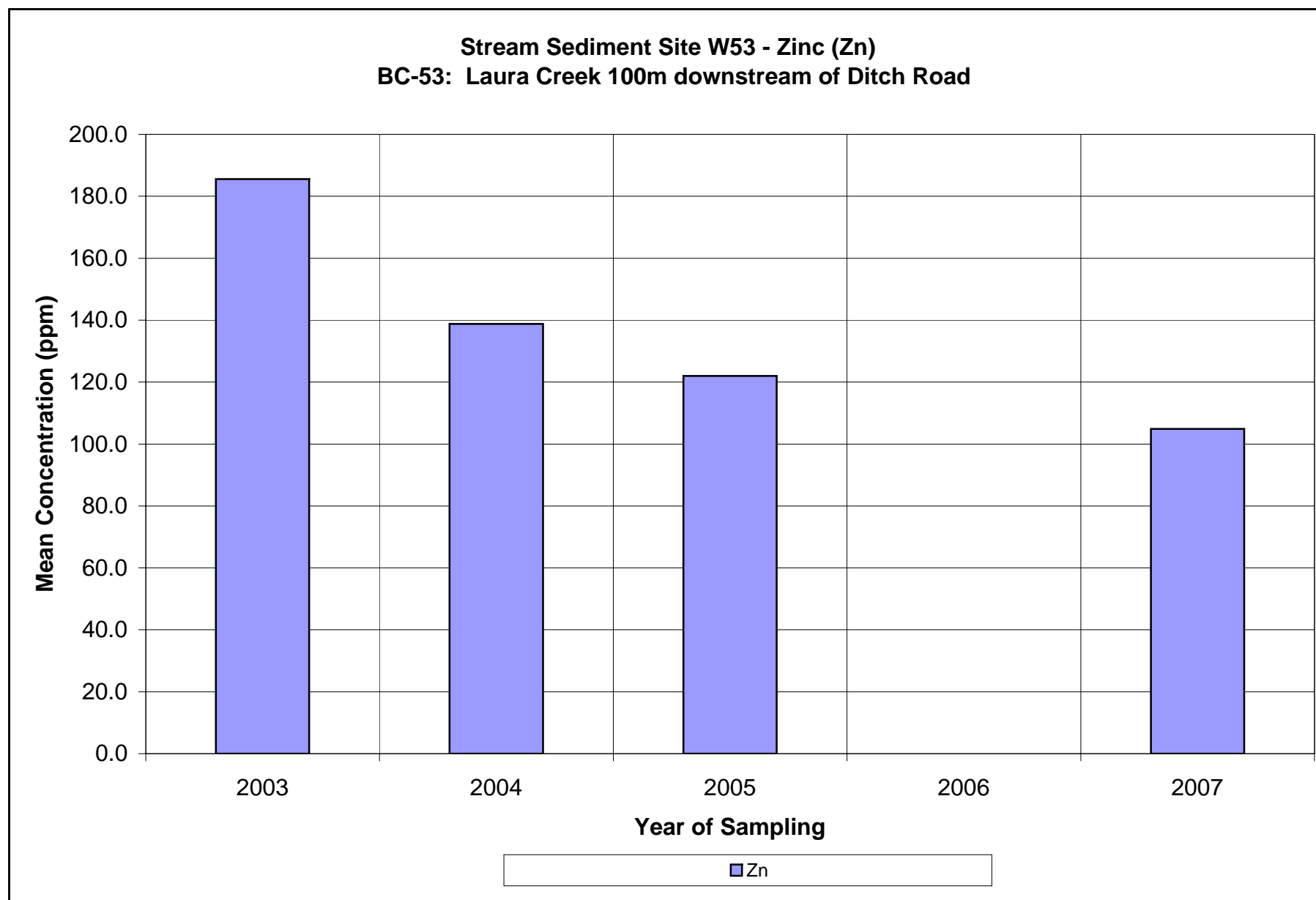




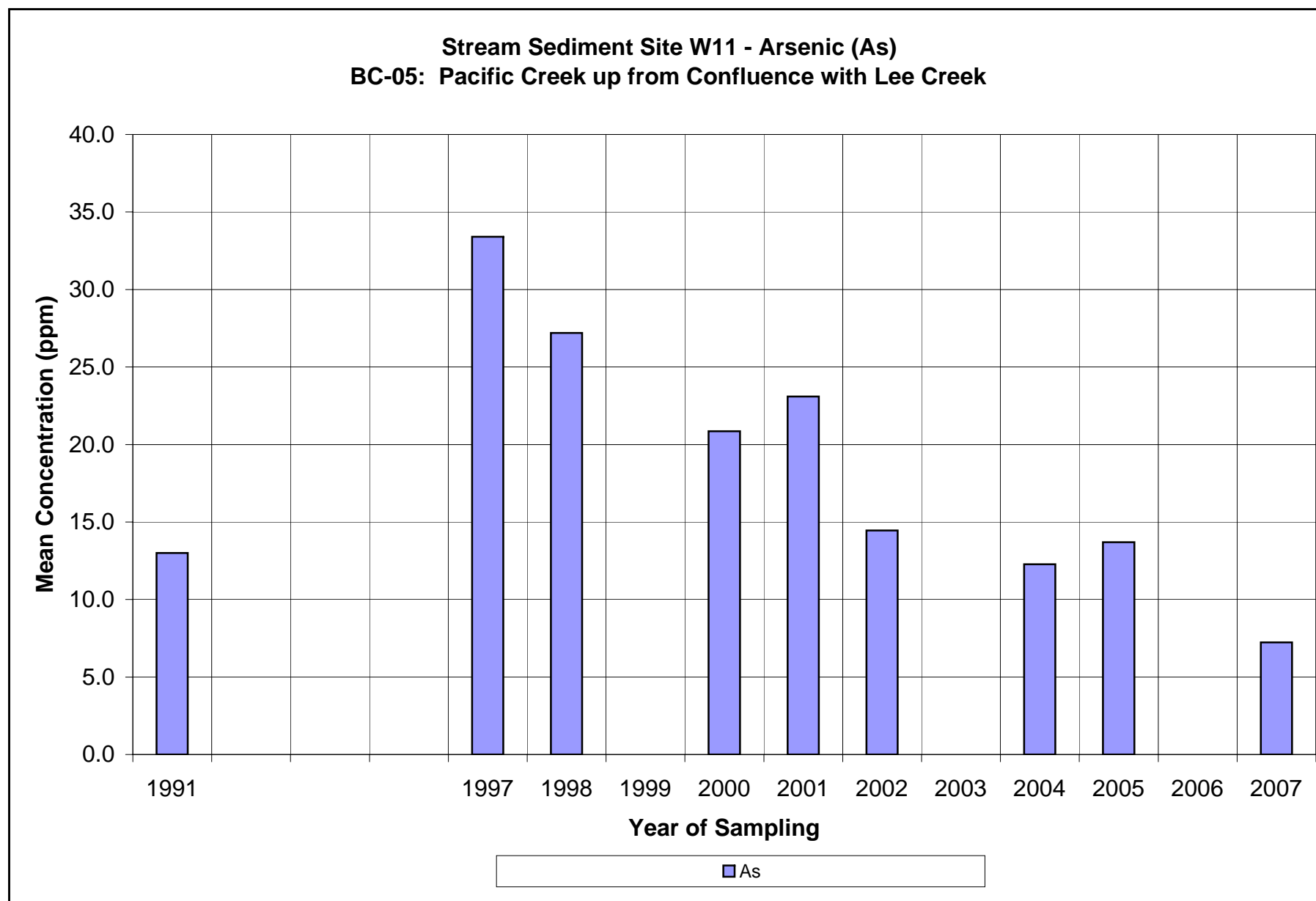
**Stream Sediment Site W53 - Lead (Pb)**  
**BC-53: Laura Creek 100m downstream of Ditch Road**

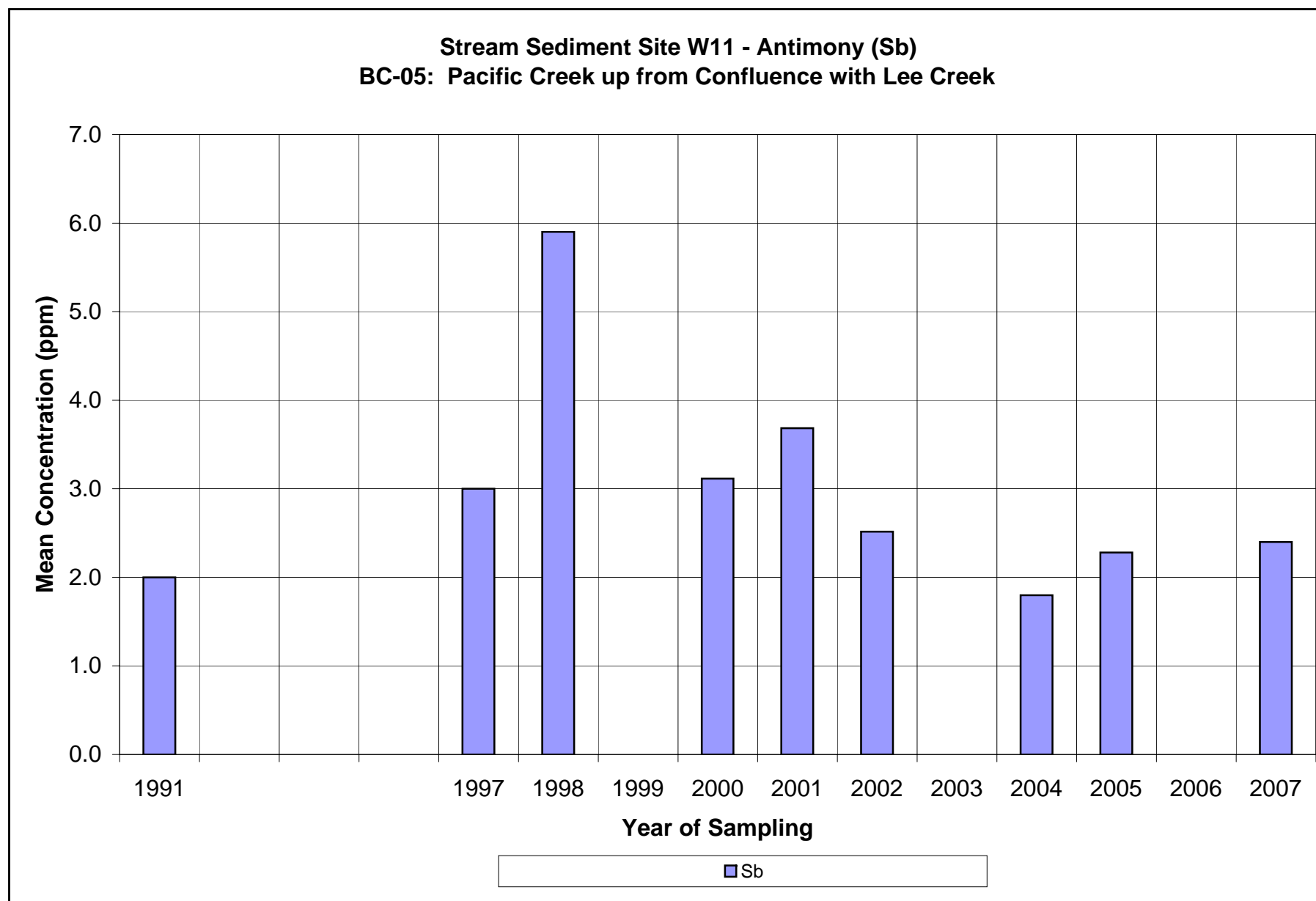


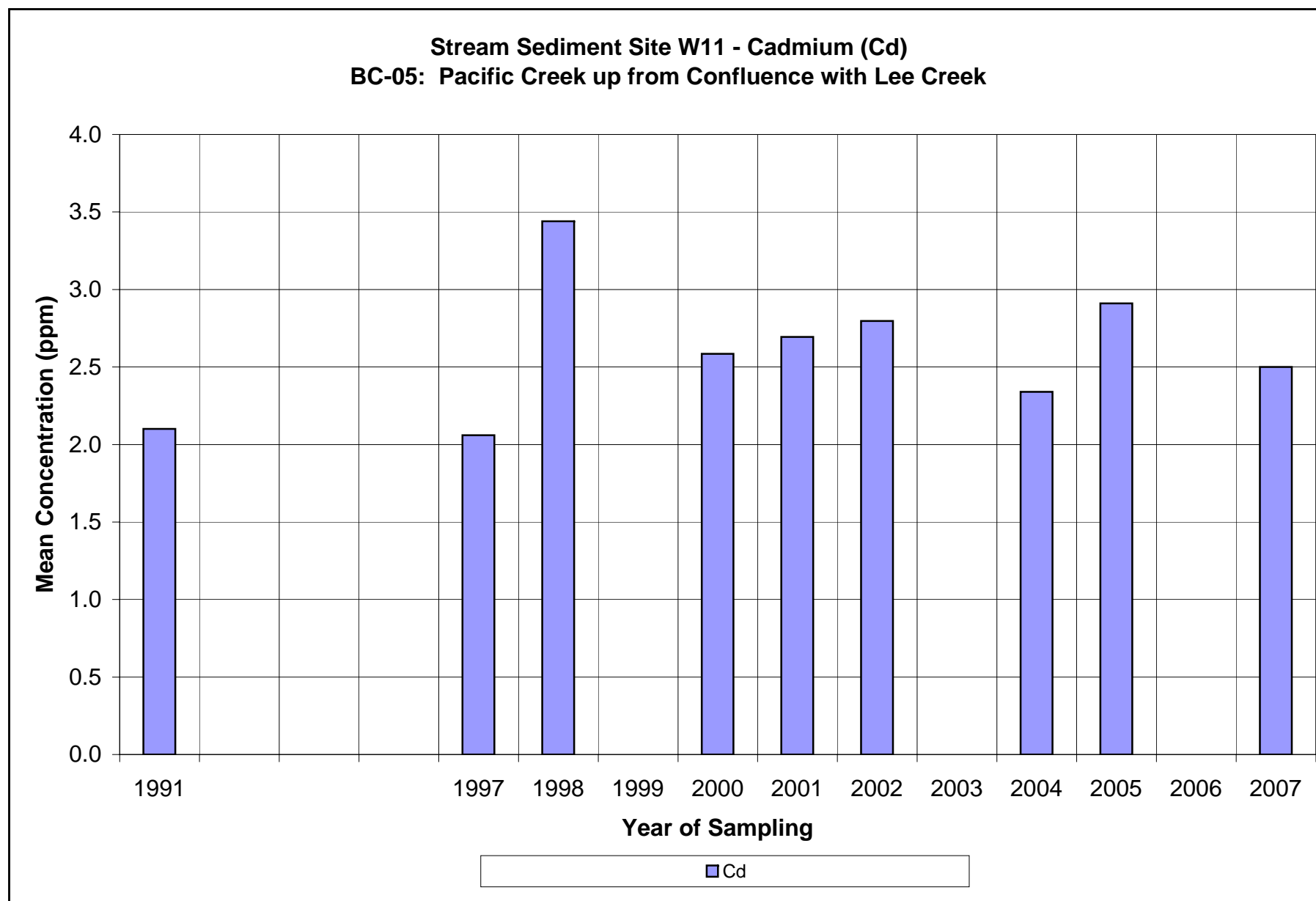


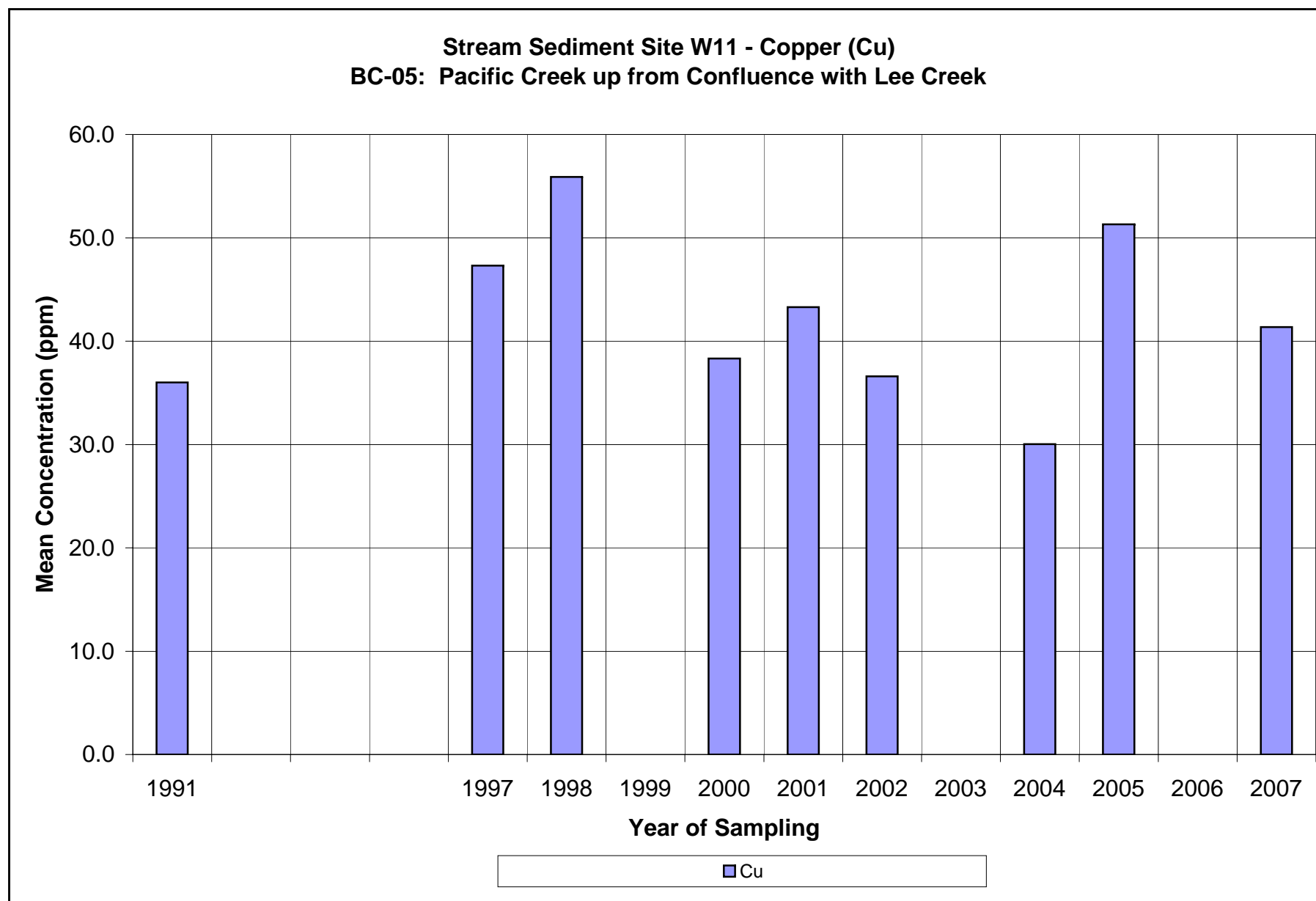


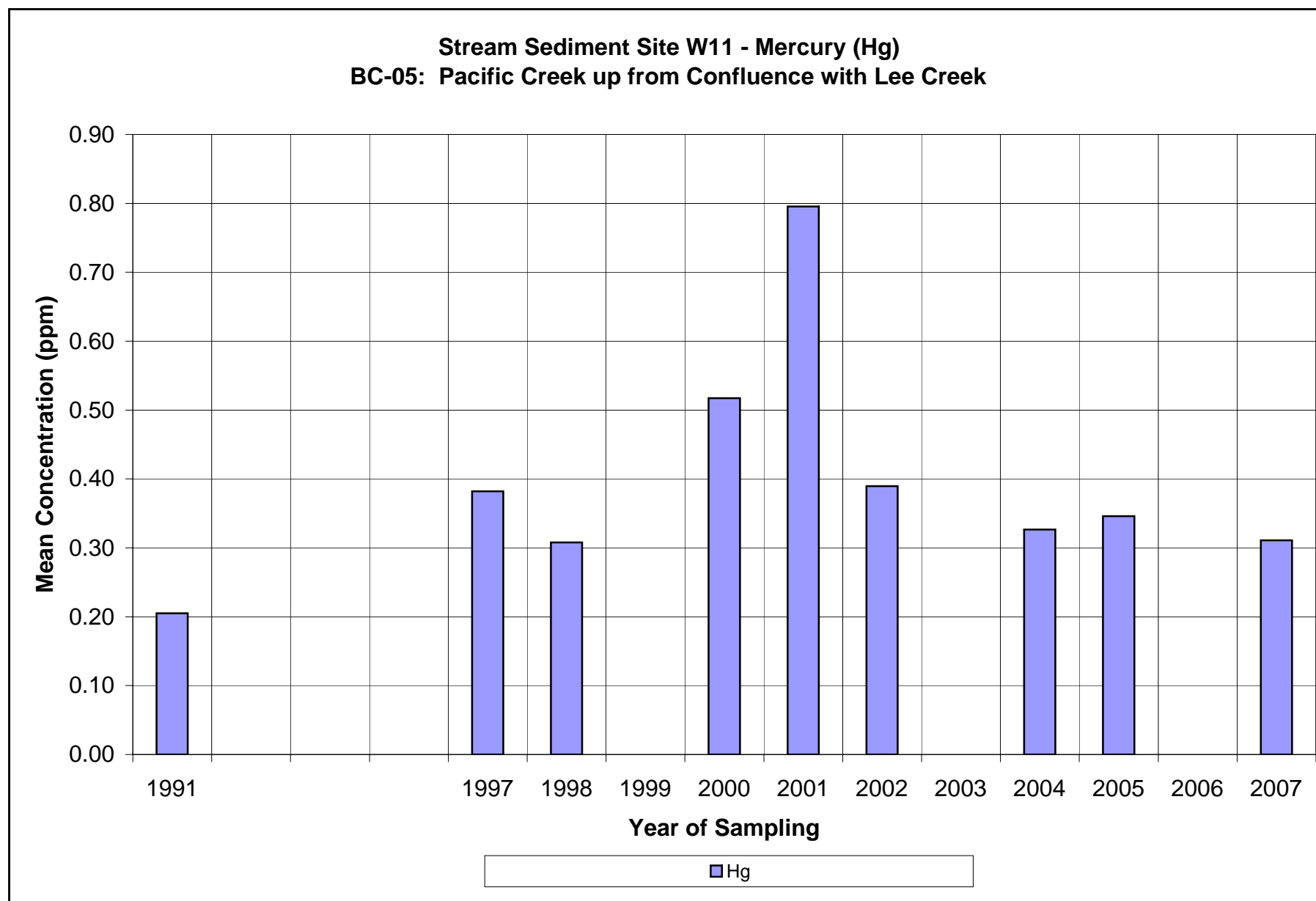


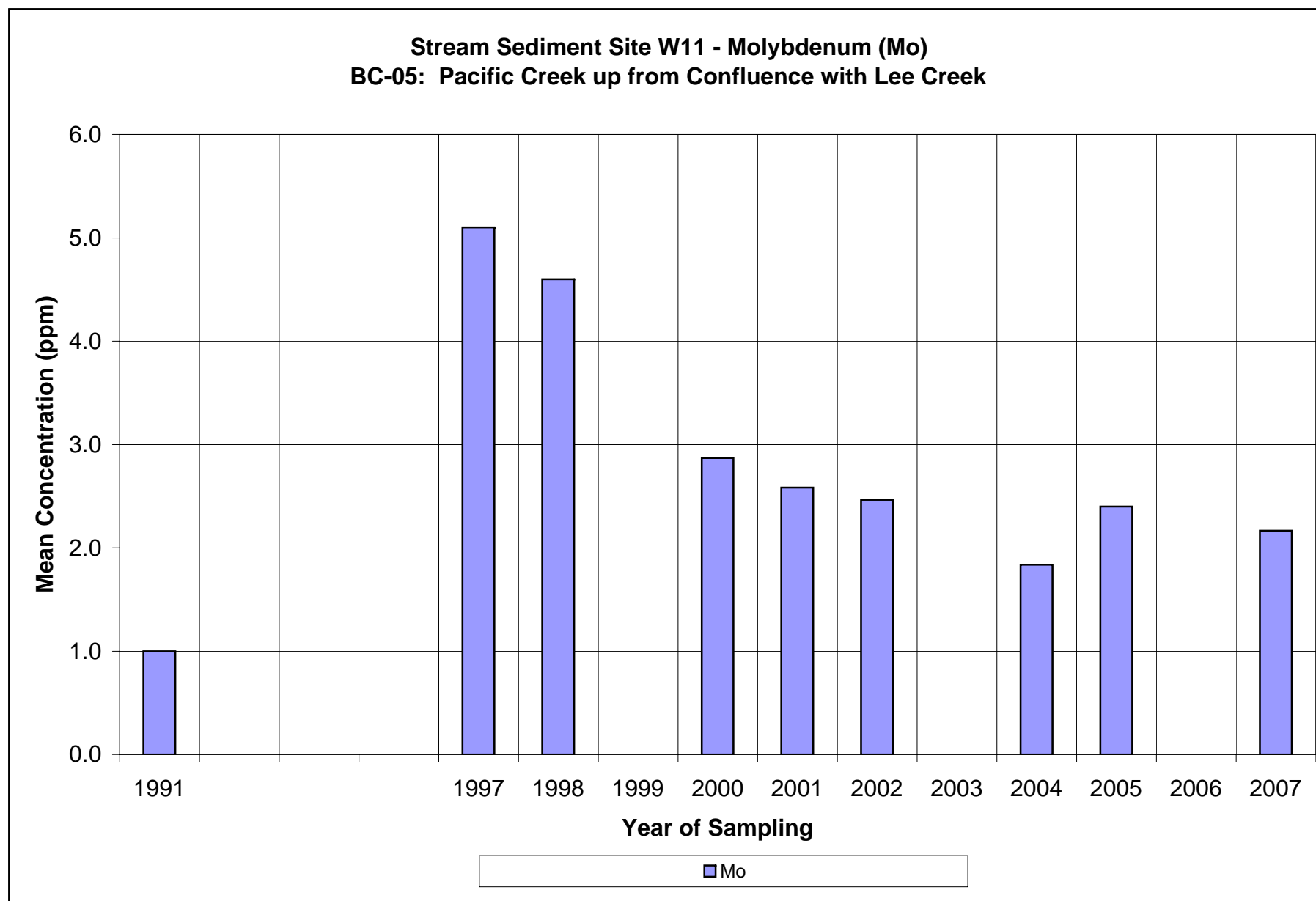


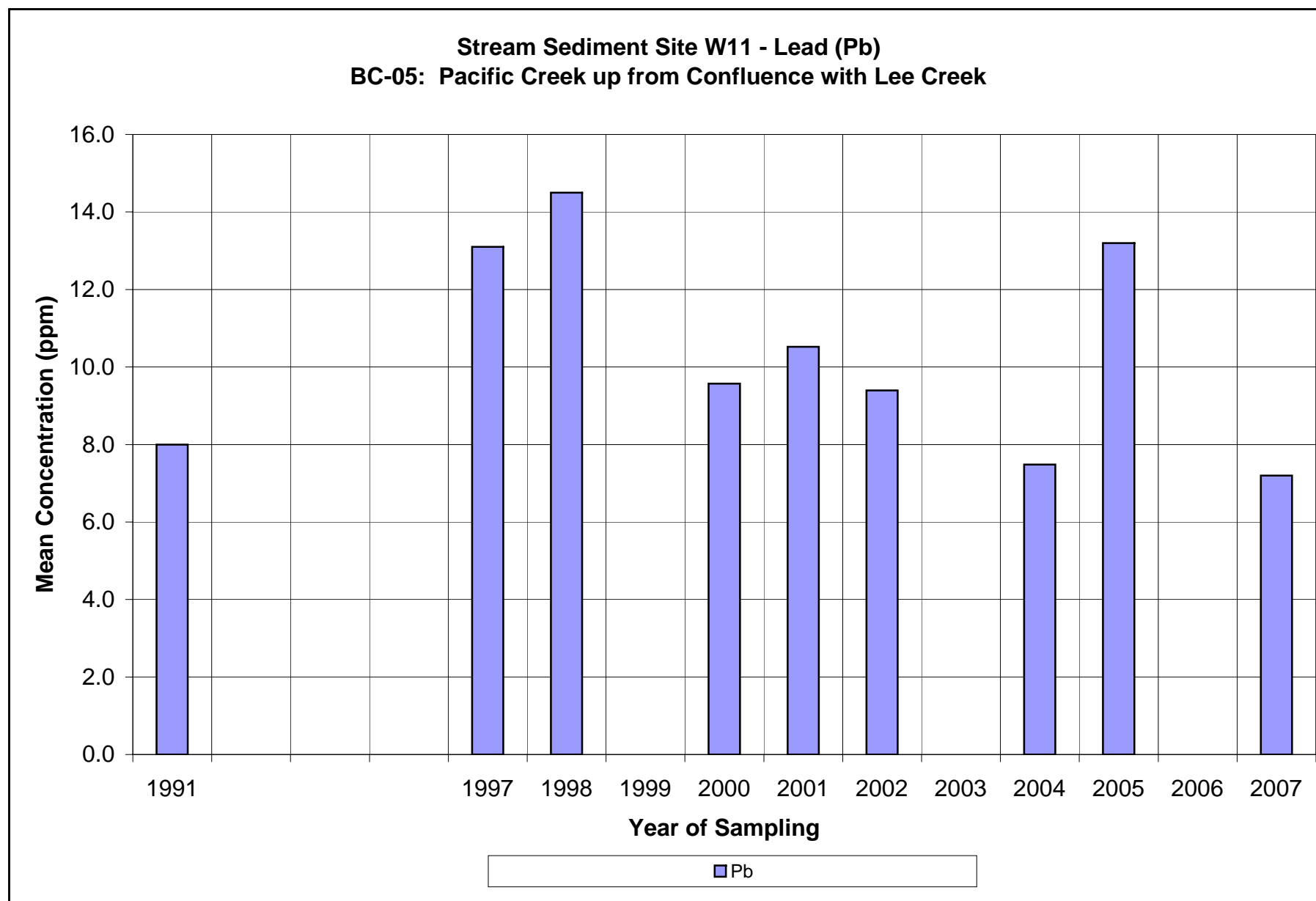


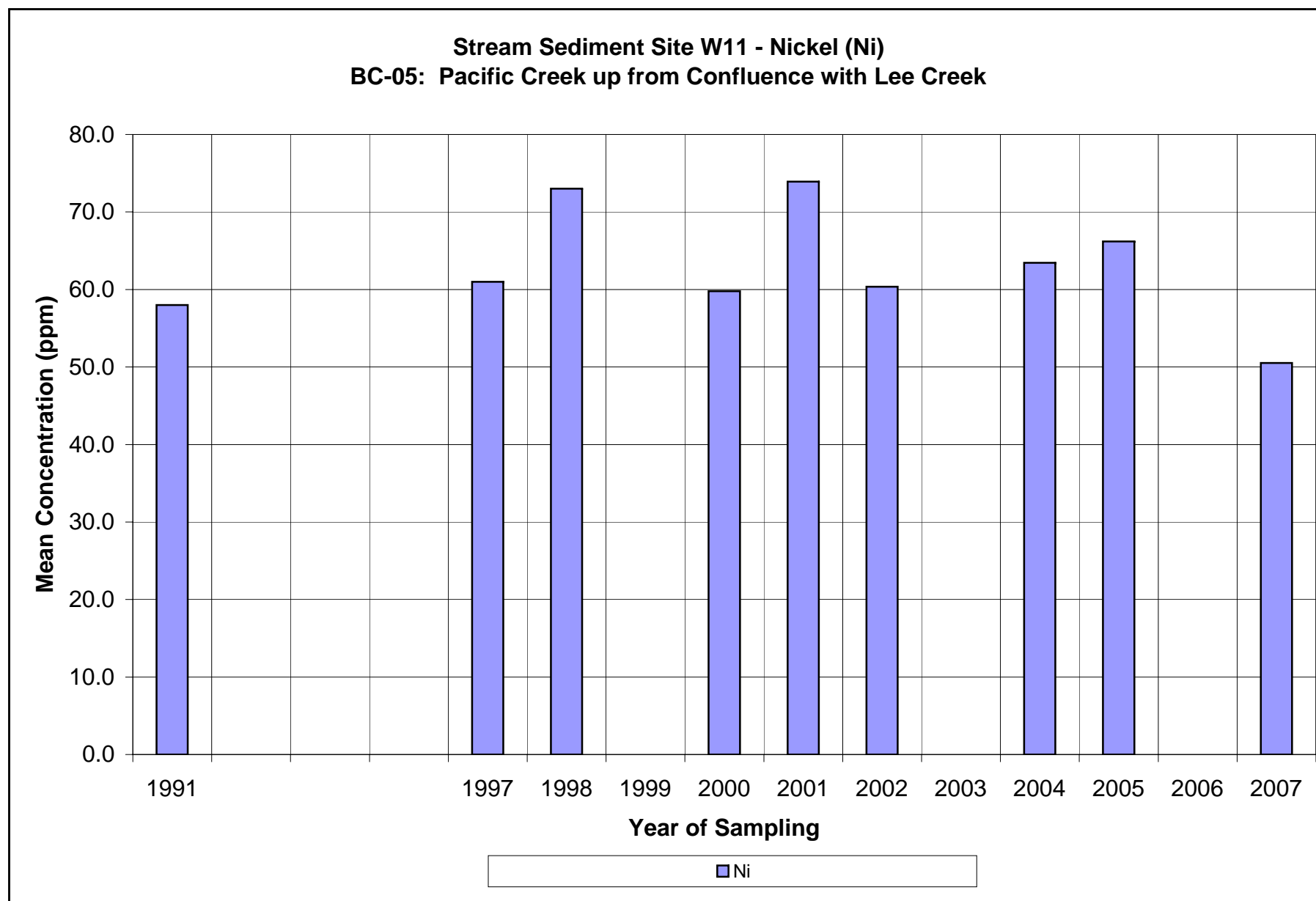




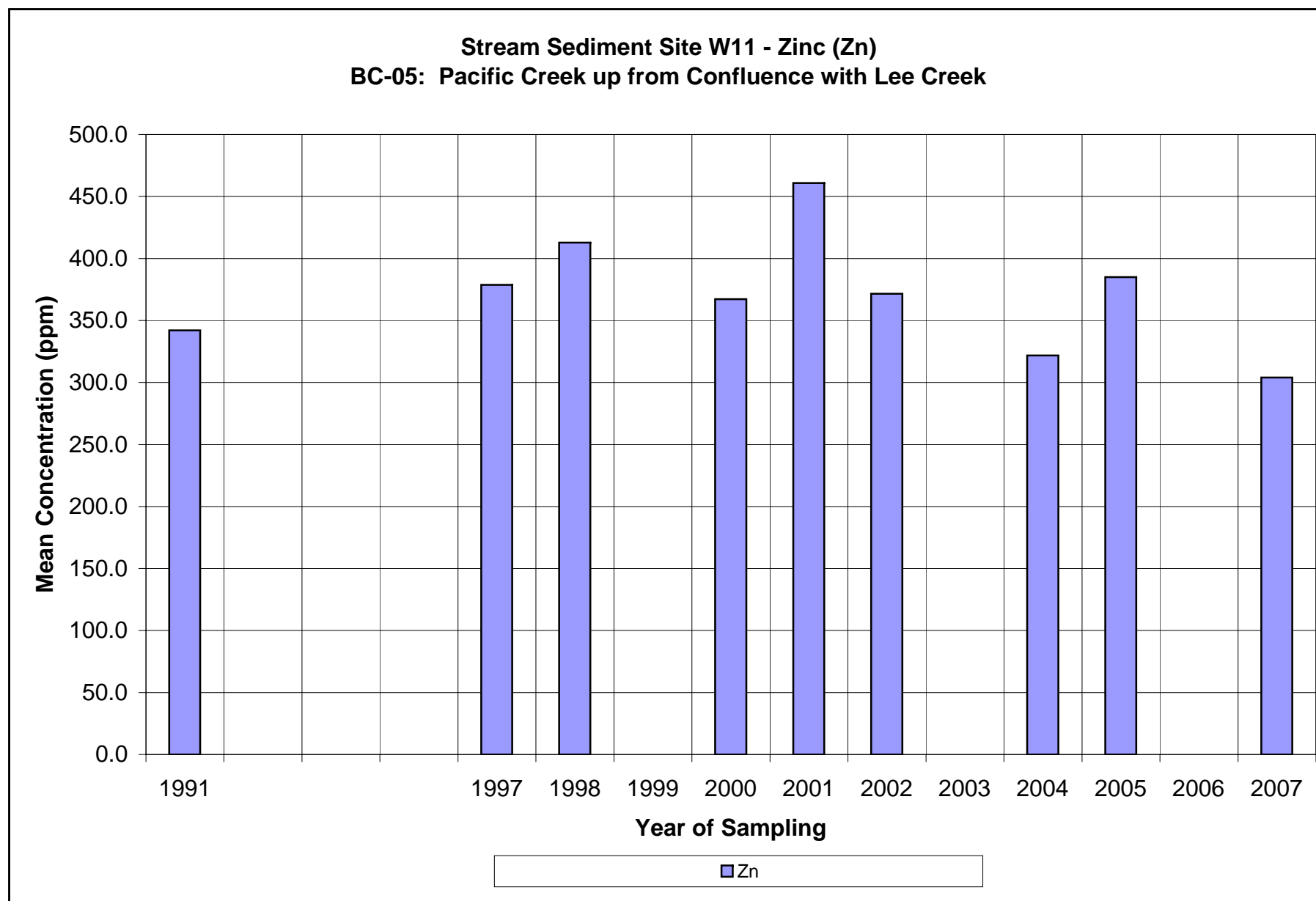


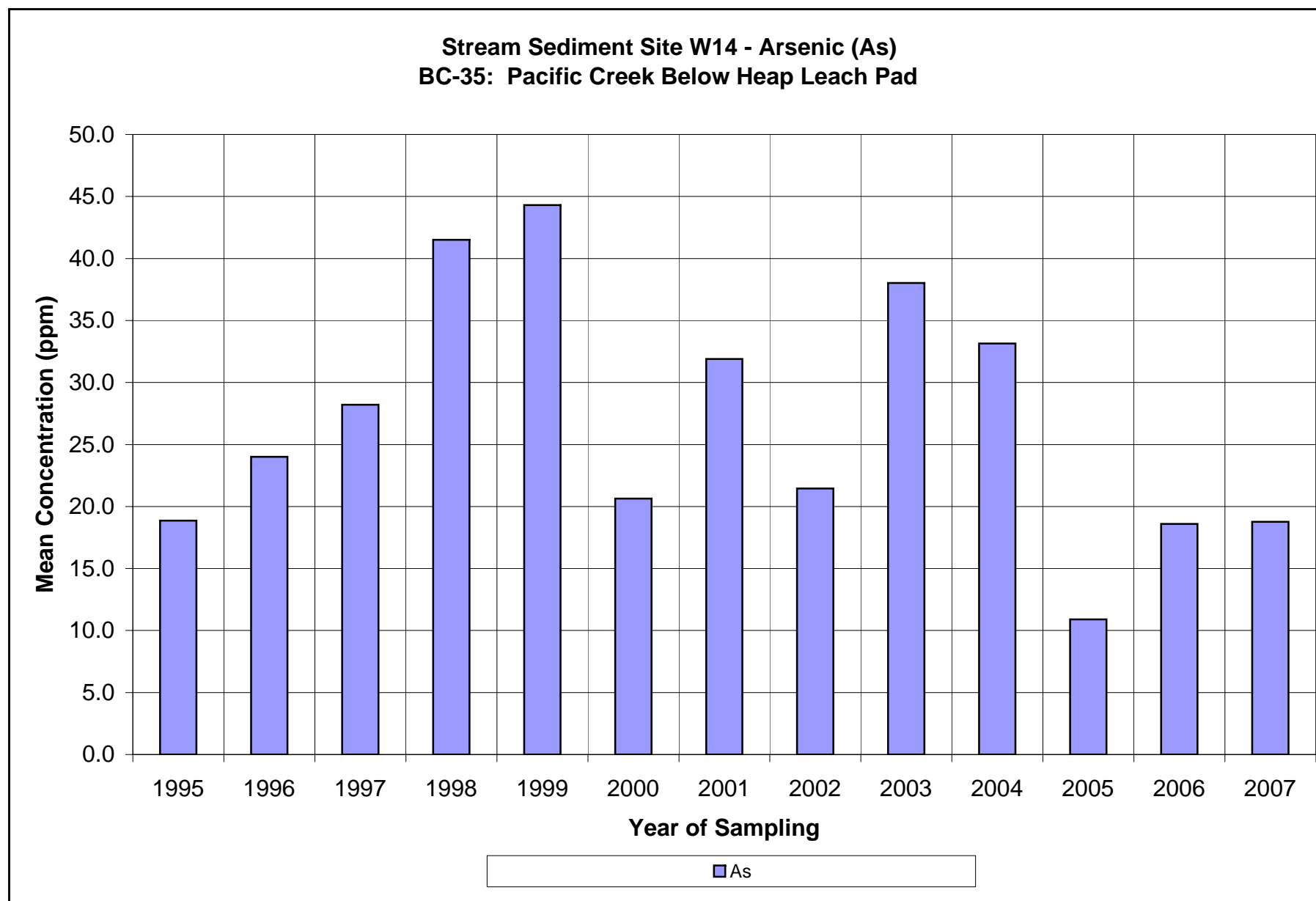


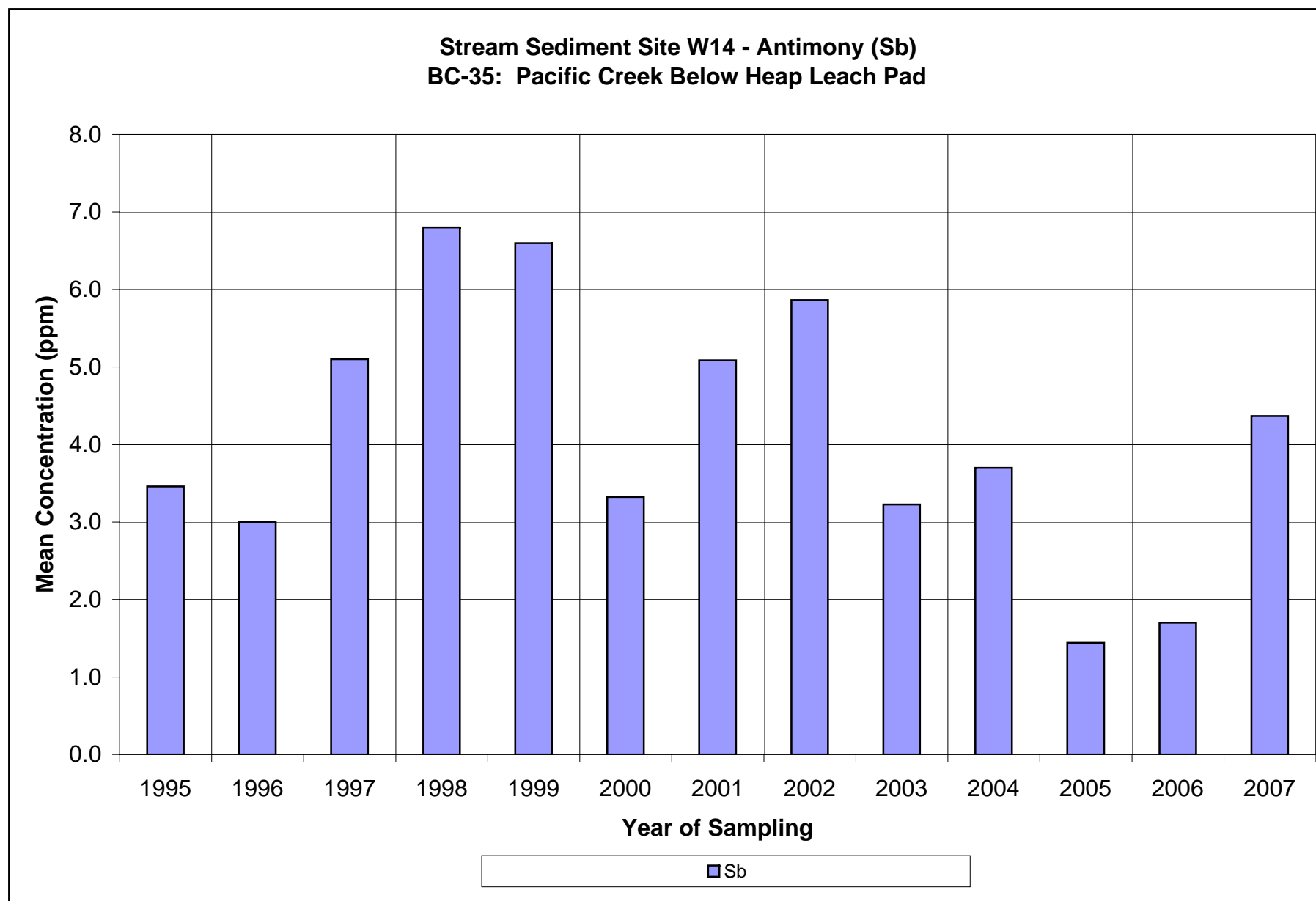


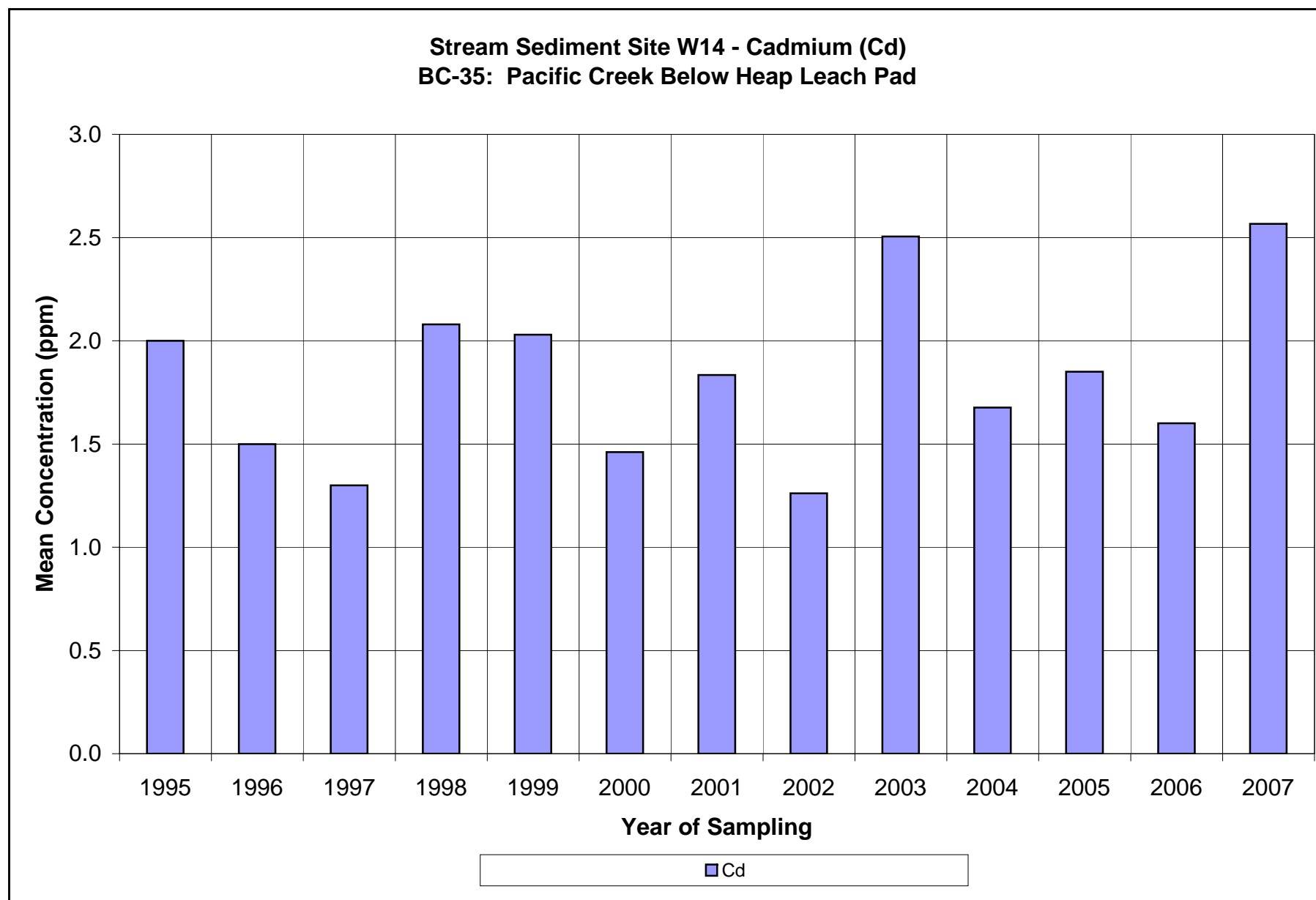


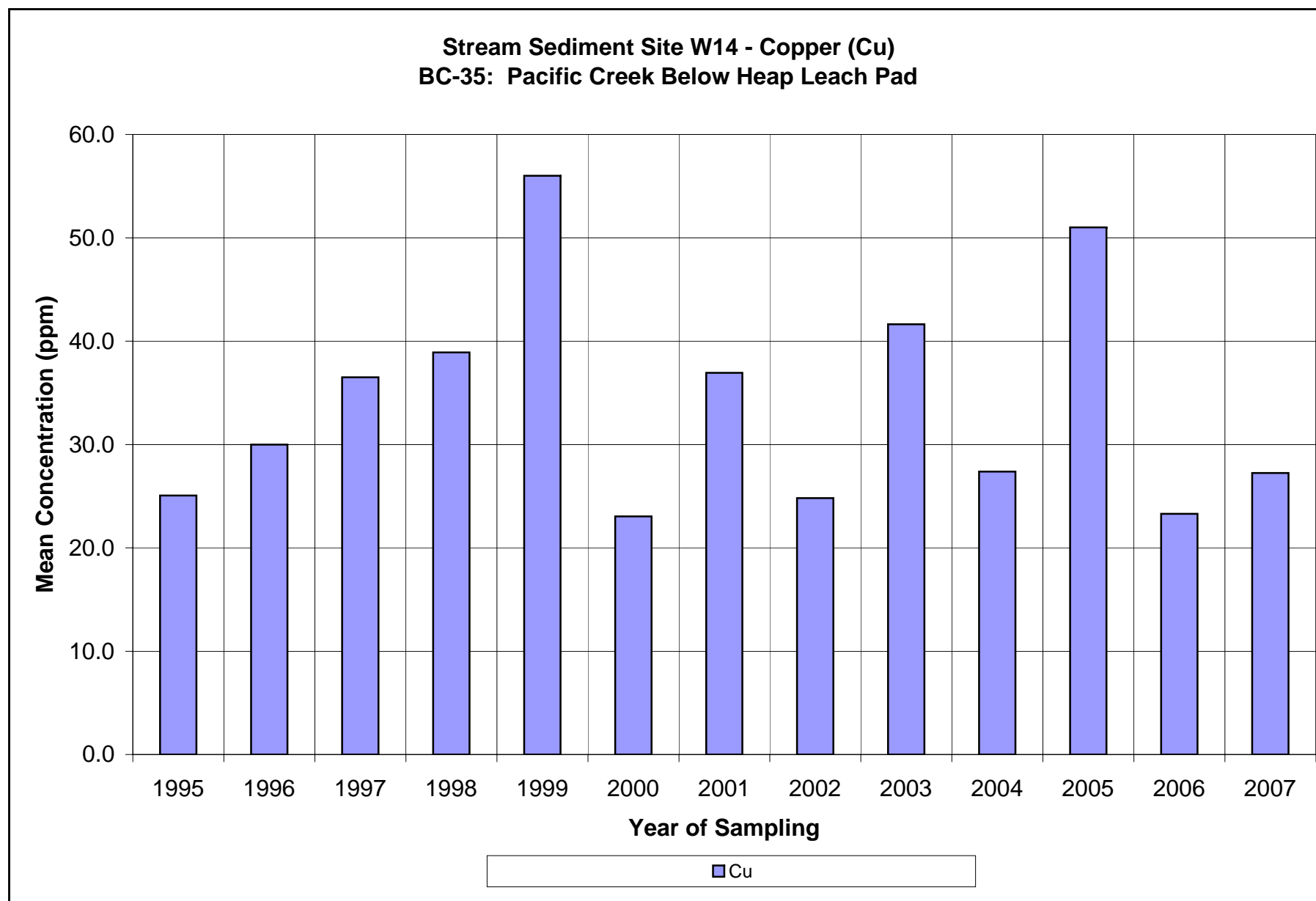


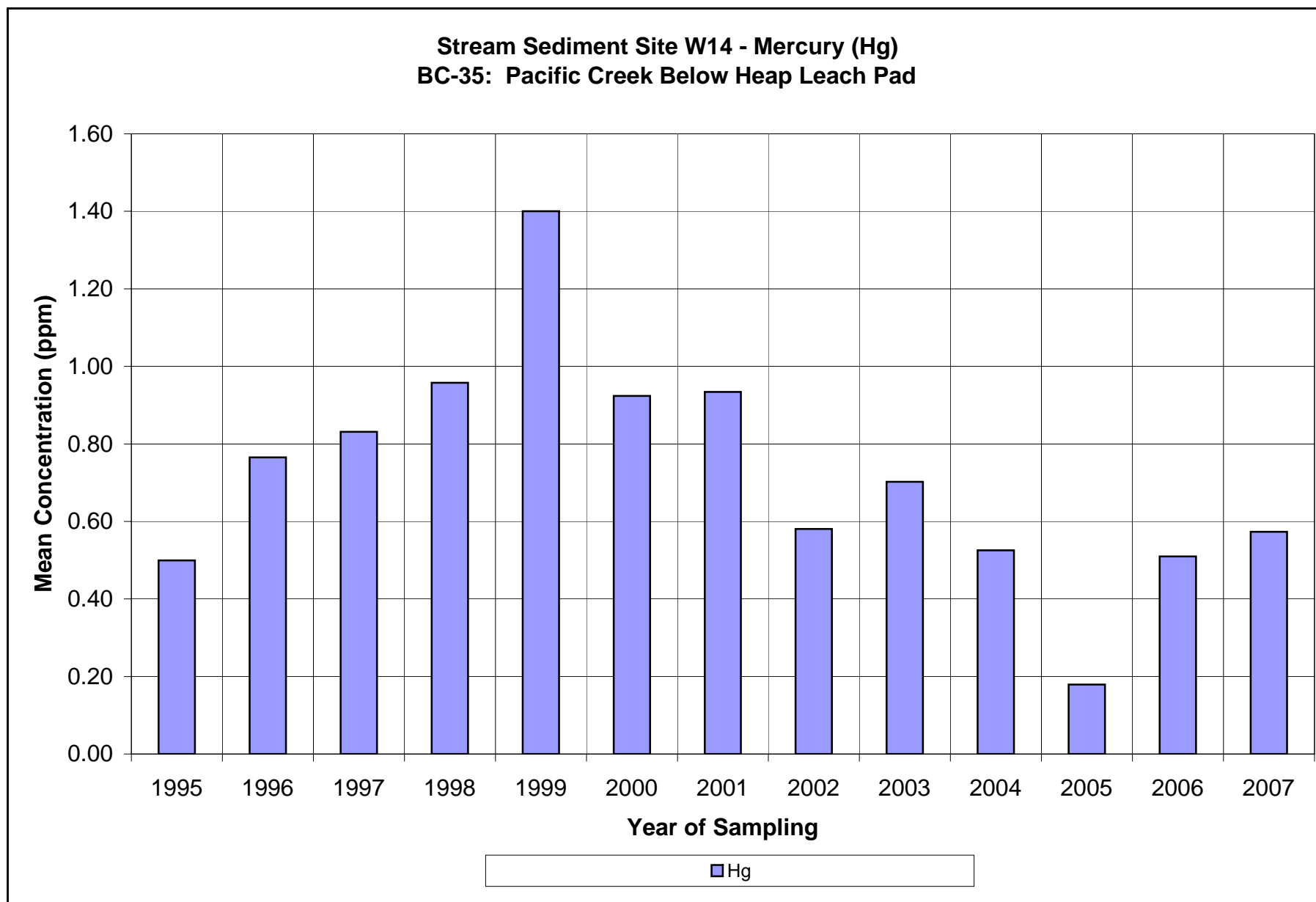


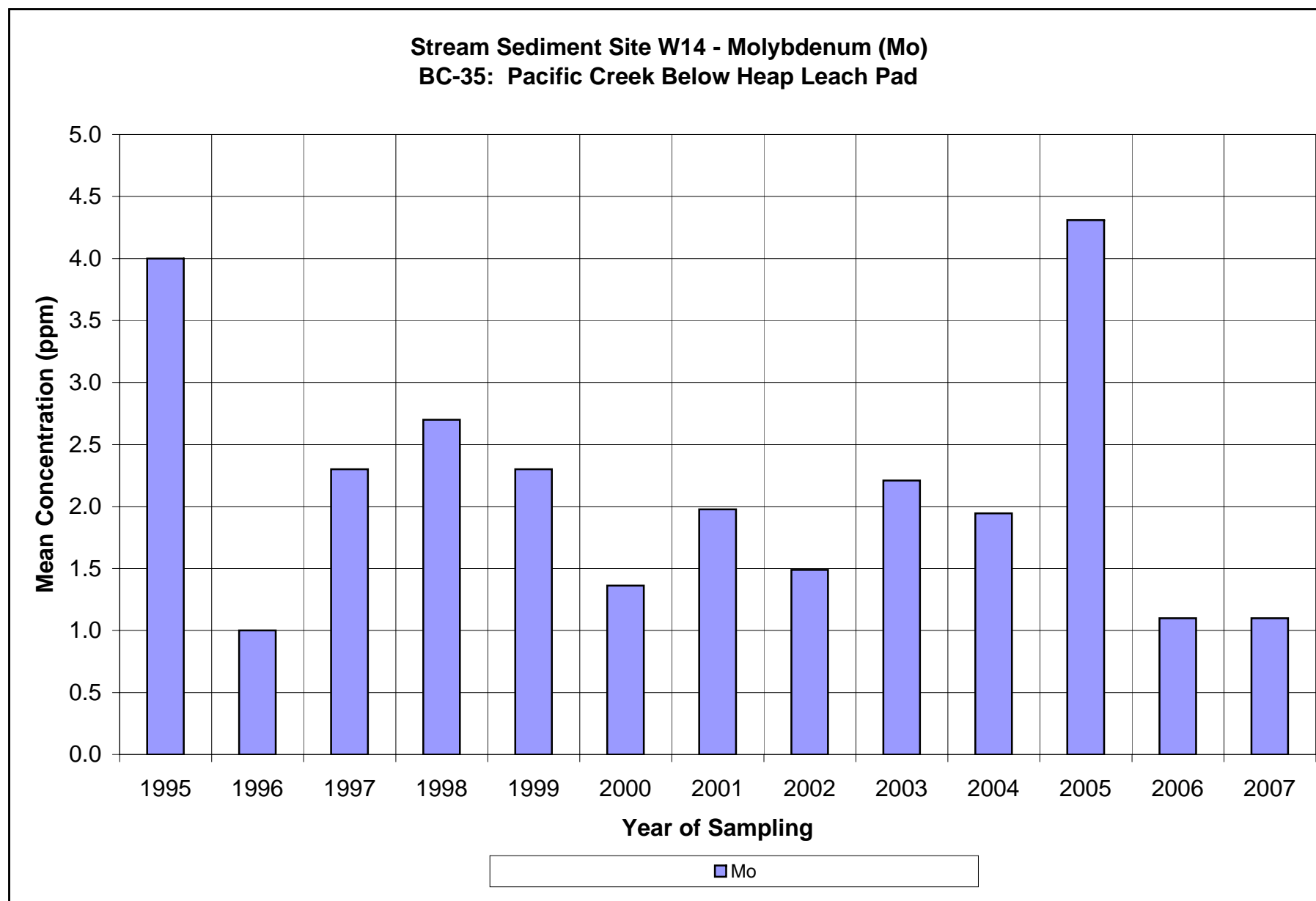


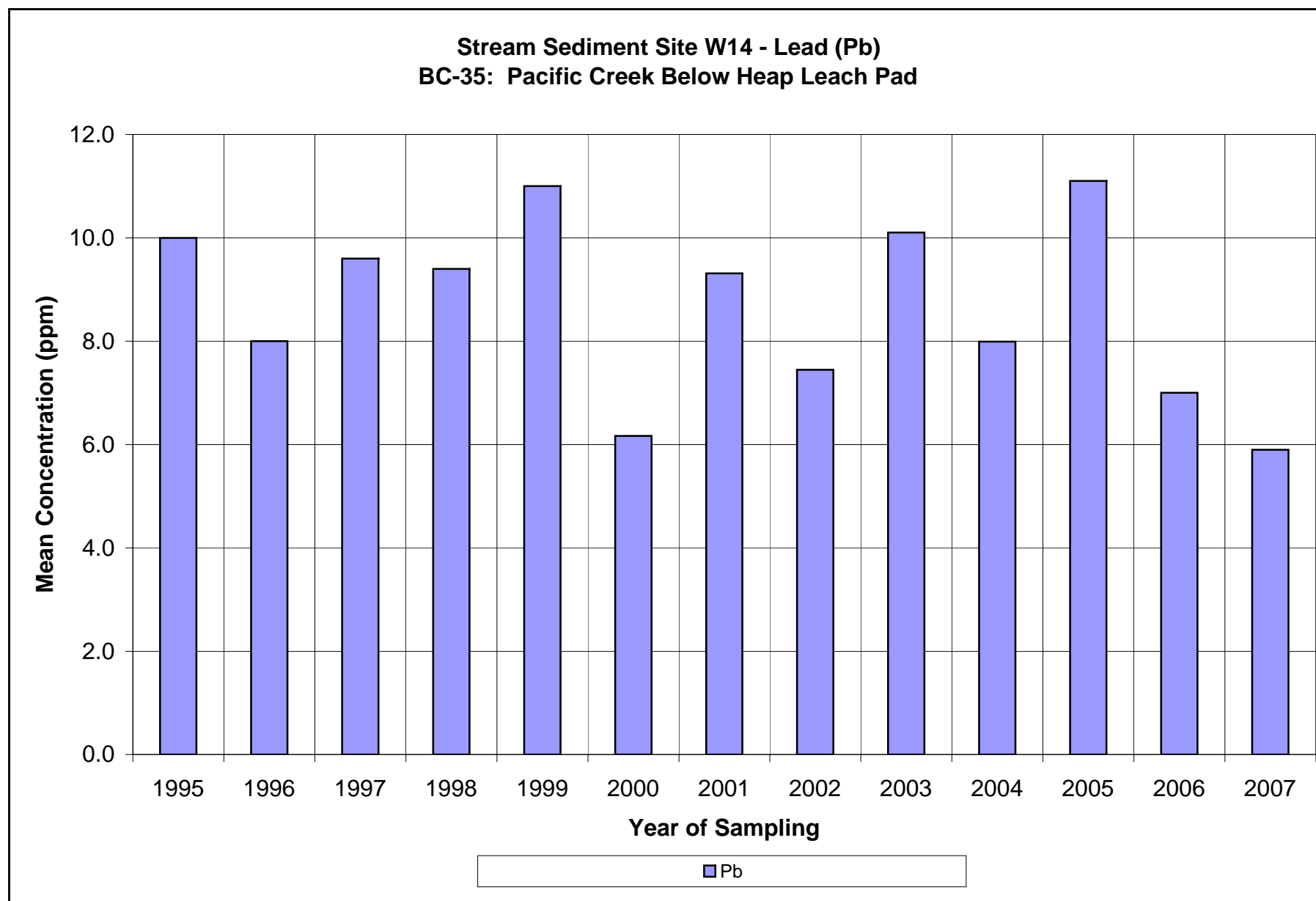






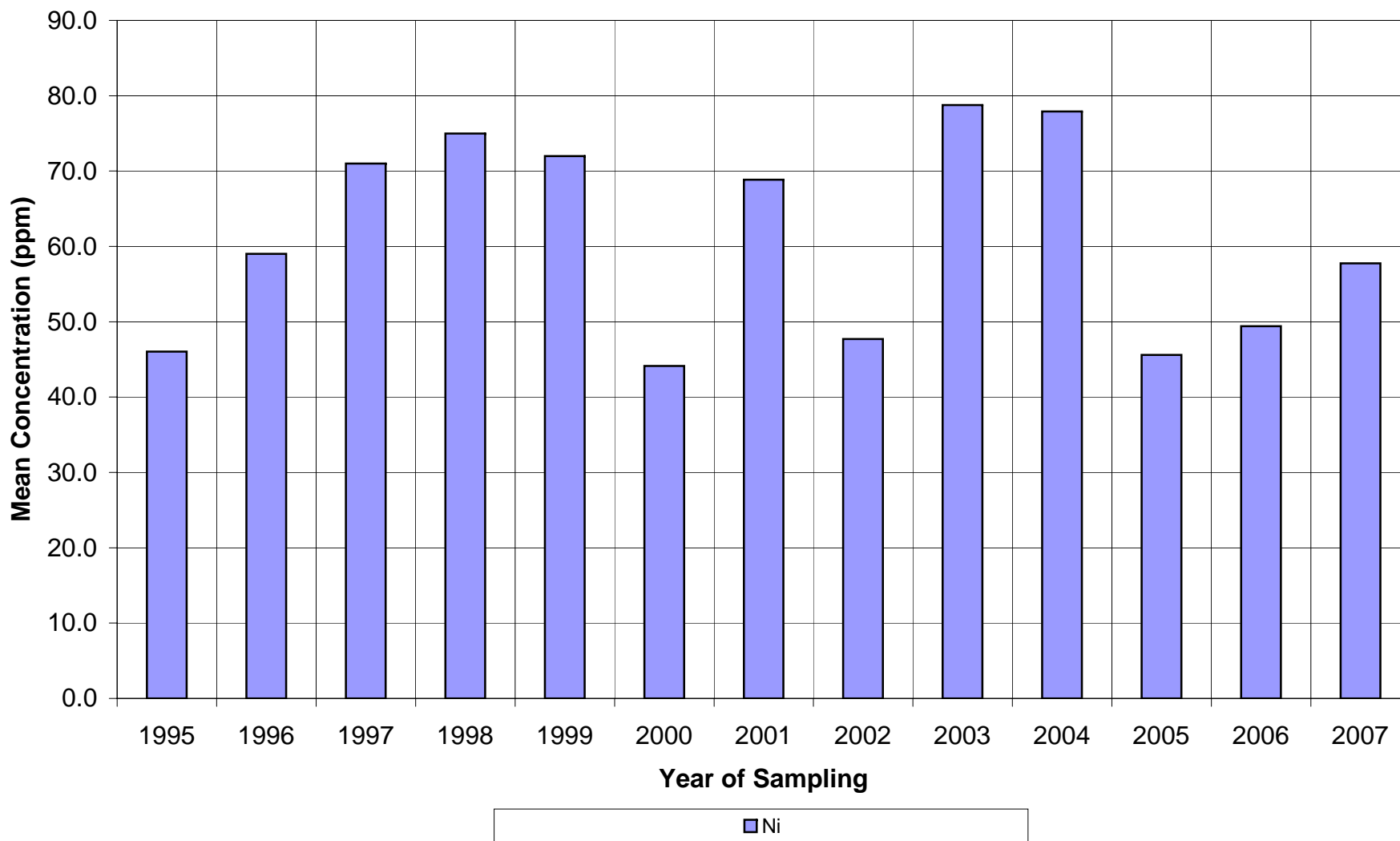


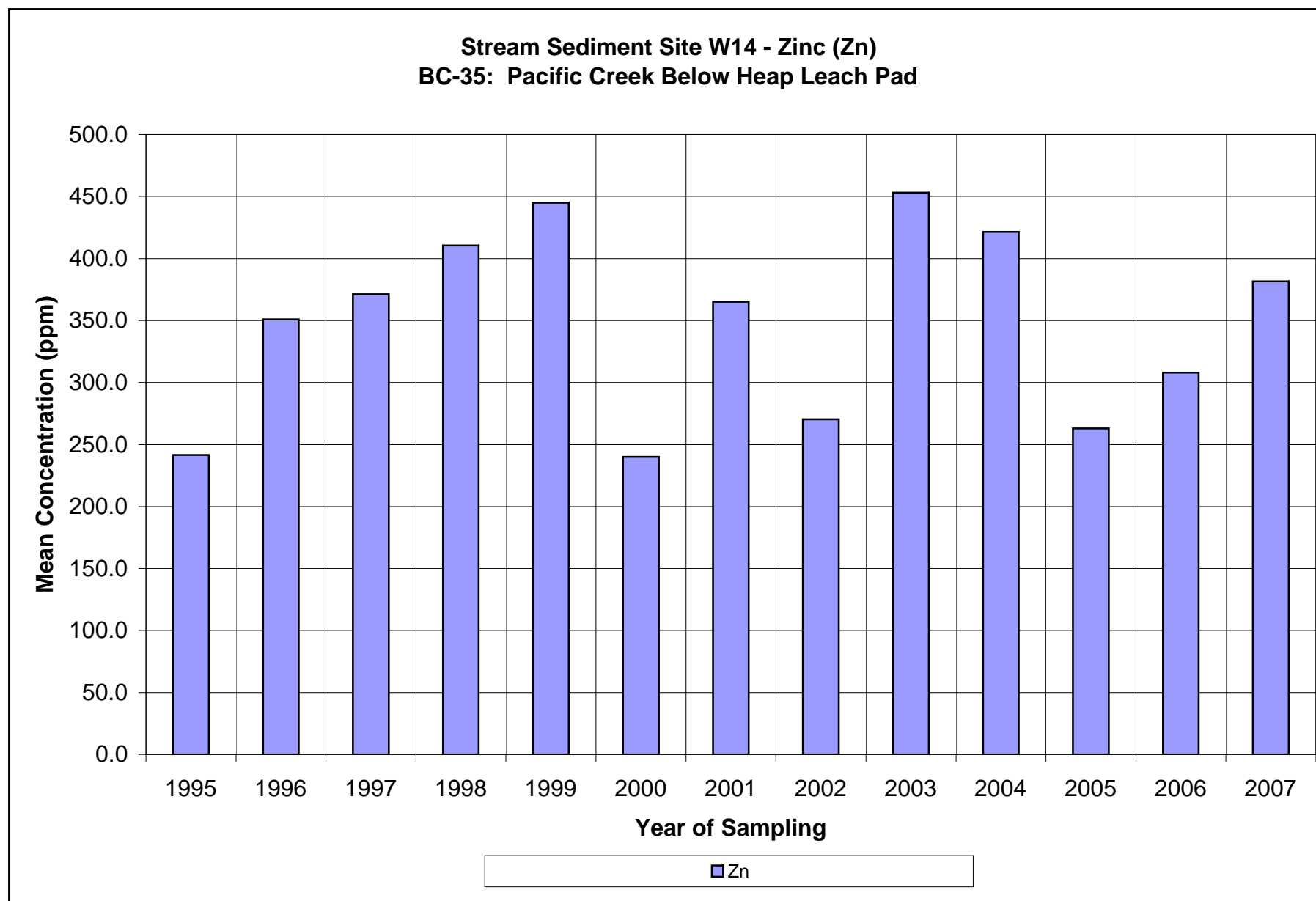




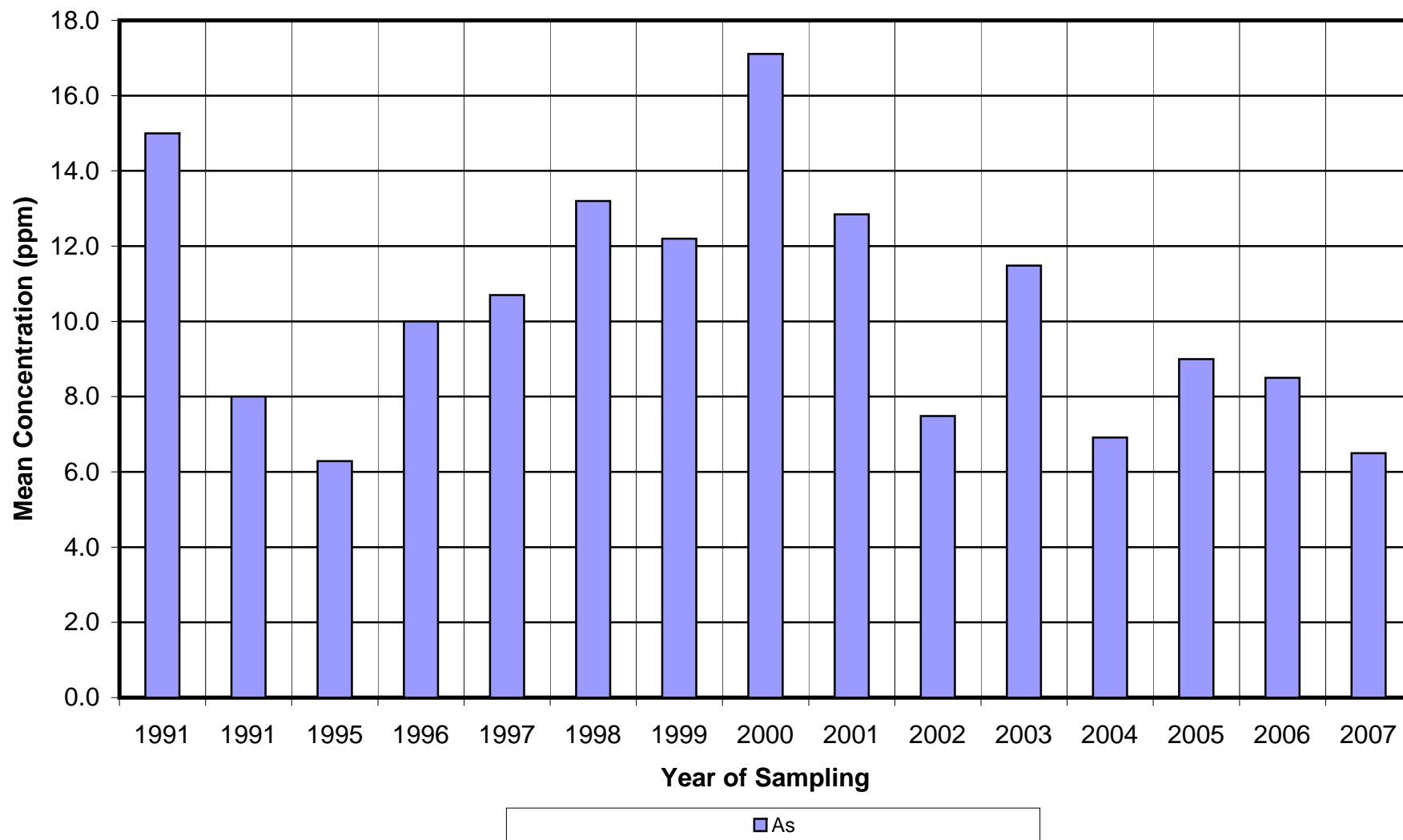


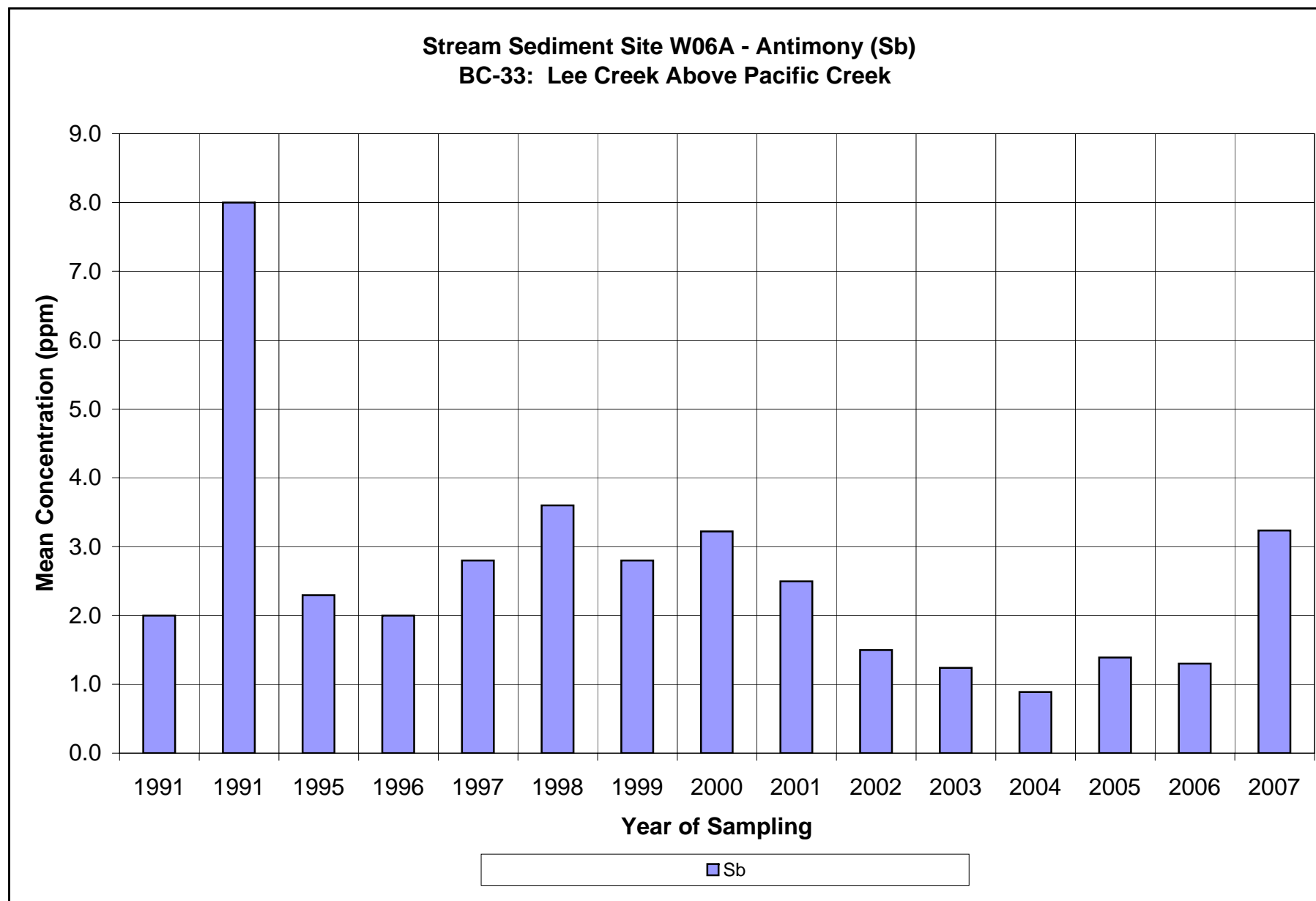
**Stream Sediment Site W14 - Nickel (Ni)  
BC-35: Pacific Creek Below Heap Leach Pad**

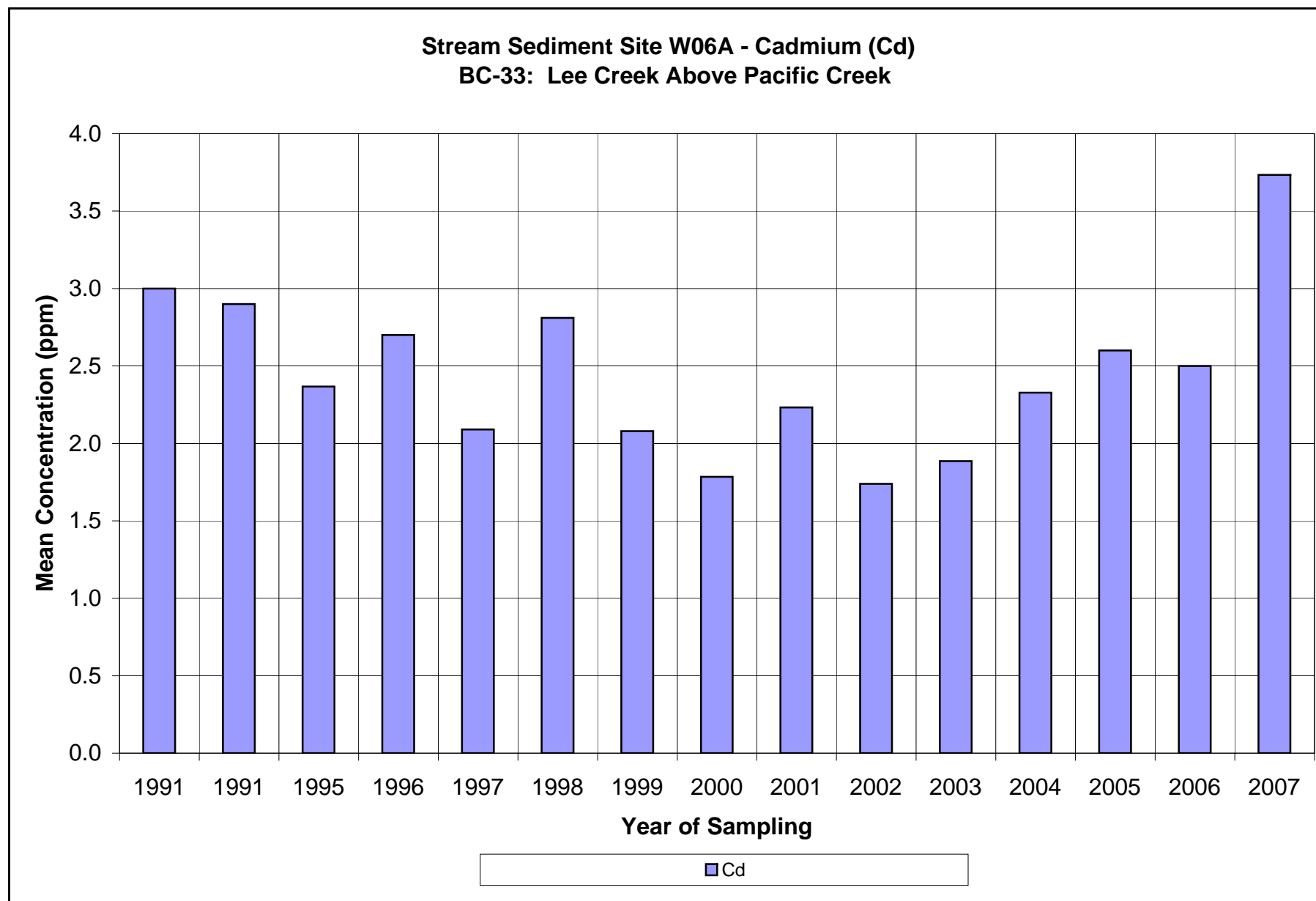


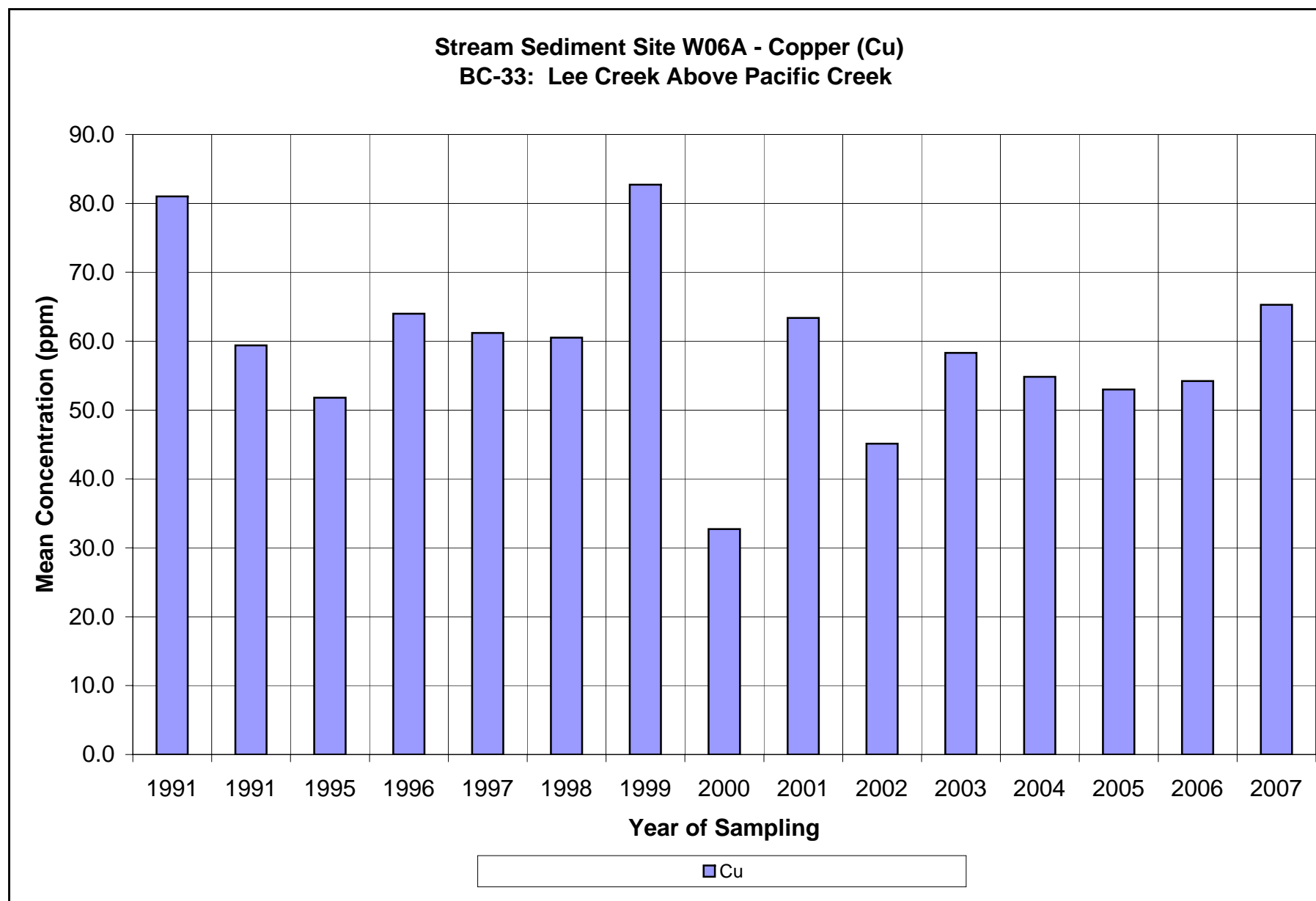


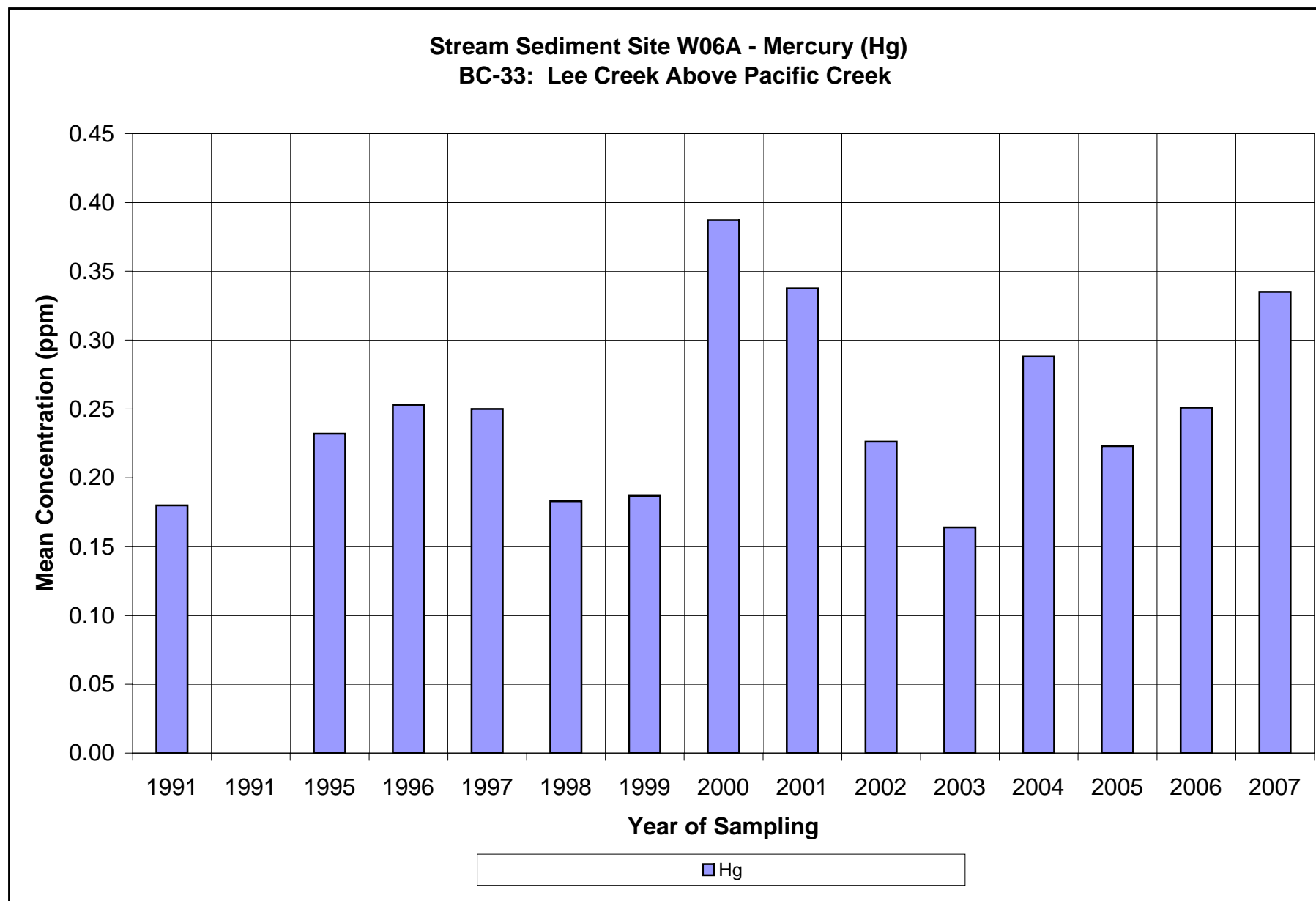
**Stream Sediment Site W06A - Arsenic (As)**  
**BC-33: Lee Creek Above Pacific Creek**



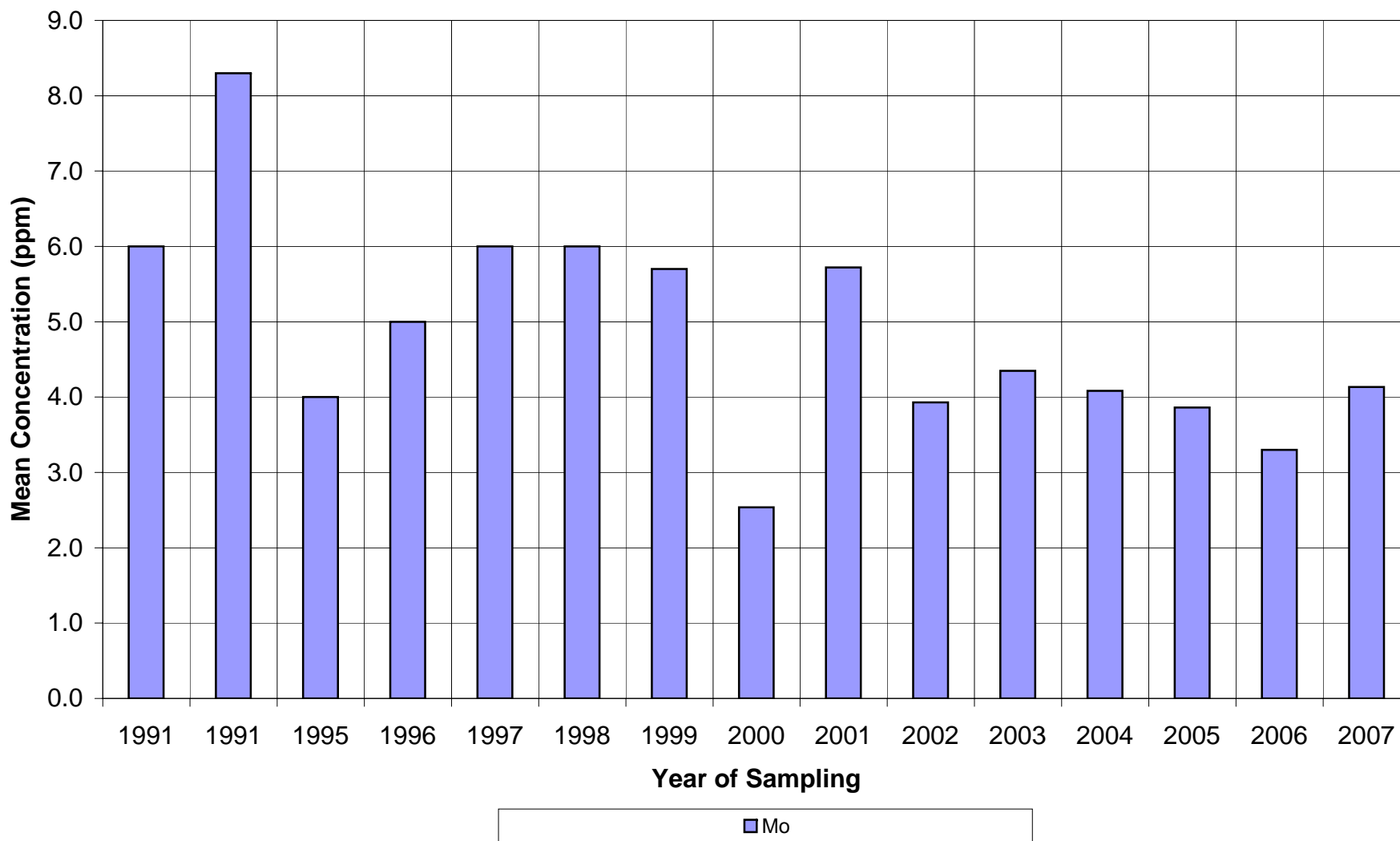




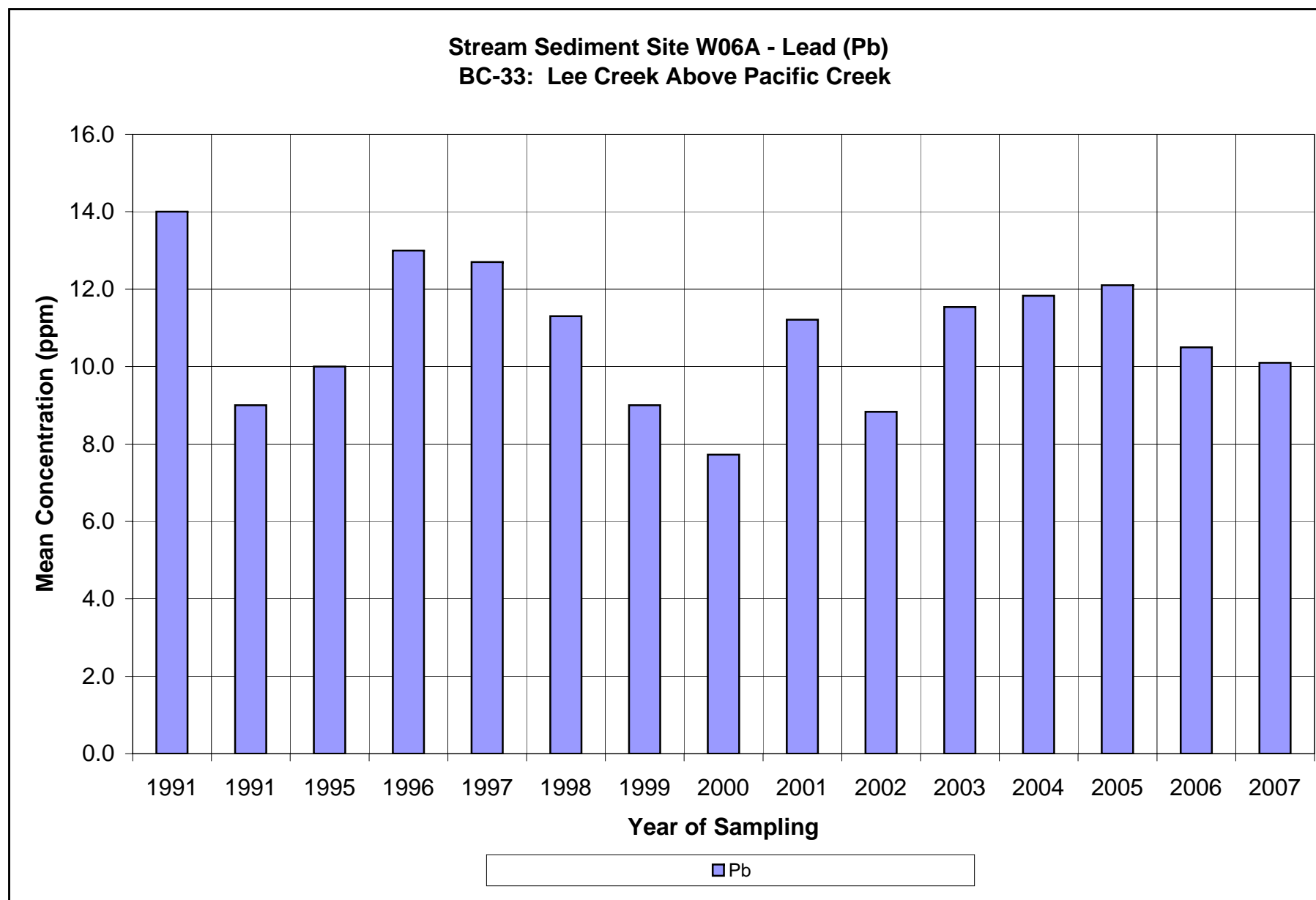


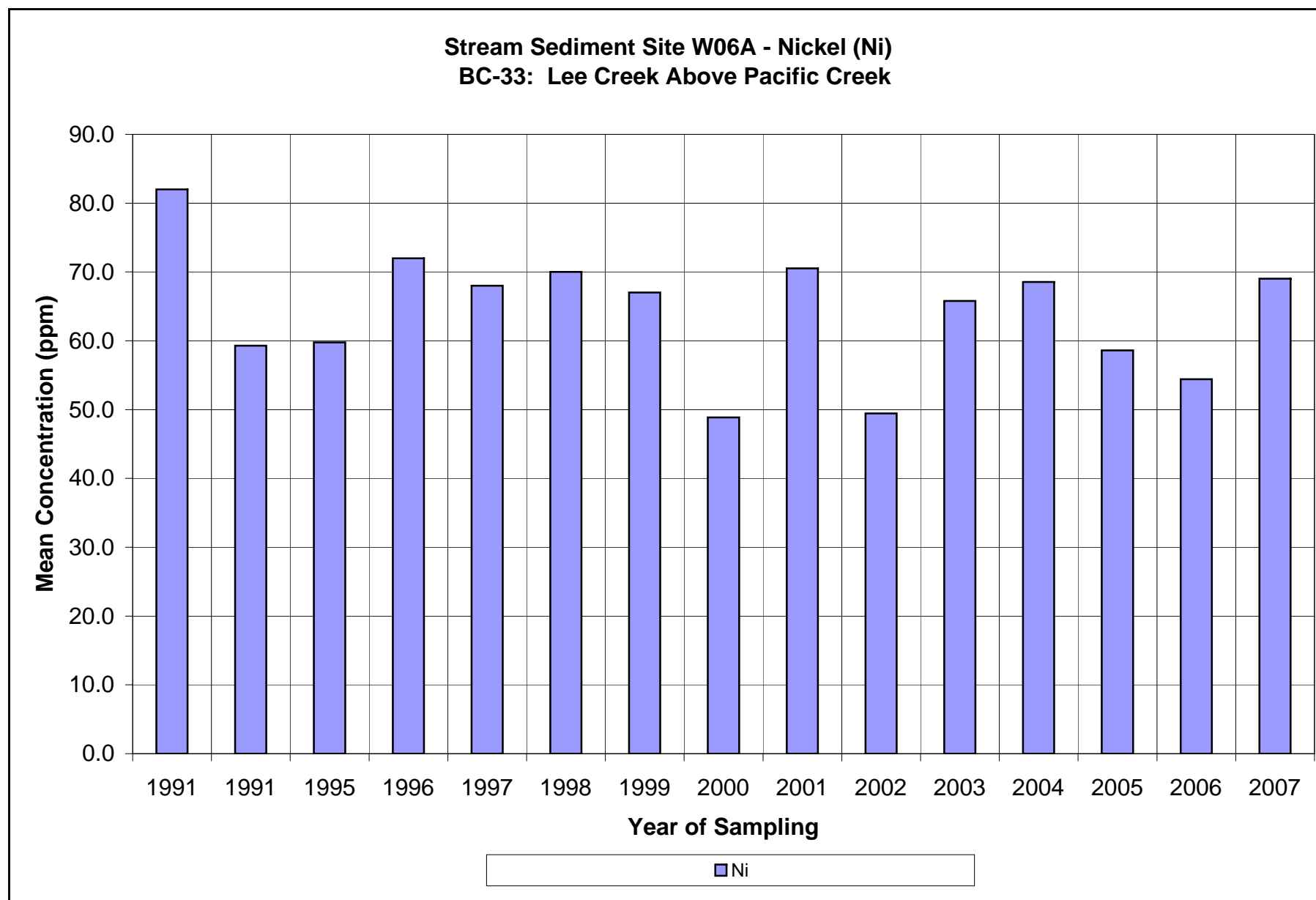


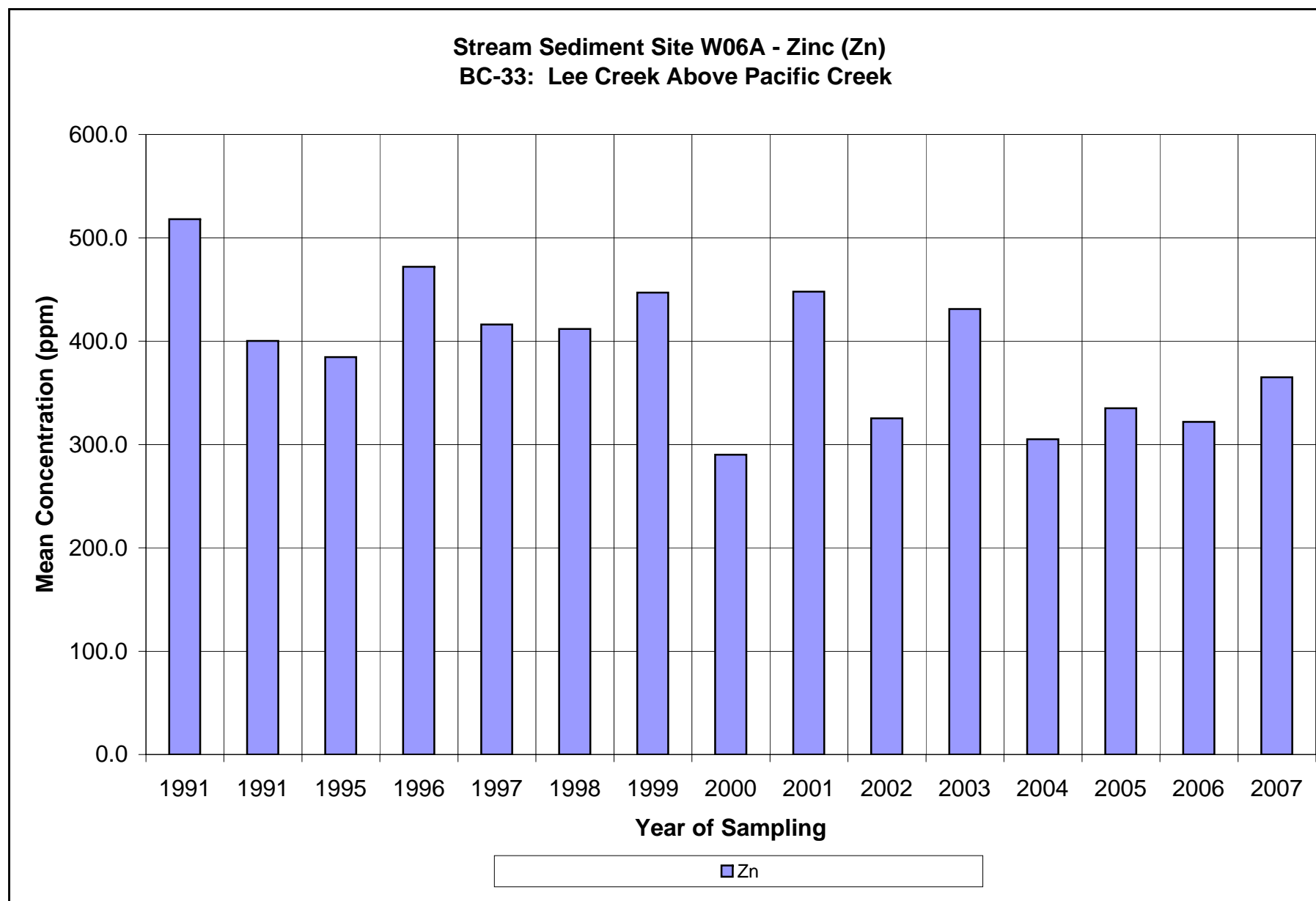
**Stream Sediment Site W06A - Molybdenum (Mo)**  
**BC-33: Lee Creek Above Pacific Creek**

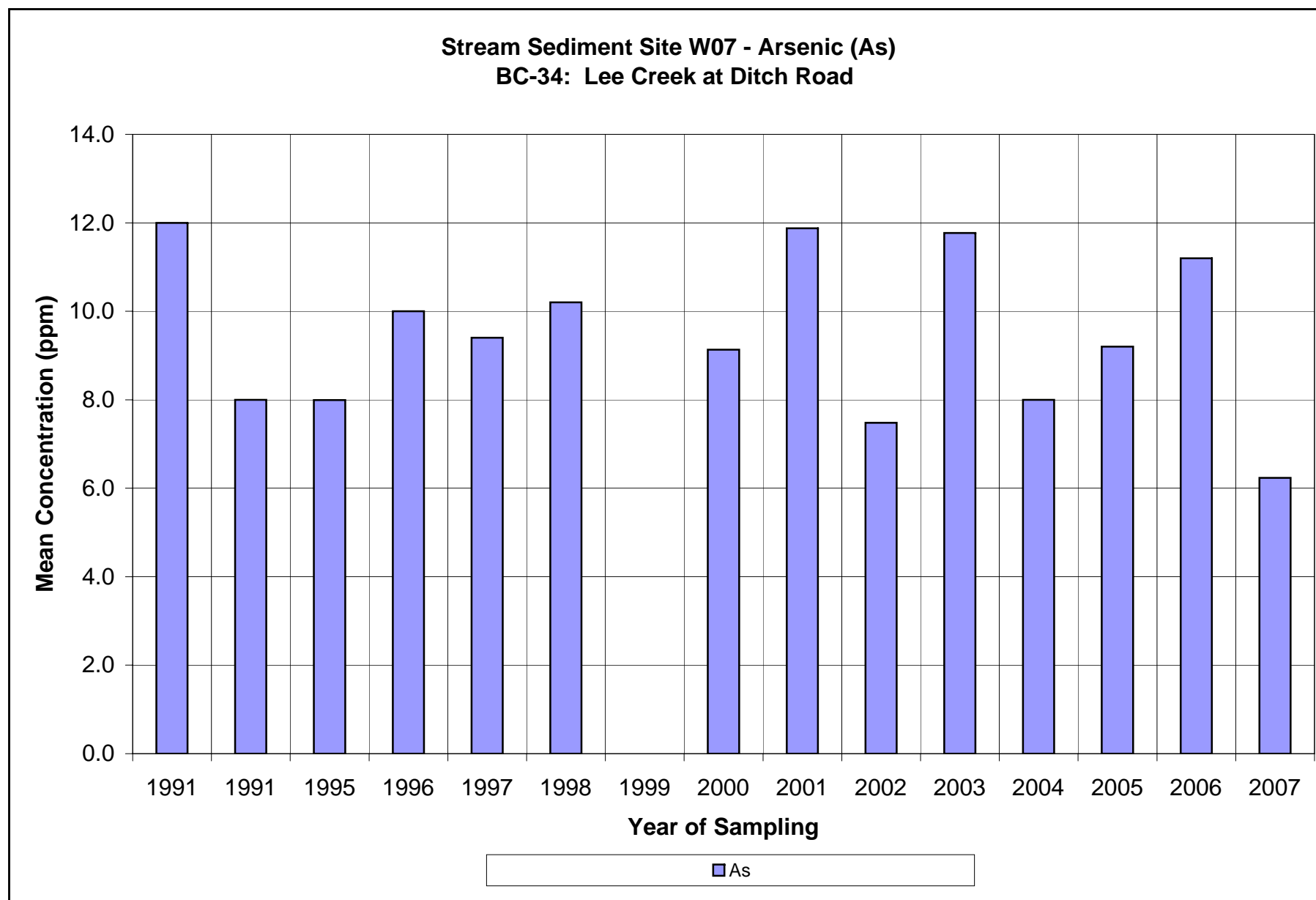


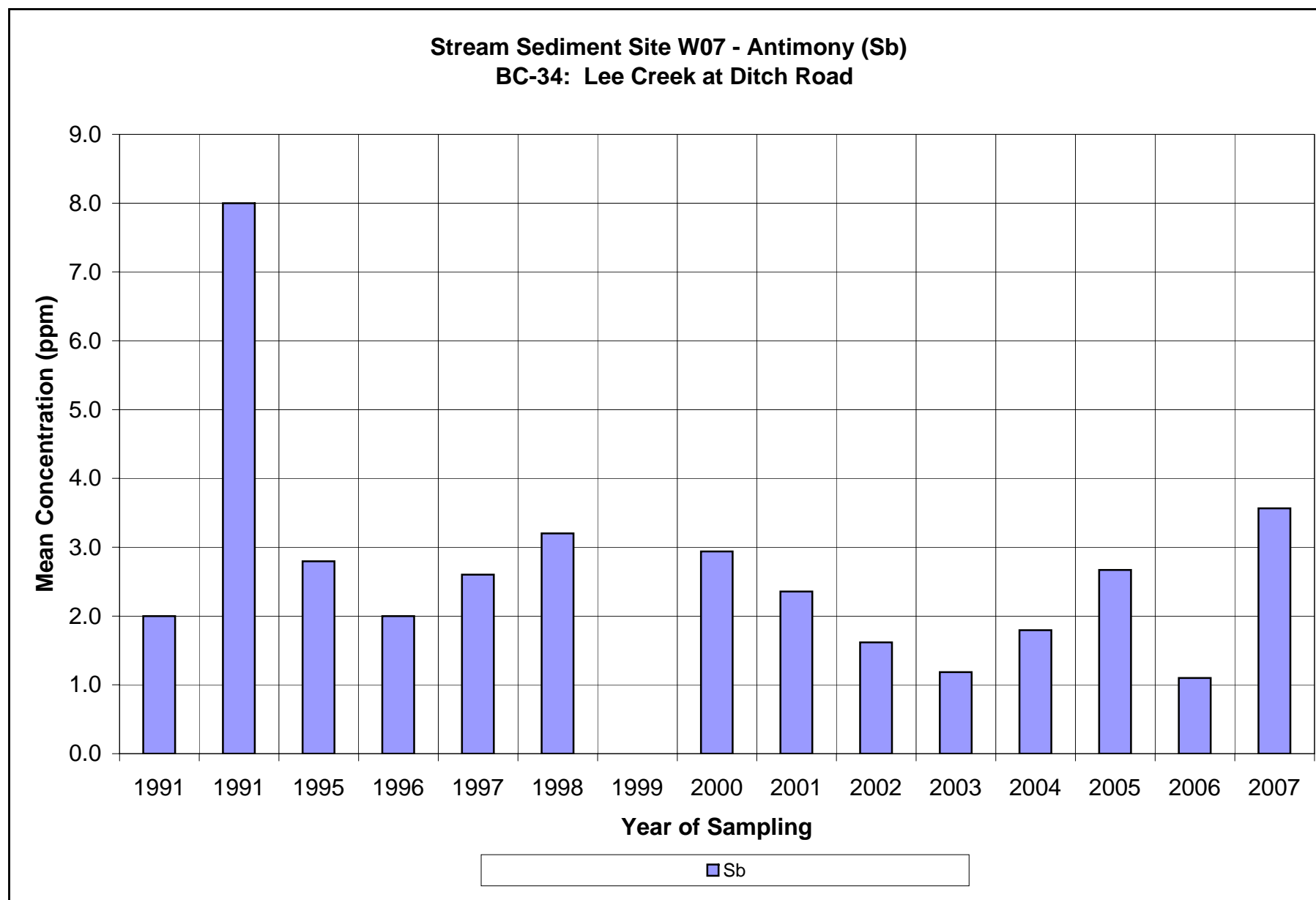


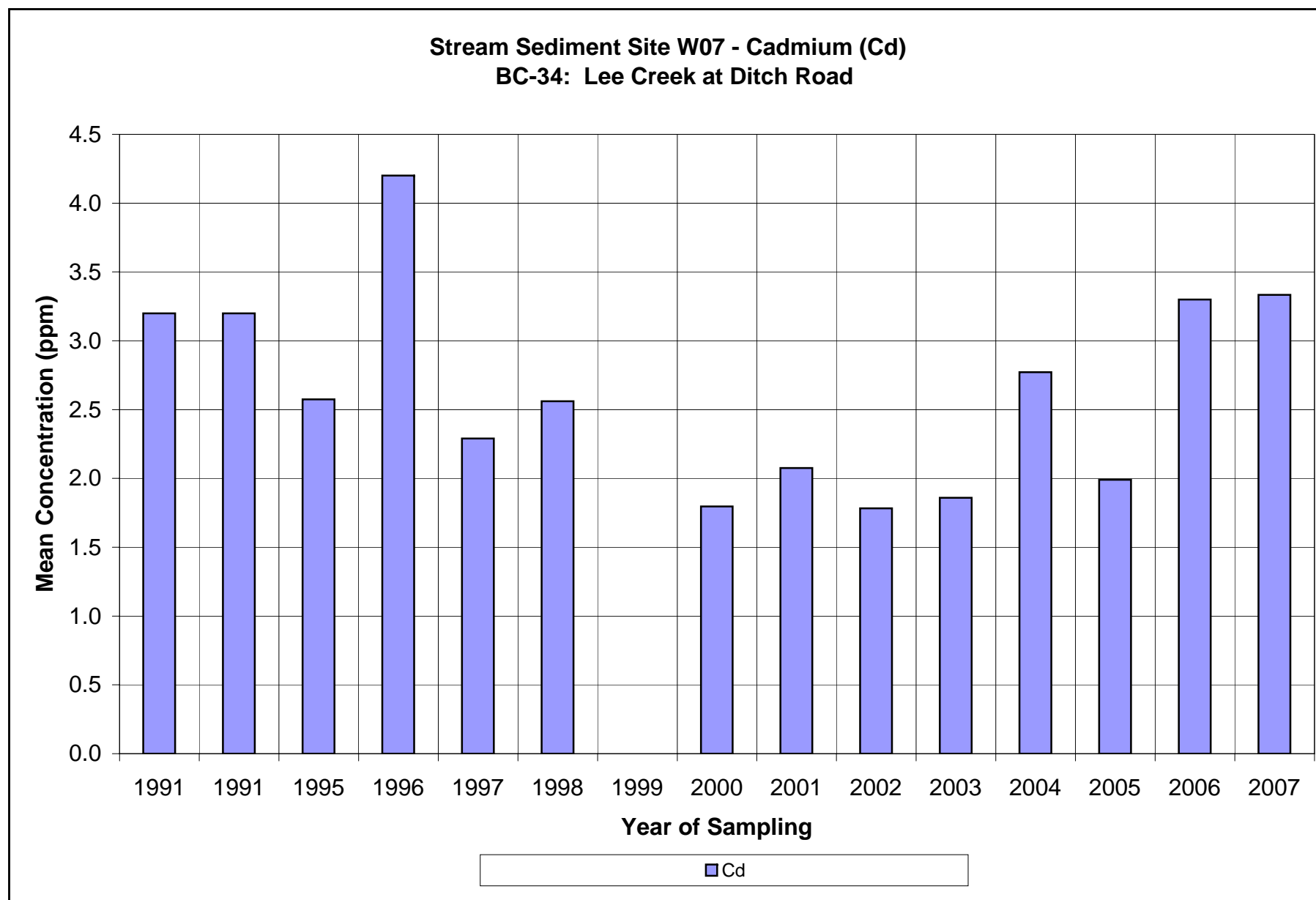


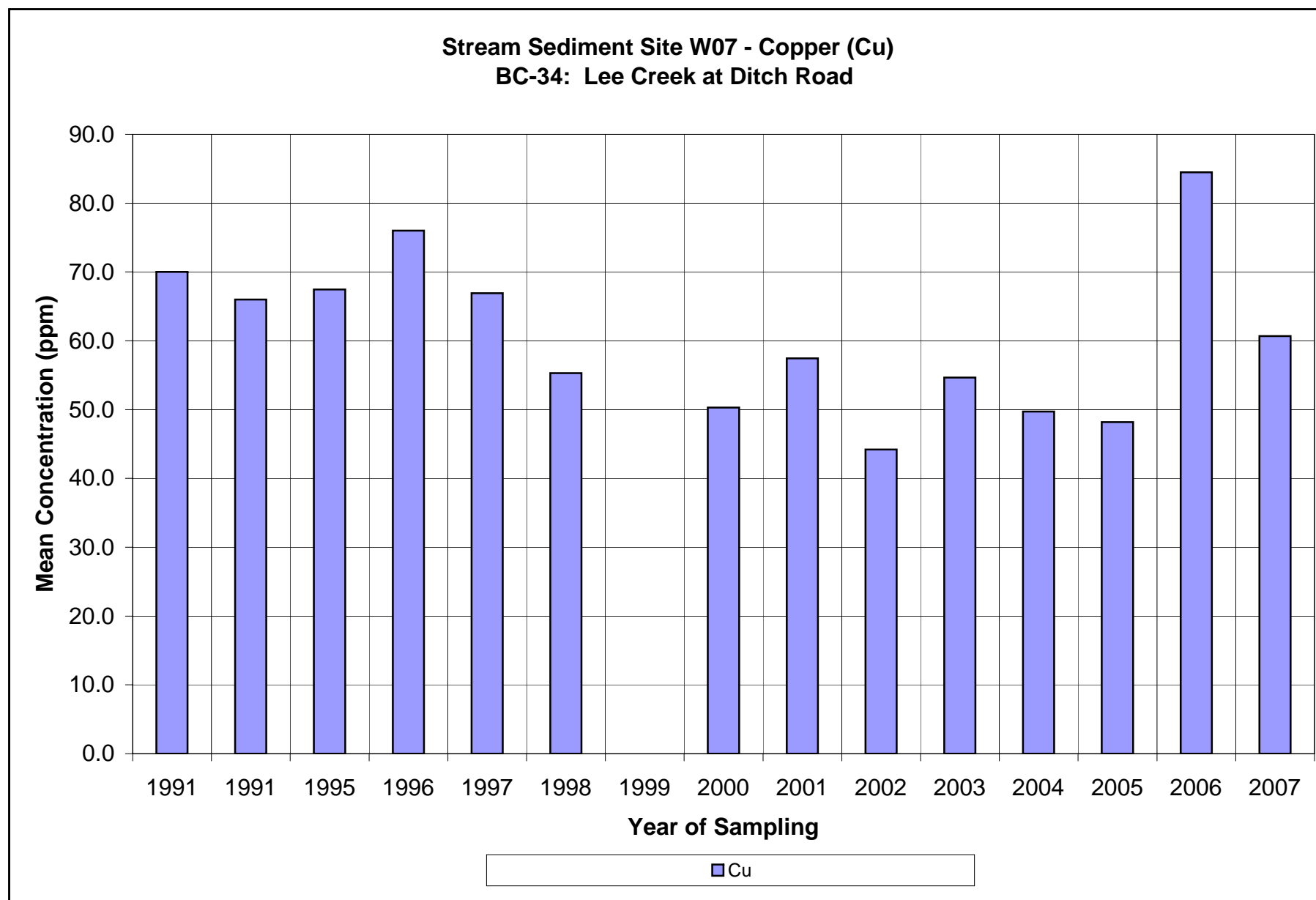




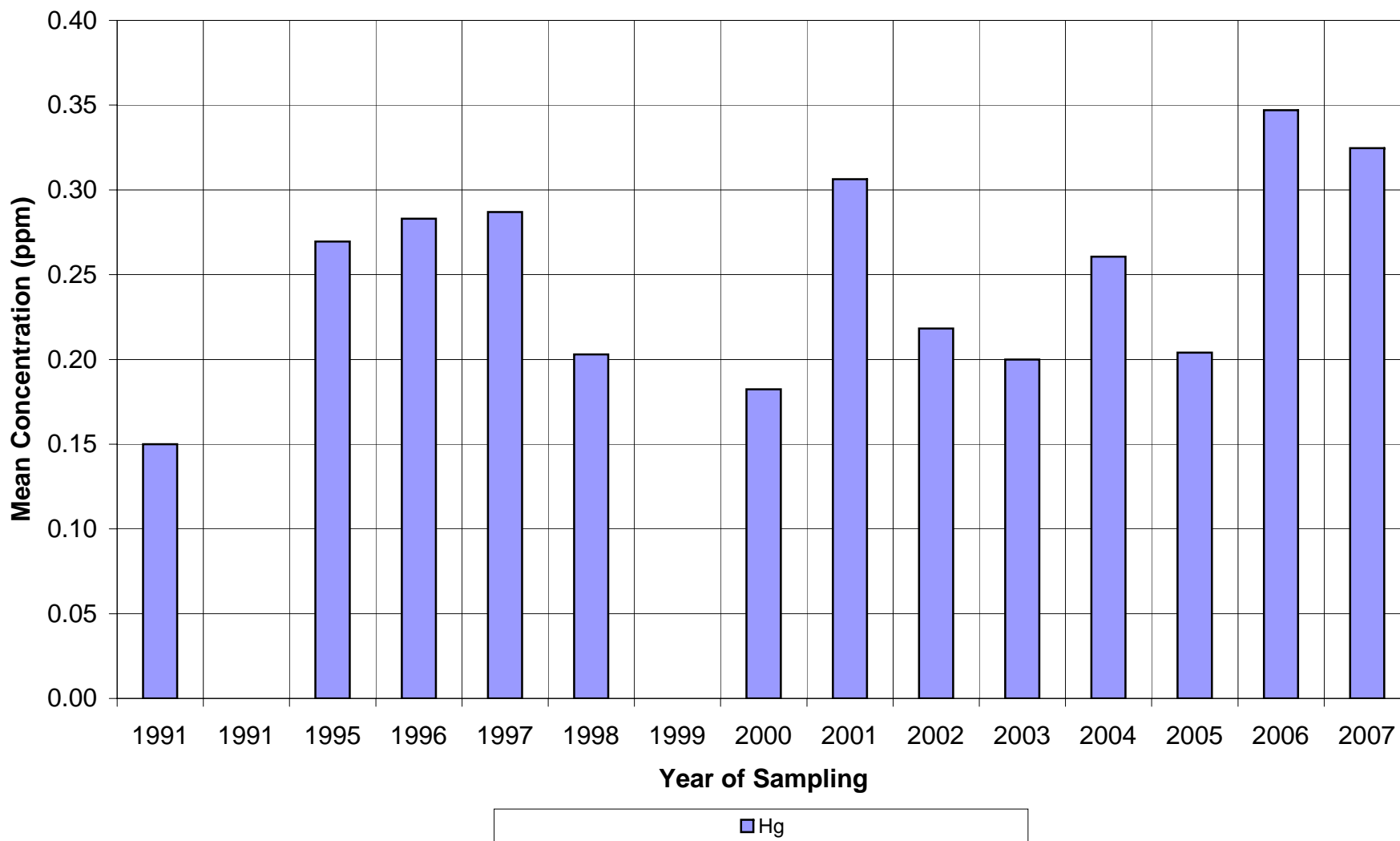






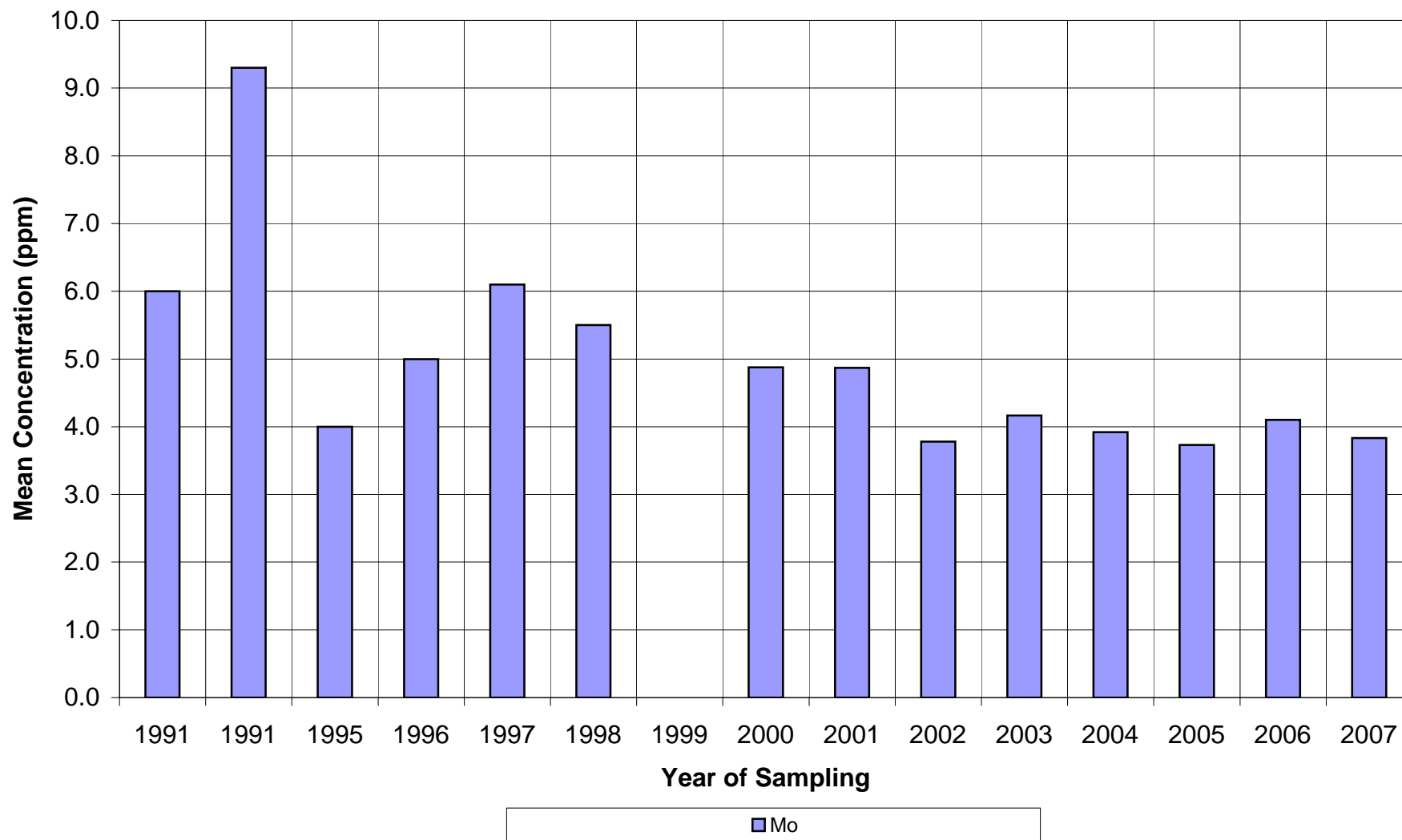


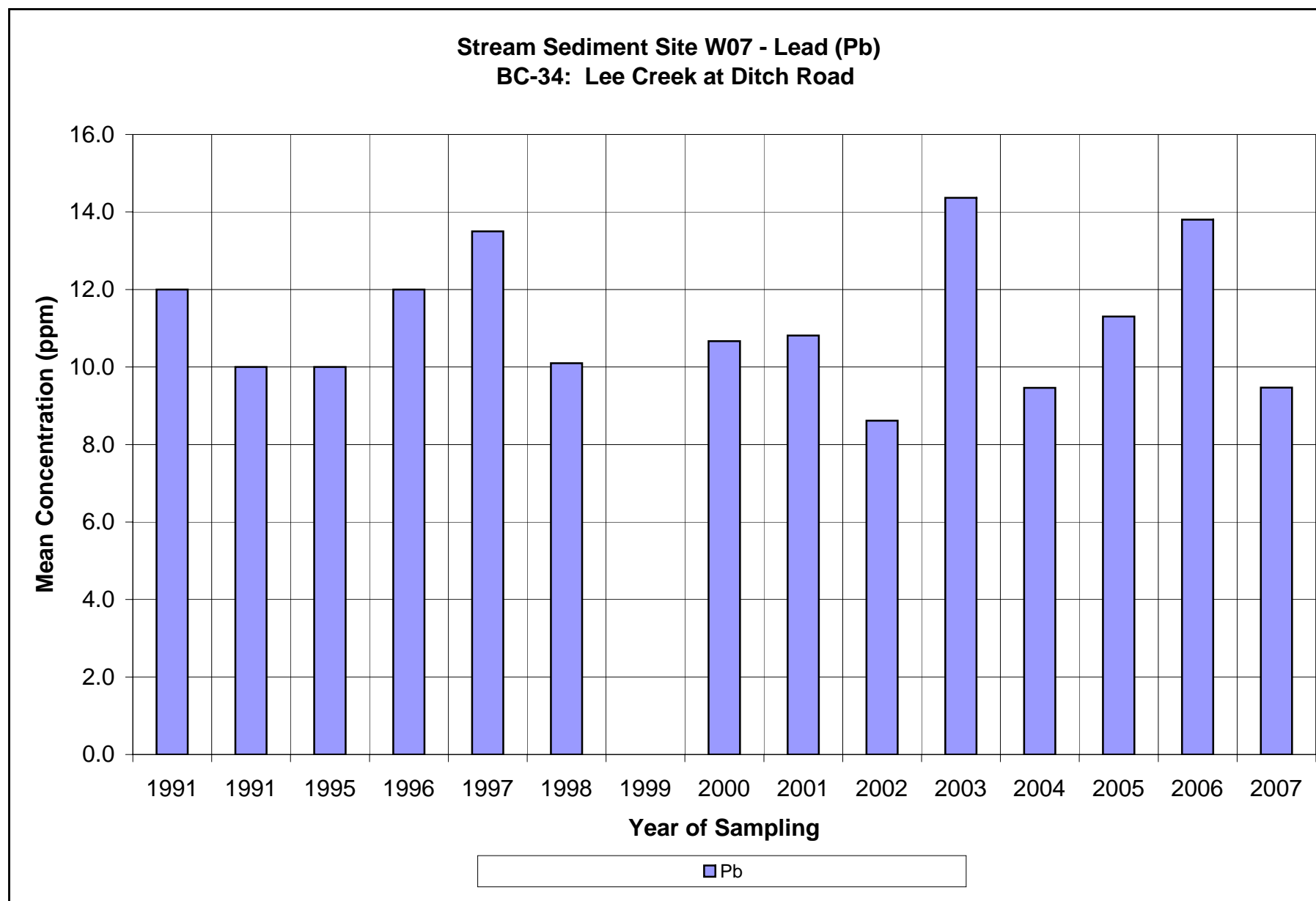
**Stream Sediment Site W07 - Mercury (Hg)  
BC-34: Lee Creek at Ditch Road**

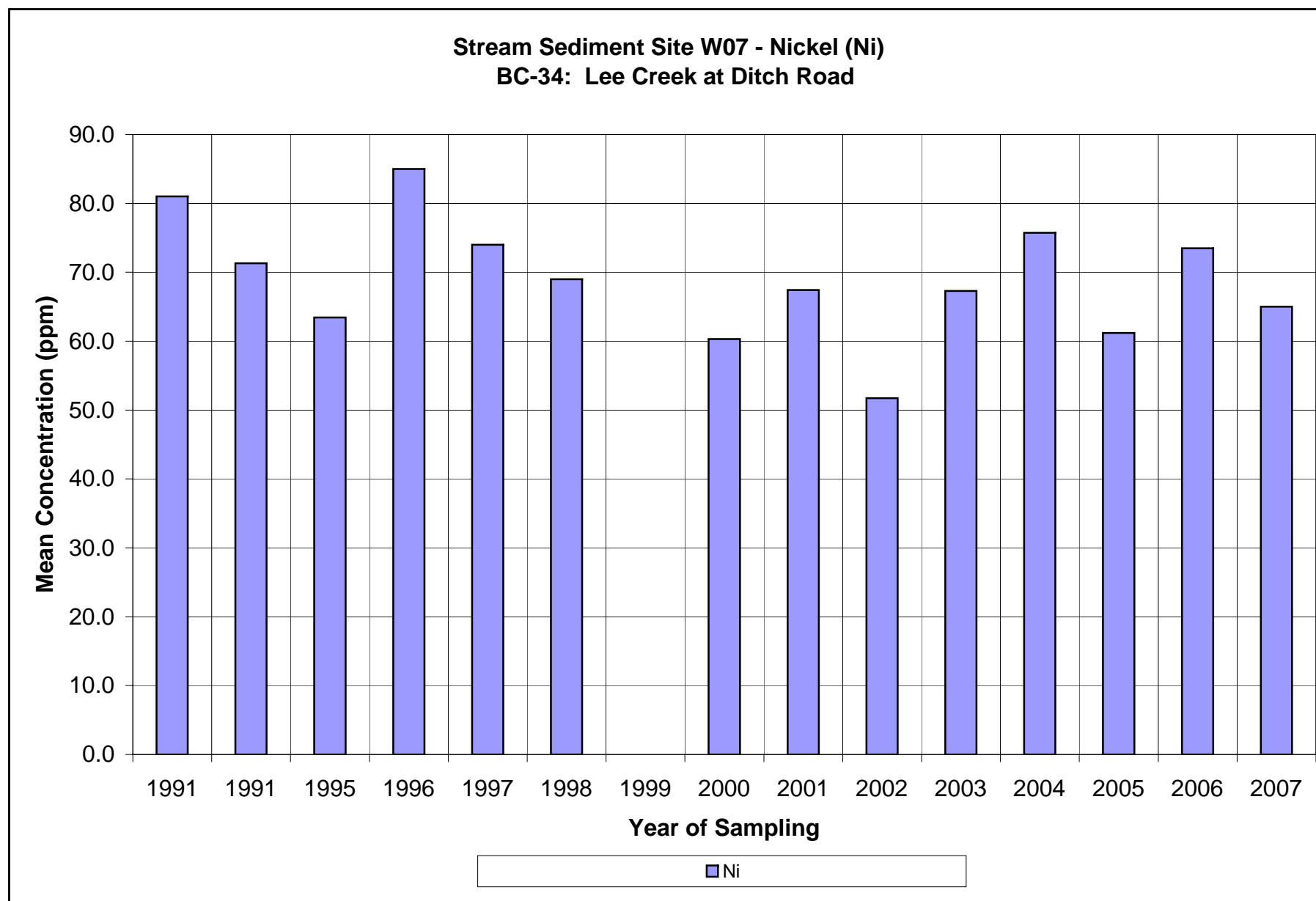


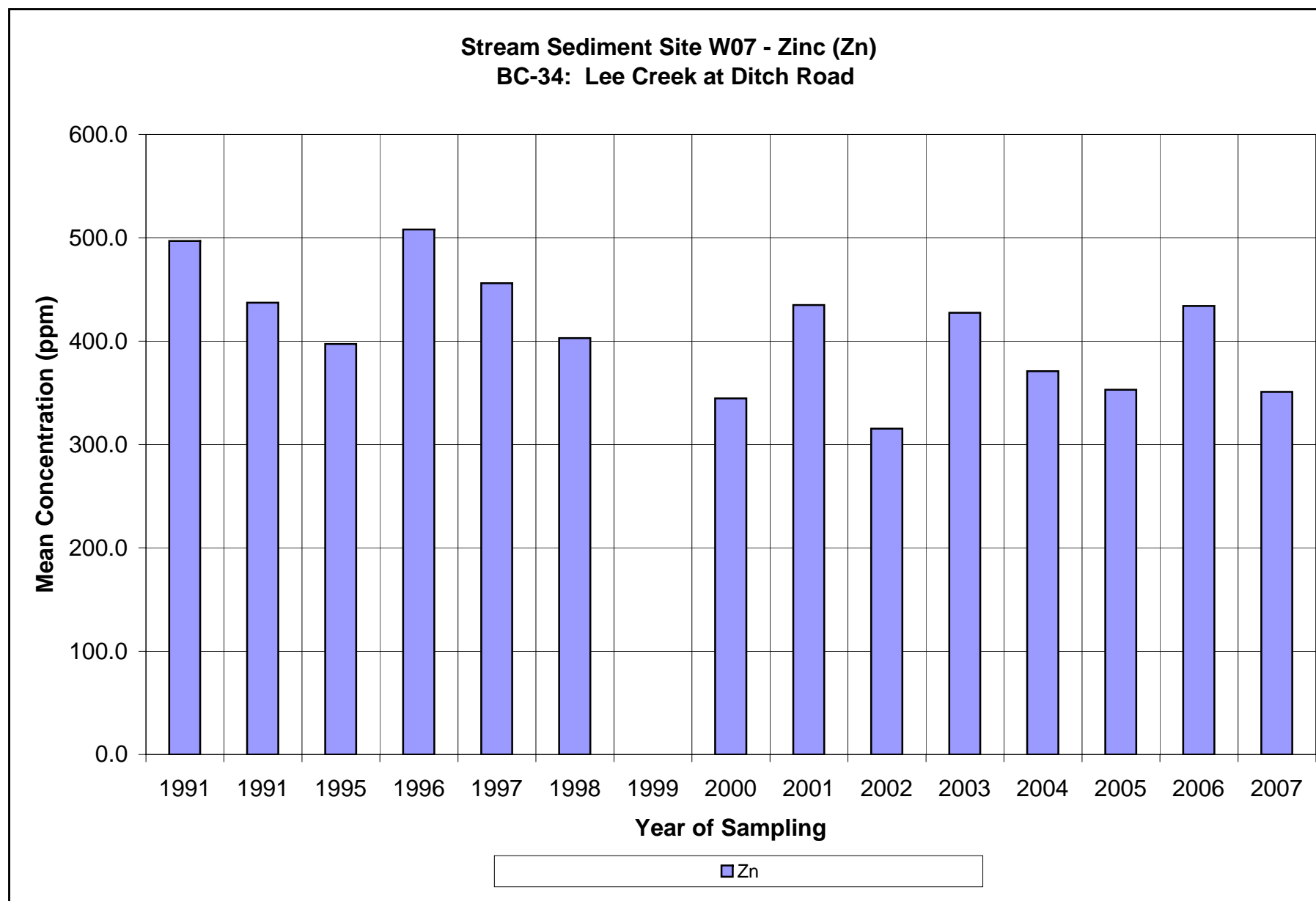


**Stream Sediment Site W07 - Molybdenum (Mo)  
BC-34: Lee Creek at Ditch Road**









LOT# 569565

Control Number



**NORWEST  
LABS**

**Environmental Sample Information Sheet**

NOTE Proper completion of this form is required in order to proceed with analysis  
See reverse for contacting your nearest Norwest location and proper sampling protocol

<b>Billing Address</b>		<b>Report To:</b> <input checked="" type="checkbox"/>	<b>Copy of Report To:</b>		<b>Copy of invoice:</b> <input checked="" type="checkbox"/>
Company: Alexco Resource Corp.	QA/QC Report <input checked="" type="checkbox"/>		Company: Access Consulting Group	Mail invoice to this address for approval <input type="checkbox"/>	
Address: #2 Calcite Business Centre-151 Industrial Road Whitehorse, YT Y1A 2V3			Address: #3 Calcite Business Centre-151 Industrial Road Whitehorse, YT Y1A 2V3		
Attention: Colleen McGovern	<b>Report Result:</b>		Attention: Dave Desmarais	<b>Report Result:</b>	
Phone: (867) 633-4881	Fax <input type="checkbox"/>		Phone: (867) 668-6364	Fax <input type="checkbox"/>	
Fax: (867) 633-4882	Mail <input type="checkbox"/>		Fax: (867) 667-6680	Mail <input checked="" type="checkbox"/>	
Cell:	Courier <input type="checkbox"/>		Cell:	Courier <input type="checkbox"/>	
Email: cmcgovern@alexcoresource.com	Email <input type="checkbox"/>		Email: dave@accessconsulting.ca	Email <input checked="" type="checkbox"/>	

<b>Information to be included on Report and Invoice</b>	<b>RUSH</b> Please contact the laboratory to confirm rush dates and times before submitting samples.	<b>Sample Custody (Please Print)</b>
	Upon filling out this section, client accepts that surcharges will be attached to this analysis Required on: all analyses or as indicated <input type="checkbox"/> or <input type="checkbox"/>	Sampled by: D.Desmarais Date: 2007 Company: ACG Signature: _____ Relinquished by: D.Desmarais Company: ACG Date: 2007 Waybill number: _____ Received by: _____ Company: _____ Date: _____ Processed by: _____ Norwest Labs Date: _____
Project ID: BC Quarterly Sampling Project Name: Brewery Creek Project Location: Brewery Creek Legal Location: _____ PO#: 4303-ACG Proj. Acct. Code: ALEX-06-BCM-01 Agreement ID: _____	Date required: _____ Signature: _____ Norwest Authorization: _____	

**Special Instructions/Comments**

Page 1 of 2  
Sediment Instructions:

The samples shall be dried and screened, using sieves at ASTM mesh numbers 10, 20, 40, 60, 100, 140 and 270 ( ASTM -E11-61) and the fraction weights shall be recorded.

A sub-sample composed of material passing through the 100 mesh number sieve shall be analyzed for metals by a 33 element ICP scan. Loss on ignition (LOI) shall also be determined by heating the sample to 600 C.

There are 3 samples from each site.

Sample Identification	Location	Depth	Date/Time Sampled	Matrix	Sampling Method	Number of Containers	Enter tests above (check off relevant samples below)																
1 BC1 W5		-	21/08/07	Sediment	Grab	3																	
2 BC2 W15		-	21/08/07	Sediment	Grab	3																	
3 BC3 W4B		-	21/08/07	Sediment	Grab	3																	
4 BC4 W13		-	21/08/07	Sediment	Grab	3																	
5 BC5 W11		-	21/08/07	Sediment	Grab	3																	
6 BC6 W09		-	21/08/07	Sediment	Grab	3																	
7 BC31 W2		-	21/08/07	Sediment	Grab	3																	
8 BC32 W3		-	21/08/07	Sediment	Grab	3																	
9 BC33 W6A		-	21/08/07	Sediment	Grab	3																	
10 BC34 W7		-	21/08/07	Sediment	Grab	3																	
11 BC35 W14		-	21/08/07	Sediment	Grab	3																	
12 BC36 W16		-	21/08/07	Sediment	Grab	3																	
13 BC37 W5A		-	21/08/07	Sediment	Grab	3																	
14 BC38 W8		-	21/08/07	Sediment	Grab	3																	



Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Approval Status: Pending Approval
# 3 Calcite Business Centre	Name: Brewery Creek	Invoice Frequency: by Lot
151 Industrial Road	Location: Brewery Creek	COD Status:
Whitehorse, YT, Canada	LSD:	Control Number:
Y1A 2V3	P.O.: 4303-ACG	Date Received: Aug 27, 2007
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	Date Reported: Oct 3, 2007
Sampled By: D.Desmarais		Report Number: 1051044
Company: ACG		

Contact	Company	Address
Dave Desmarais	Access Mining Consultants Ltd.	# 3 Calcite Business Centre, 151 Industrial Road Whitehorse, YT Y1A 2V3
		Phone: (867) 668-6463 Fax: (867) 667-6680
		Email: dave@accessconsulting.ca

	Copies	Delivery	Format
M	1	Post	
	1	Email - Multiple Reports	PDF
	1	Email - Multiple Reports	Standard Crosstab

\_\_\_\_\_ PAGES IN THIS TRANSMISSION

**Notes To Clients:**

- The less than 150 um fraction of the sediment was analyzed for metals and LOI as requested by the Client Access Mining.

**Reports associated with this Lot**

<u>Id/Format/Report Date</u>	<u>Id/Format/Report Date</u>	<u>Id/Format/Report Date</u>
1040641 Env2QC 3 Smp & DL 05-Sep-07		

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**Sample Custody**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

**Sample Disposal Date: October 05, 2007**

All samples will be stored until this date unless other instructions are received. Please indicate other requirements below and return this form to the address or fax number on the bottom of this page.

Extend Sample Storage Until \_\_\_\_\_ (MM/DD/YY)

The following charges apply to extended sample storage:

Storage for 1 to 5 samples per month	\$ 10.00
Storage for 6 to 20 samples per month	\$ 15.00
Storage for 21 to 50 samples per month	\$ 30.00
Storage for 51 to 200 samples per month	\$ 60.00
Storage for more than 200 samples per month	\$ 110.00

Return Sample, collect, to the address below via:

Greyhound

Loomis

Purolator

Other (specify) \_\_\_\_\_

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Signature \_\_\_\_\_



## Analytical Report

Bill To: Alexco Resource Corp.	Project:	
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Lot ID: <b>569565</b>
# 3 Calcite Business Centre	Name: Brewery Creek	Control Number:
151 Industrial Road	Location: Brewery Creek	Date Received: Aug 27, 2007
Whitehorse, YT, Canada	LSD:	Date Reported: Oct 3, 2007
Y1A 2V3	P.O.: 4303-ACG	Report Number: 1051044
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-1	569565-2	569565-3	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC1 - W5	BC2 - W15	BC3 - W4B	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	4.388	3.507	5.50
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	9180	7330	8520
Antimony	Strong Acid Extractable	ug/g	7.6	2.4	8.5
Arsenic	Strong Acid Extractable	ug/g	27.1	4.5	20.2
Barium	Strong Acid Extractable	ug/g	561	240	456
Beryllium	Strong Acid Extractable	ug/g	0.45	0.26	0.48
Bismuth	Strong Acid Extractable	ug/g	<0.5	0.7	<0.5
Cadmium	Strong Acid Extractable	ug/g	0.98	0.2	0.99
Calcium	Strong Acid Extractable	ug/g	5030	3420	5740
Chromium	Strong Acid Extractable	ug/g	19.5	13.2	21.0
Cobalt	Strong Acid Extractable	ug/g	7.72	5.74	8.77
Copper	Strong Acid Extractable	ug/g	19.3	11.4	19.4
Iron	Strong Acid Extractable	ug/g	22400	16100	21200
Lead	Strong Acid Extractable	ug/g	8.4	7.2	9.4
Lithium	Strong Acid Extractable	ug/g	13.8	9.5	14.6
Magnesium	Strong Acid Extractable	ug/g	4070	2800	4030
Manganese	Strong Acid Extractable	ug/g	334	191	278
Mercury	Strong Acid Extractable	ug/g	0.135	0.030	0.151
Molybdenum	Strong Acid Extractable	ug/g	1.3	0.3	0.93
Nickel	Strong Acid Extractable	ug/g	23.3	13.3	26.8
Phosphorus	Strong Acid Extractable	ug/g	830	577	803
Potassium	Strong Acid Extractable	ug/g	696	480	695
Selenium	Strong Acid Extractable	ug/g	1.0	0.4	1.3
Silicon	Strong Acid Extractable	ug/g	352	260	262
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	108	96	93
Strontium	Strong Acid Extractable	ug/g	43.8	21.1	44.2
Thallium	Strong Acid Extractable	ug/g	0.5	0.3	0.5
Tin	Strong Acid Extractable	ug/g	0.3	<0.2	0.2
Titanium	Strong Acid Extractable	ug/g	185	121	174
Vanadium	Strong Acid Extractable	ug/g	43.0	24.0	41.2
Zinc	Strong Acid Extractable	ug/g	94.0	43.2	111
Zirconium	Strong Acid Extractable	ug/g	3.8	2.9	3.5
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	0.3	0.2	0.8
850 micron sieve	% Retained	% by weight	7.6	1.4	2.8
425 micron sieve	% Retained	% by weight	36.8	3.8	5.7

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-1	569565-2	569565-3		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC1 - W5	BC2 - W15	BC3 - W4B		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	25.4	5.6	8.3	0.1
150 micron sieve	% Retained	% by weight	8.4	7.1	9.6	0.1
106 micron sieve	% Retained	% by weight	3.1	7.2	7.3	0.1
53 micron sieve	% Retained	% by weight	8.4	39.5	31.5	0.1
Pan	% Retained	% by weight	9.3	33.5	31.6	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.9	7.4	7.6	0.5

**Analytical Report**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-4	569565-5	569565-6		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC4 - W13	BC5 - W11	BC6 - W09		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	6.296	9.228	6.988	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	10700	10100	10000	1
Antimony	Strong Acid Extractable	ug/g	5.5	2.0	2.3	0.5
Arsenic	Strong Acid Extractable	ug/g	34.1	7.0	14.7	0.2
Barium	Strong Acid Extractable	ug/g	422	629	562	0.03
Beryllium	Strong Acid Extractable	ug/g	0.42	0.43	0.47	0.01
Bismuth	Strong Acid Extractable	ug/g	1.3	1.4	1.9	0.5
Cadmium	Strong Acid Extractable	ug/g	1.7	2.4	1.4	0.05
Calcium	Strong Acid Extractable	ug/g	11400	7390	5190	2
Chromium	Strong Acid Extractable	ug/g	22.1	21.4	18.7	0.04
Cobalt	Strong Acid Extractable	ug/g	10.6	9.58	9.66	0.05
Copper	Strong Acid Extractable	ug/g	31.4	38.6	28.9	0.05
Iron	Strong Acid Extractable	ug/g	27600	24700	26000	1
Lead	Strong Acid Extractable	ug/g	21.0	7.4	11.0	0.3
Lithium	Strong Acid Extractable	ug/g	15.2	13.2	19.5	0.1
Magnesium	Strong Acid Extractable	ug/g	6450	4560	4590	1
Manganese	Strong Acid Extractable	ug/g	518	463	552	0.3
Mercury	Strong Acid Extractable	ug/g	0.295	0.257	0.131	0.003
Molybdenum	Strong Acid Extractable	ug/g	1.1	2.1	1.6	0.05
Nickel	Strong Acid Extractable	ug/g	37.8	51.0	35.5	0.1
Phosphorus	Strong Acid Extractable	ug/g	704	1040	851	0.5
Potassium	Strong Acid Extractable	ug/g	878	759	782	5
Selenium	Strong Acid Extractable	ug/g	1.2	2.5	1.5	0.3
Silicon	Strong Acid Extractable	ug/g	196	311	189	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	152	87	104	1
Strontium	Strong Acid Extractable	ug/g	54.9	52.1	45.6	0.02
Thallium	Strong Acid Extractable	ug/g	0.5	0.7	0.3	0.3
Tin	Strong Acid Extractable	ug/g	0.4	0.4	0.3	0.2
Titanium	Strong Acid Extractable	ug/g	222	151	88.2	0.05
Vanadium	Strong Acid Extractable	ug/g	43.0	64.0	43.1	0.1
Zinc	Strong Acid Extractable	ug/g	122	281	163	0.1
Zirconium	Strong Acid Extractable	ug/g	4.6	3.7	3.0	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	0.3	31.3	5.5	0.1
850 micron sieve	% Retained	% by weight	1.1	16.9	12.3	0.1
425 micron sieve	% Retained	% by weight	3.4	20.6	7.9	0.1

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-4	569565-5	569565-6		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC4 - W13	BC5 - W11	BC6 - W09		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	5.4	9.7	6.8	0.1
150 micron sieve	% Retained	% by weight	7.0	4.7	15.3	0.1
106 micron sieve	% Retained	% by weight	6.0	2.4	10.2	0.1
53 micron sieve	% Retained	% by weight	25.5	5.6	20.4	0.1
Pan	% Retained	% by weight	49.8	7.8	17.7	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.8	7.6	7.6	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-7	569565-8	569565-9	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC31 - W2	BC32 - W3	BC33 - W6A	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	6.452	1.754	9.788
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	9620	6640	10400
Antimony	Strong Acid Extractable	ug/g	4.0	46.0	3.5
Arsenic	Strong Acid Extractable	ug/g	16.7	94.0	7.5
Barium	Strong Acid Extractable	ug/g	738	612	613
Beryllium	Strong Acid Extractable	ug/g	0.46	0.47	0.54
Bismuth	Strong Acid Extractable	ug/g	1.7	1.7	0.9
Cadmium	Strong Acid Extractable	ug/g	1.2	3.3	3.5
Calcium	Strong Acid Extractable	ug/g	6140	4880	8710
Chromium	Strong Acid Extractable	ug/g	21.2	14.0	24.1
Cobalt	Strong Acid Extractable	ug/g	9.23	9.02	10.2
Copper	Strong Acid Extractable	ug/g	31.2	31.9	58.0
Iron	Strong Acid Extractable	ug/g	26200	25900	28300
Lead	Strong Acid Extractable	ug/g	9.9	16.1	9.8
Lithium	Strong Acid Extractable	ug/g	16.4	9.4	13.9
Magnesium	Strong Acid Extractable	ug/g	4640	2410	5650
Manganese	Strong Acid Extractable	ug/g	401	523	515
Mercury	Strong Acid Extractable	ug/g	0.155	0.517	0.297
Molybdenum	Strong Acid Extractable	ug/g	2.1	4.2	4.4
Nickel	Strong Acid Extractable	ug/g	39.7	39.8	68.3
Phosphorus	Strong Acid Extractable	ug/g	1020	674	1310
Potassium	Strong Acid Extractable	ug/g	757	808	983
Selenium	Strong Acid Extractable	ug/g	1.7	3.2	2.7
Silicon	Strong Acid Extractable	ug/g	320	140	258
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	76	61	85
Strontium	Strong Acid Extractable	ug/g	54.2	56.2	70.4
Thallium	Strong Acid Extractable	ug/g	0.5	1.0	0.6
Tin	Strong Acid Extractable	ug/g	0.3	0.8	0.5
Titanium	Strong Acid Extractable	ug/g	83.5	32.0	148
Vanadium	Strong Acid Extractable	ug/g	57.2	45.0	91.9
Zinc	Strong Acid Extractable	ug/g	177	176	336
Zirconium	Strong Acid Extractable	ug/g	2.6	2.3	3.8
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	0.2	0.6	14.2
850 micron sieve	% Retained	% by weight	0.3	2.8	27.1
425 micron sieve	% Retained	% by weight	2.2	9.0	38.5

## Analytical Report

Bill To: Alexco Resource Corp. Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: D.Desmarais Company: ACG	Project: ID: BC Quarterly Sampling Name: Brewery Creek Location: Brewery Creek LSD: P.O.: 4303-ACG Acct code: ALEX-06-BCM-01(Additional)	Lot ID: <b>569565</b> Control Number: Date Received: Aug 27, 2007 Date Reported: Oct 3, 2007 Report Number: 1051044
---	--	---

	Reference Number	569565-7	569565-8	569565-9		
	<b>Sample Date</b>	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	<b>Sample Location</b>					
	<b>Sample Description</b>	BC31 - W2	BC32 - W3	BC33 - W6A		
	<b>Matrix</b>	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	6.8	12.5	11.7	0.1
150 micron sieve	% Retained	% by weight	19.2	18.7	2.3	0.1
106 micron sieve	% Retained	% by weight	14.4	11.8	1.1	0.1
53 micron sieve	% Retained	% by weight	29.9	20.4	1.7	0.1
Pan	% Retained	% by weight	25.6	20.6	2.2	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.9	7.3	8.1	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-10	569565-11	569565-12	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC34 - W7	BC35 - W14	BC36 - W16	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	2.906	10.40	7.328
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	9910	10100	9550
Antimony	Strong Acid Extractable	ug/g	3.0	4.1	1.5
Arsenic	Strong Acid Extractable	ug/g	5.9	18.2	4.8
Barium	Strong Acid Extractable	ug/g	629	775	466
Beryllium	Strong Acid Extractable	ug/g	0.50	0.39	0.46
Bismuth	Strong Acid Extractable	ug/g	0.9	1.4	1.6
Cadmium	Strong Acid Extractable	ug/g	2.3	2.9	1.2
Calcium	Strong Acid Extractable	ug/g	7610	8220	6120
Chromium	Strong Acid Extractable	ug/g	23.1	26.2	18.7
Cobalt	Strong Acid Extractable	ug/g	10.3	11.3	7.56
Copper	Strong Acid Extractable	ug/g	47.4	25.6	37.4
Iron	Strong Acid Extractable	ug/g	27300	25200	22800
Lead	Strong Acid Extractable	ug/g	8.4	6.1	7.2
Lithium	Strong Acid Extractable	ug/g	13.7	17.8	14.4
Magnesium	Strong Acid Extractable	ug/g	5500	5050	4280
Manganese	Strong Acid Extractable	ug/g	533	656	284
Mercury	Strong Acid Extractable	ug/g	0.266	0.598	0.135
Molybdenum	Strong Acid Extractable	ug/g	3.6	1.1	2.5
Nickel	Strong Acid Extractable	ug/g	59.3	66.0	36.8
Phosphorus	Strong Acid Extractable	ug/g	1470	832	1010
Potassium	Strong Acid Extractable	ug/g	974	672	849
Selenium	Strong Acid Extractable	ug/g	2.6	2.1	1.9
Silicon	Strong Acid Extractable	ug/g	220	257	315
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	76	88	75
Strontium	Strong Acid Extractable	ug/g	64.3	59.0	49.1
Thallium	Strong Acid Extractable	ug/g	0.4	0.6	0.8
Tin	Strong Acid Extractable	ug/g	0.3	<0.2	0.2
Titanium	Strong Acid Extractable	ug/g	136	102	91.3
Vanadium	Strong Acid Extractable	ug/g	83.5	50.8	61.6
Zinc	Strong Acid Extractable	ug/g	302	395	189
Zirconium	Strong Acid Extractable	ug/g	3.3	2.5	2.6
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	4.0	1.0	1.7
850 micron sieve	% Retained	% by weight	4.6	2.4	3.1
425 micron sieve	% Retained	% by weight	7.2	4.3	15.1

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	
Report To: Access Mining Consultants Ltd.	ID:	BC Quarterly Sampling
# 3 Calcite Business Centre	Name:	Brewery Creek
151 Industrial Road	Location:	Brewery Creek
Whitehorse, YT, Canada	LSD:	
Y1A 2V3	P.O.:	4303-ACG
Attn: Dave Desmarais	Acct code:	ALEX-06-BCM-01(Additional)
Sampled By: D.Desmarais		
Company: ACG		

Lot ID: **569565**  
 Control Number:  
 Date Received: Aug 27, 2007  
 Date Reported: Oct 3, 2007  
 Report Number: 1051044

	Reference Number	569565-10	569565-11	569565-12		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC34 - W7	BC35 - W14	BC36 - W16		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	13.1	6.4	29.2	0.1
150 micron sieve	% Retained	% by weight	15.4	11.3	15.5	0.1
106 micron sieve	% Retained	% by weight	9.4	9.4	5.7	0.1
53 micron sieve	% Retained	% by weight	19.0	32.8	14.1	0.1
Pan	% Retained	% by weight	25.1	29.7	14.6	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.8	7.9	7.2	0.5



## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-13	569565-14	569565-15	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC37 - W5A	BC38 - W8	BC39 - W39	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	1.509	6.596	11.07
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	10300	9250	13300
Antimony	Strong Acid Extractable	ug/g	7.6	1.5	19.5
Arsenic	Strong Acid Extractable	ug/g	25.9	9.2	96.5
Barium	Strong Acid Extractable	ug/g	490	472	571
Beryllium	Strong Acid Extractable	ug/g	0.51	0.40	0.75
Bismuth	Strong Acid Extractable	ug/g	1.2	1.2	2.5
Cadmium	Strong Acid Extractable	ug/g	1.2	1.1	2.9
Calcium	Strong Acid Extractable	ug/g	6730	4430	6590
Chromium	Strong Acid Extractable	ug/g	21.4	16.4	23.7
Cobalt	Strong Acid Extractable	ug/g	9.20	9.18	12.4
Copper	Strong Acid Extractable	ug/g	28.4	23.8	33.7
Iron	Strong Acid Extractable	ug/g	23300	22800	35000
Lead	Strong Acid Extractable	ug/g	11.6	10.0	16.9
Lithium	Strong Acid Extractable	ug/g	14.9	18.6	23.6
Magnesium	Strong Acid Extractable	ug/g	4490	4010	4730
Manganese	Strong Acid Extractable	ug/g	418	552	1260
Mercury	Strong Acid Extractable	ug/g	0.109	0.084	0.375
Molybdenum	Strong Acid Extractable	ug/g	1.2	0.87	3.0
Nickel	Strong Acid Extractable	ug/g	29.2	29.8	41.6
Phosphorus	Strong Acid Extractable	ug/g	689	733	990
Potassium	Strong Acid Extractable	ug/g	711	652	1120
Selenium	Strong Acid Extractable	ug/g	1.5	1.0	3.7
Silicon	Strong Acid Extractable	ug/g	326	245	395
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	118	90	96
Strontium	Strong Acid Extractable	ug/g	50.5	37.5	57.8
Thallium	Strong Acid Extractable	ug/g	0.3	0.4	<0.3
Tin	Strong Acid Extractable	ug/g	0.4	0.4	0.6
Titanium	Strong Acid Extractable	ug/g	186	79.4	51.5
Vanadium	Strong Acid Extractable	ug/g	41.4	29.2	66.8
Zinc	Strong Acid Extractable	ug/g	125	138	168
Zirconium	Strong Acid Extractable	ug/g	4.6	3.0	2.8
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	0.8	45.8	18.7
850 micron sieve	% Retained	% by weight	3.1	16.1	24.3
425 micron sieve	% Retained	% by weight	7.1	14.0	15.3

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	
Report To: Access Mining Consultants Ltd.	ID:	BC Quarterly Sampling
# 3 Calcite Business Centre	Name:	Brewery Creek
151 Industrial Road	Location:	Brewery Creek
Whitehorse, YT, Canada	LSD:	
Y1A 2V3	P.O.:	4303-ACG
Attn: Dave Desmarais	Acct code:	ALEX-06-BCM-01(Additional)
Sampled By: D.Desmarais		
Company: ACG		

Lot ID: **569565**  
 Control Number:  
 Date Received: Aug 27, 2007  
 Date Reported: Oct 3, 2007  
 Report Number: 1051044

	Reference Number	569565-13	569565-14	569565-15		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC37 - W5A	BC38 - W8	BC39 - W39		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	8.8	6.5	9.5	0.1
150 micron sieve	% Retained	% by weight	10.4	6.0	7.2	0.1
106 micron sieve	% Retained	% by weight	7.8	2.7	4.9	0.1
53 micron sieve	% Retained	% by weight	31.8	5.0	12.8	0.1
Pan	% Retained	% by weight	29.5	3.2	6.9	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.5	7.4	7.4	0.5

**Analytical Report**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-16	569565-17	569565-18		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC53 - W53	BC1 - W5-A	BC2 - W15-A		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	10.80	6.977	4.097	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	8820	11400	8620	1
Antimony	Strong Acid Extractable	ug/g	6.1	7.2	1.5	0.5
Arsenic	Strong Acid Extractable	ug/g	19.6	24.6	4.7	0.2
Barium	Strong Acid Extractable	ug/g	485	498	224	0.03
Beryllium	Strong Acid Extractable	ug/g	0.39	0.55	0.31	0.01
Bismuth	Strong Acid Extractable	ug/g	1.0	0.8	<0.5	0.5
Cadmium	Strong Acid Extractable	ug/g	1.1	0.87	0.2	0.05
Calcium	Strong Acid Extractable	ug/g	8580	6310	3780	2
Chromium	Strong Acid Extractable	ug/g	17.6	22.7	15.0	0.04
Cobalt	Strong Acid Extractable	ug/g	7.75	9.14	6.58	0.05
Copper	Strong Acid Extractable	ug/g	19.7	25.2	12.6	0.05
Iron	Strong Acid Extractable	ug/g	20300	24700	17800	1
Lead	Strong Acid Extractable	ug/g	7.2	8.3	6.7	0.3
Lithium	Strong Acid Extractable	ug/g	12.3	16.3	10.7	0.1
Magnesium	Strong Acid Extractable	ug/g	3910	5020	3210	1
Manganese	Strong Acid Extractable	ug/g	330	354	234	0.3
Mercury	Strong Acid Extractable	ug/g	0.090	0.110	0.035	0.003
Molybdenum	Strong Acid Extractable	ug/g	0.92	1.1	0.3	0.05
Nickel	Strong Acid Extractable	ug/g	25.6	27.8	14.6	0.1
Phosphorus	Strong Acid Extractable	ug/g	850	741	610	0.5
Potassium	Strong Acid Extractable	ug/g	614	788	561	5
Selenium	Strong Acid Extractable	ug/g	2.3	<0.3	<0.3	0.3
Silicon	Strong Acid Extractable	ug/g	354	101	78	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	111	135	111	1
Strontium	Strong Acid Extractable	ug/g	55.9	51.8	24.7	0.02
Thallium	Strong Acid Extractable	ug/g	1.0	0.2	<0.3	0.3
Tin	Strong Acid Extractable	ug/g	<0.2	0.4	0.4	0.2
Titanium	Strong Acid Extractable	ug/g	188	234	170	0.05
Vanadium	Strong Acid Extractable	ug/g	35.8	46.2	28.0	0.1
Zinc	Strong Acid Extractable	ug/g	84.7	94.9	47.3	0.1
Zirconium	Strong Acid Extractable	ug/g	3.5	4.8	3.4	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	2.7	0.9	0.6	0.1
850 micron sieve	% Retained	% by weight	4.5	1.9	1.2	0.1
425 micron sieve	% Retained	% by weight	9.2	3.7	2.7	0.1

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-16	569565-17	569565-18		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC53 - W53	BC1 - W5-A	BC2 - W15-A		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	9.8	5.0	4.6	0.1
150 micron sieve	% Retained	% by weight	7.5	6.2	6.2	0.1
106 micron sieve	% Retained	% by weight	5.8	5.7	6.3	0.1
53 micron sieve	% Retained	% by weight	26.9	33.5	52.4	0.1
Pan	% Retained	% by weight	33.1	43.0	25.8	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.4	7.6	7.6	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-19	569565-20	569565-21		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC3 - W4B-A	BC4 - W13-A	BC5 - W11-A		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	7.067	6.006	10.71	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	8900	10500	9000	1
Antimony	Strong Acid Extractable	ug/g	12.6	6.4	2.4	0.5
Arsenic	Strong Acid Extractable	ug/g	31.3	32.8	7.2	0.2
Barium	Strong Acid Extractable	ug/g	344	344	535	0.03
Beryllium	Strong Acid Extractable	ug/g	0.53	0.41	0.44	0.01
Bismuth	Strong Acid Extractable	ug/g	<0.5	1.0	0.8	0.5
Cadmium	Strong Acid Extractable	ug/g	1.3	1.4	2.1	0.05
Calcium	Strong Acid Extractable	ug/g	6590	9840	6970	2
Chromium	Strong Acid Extractable	ug/g	18.7	21.0	19.5	0.04
Cobalt	Strong Acid Extractable	ug/g	11.6	10.5	9.34	0.05
Copper	Strong Acid Extractable	ug/g	22.3	27.8	36.6	0.05
Iron	Strong Acid Extractable	ug/g	22000	26400	22600	1
Lead	Strong Acid Extractable	ug/g	8.3	18.5	6.6	0.3
Lithium	Strong Acid Extractable	ug/g	14.2	15.1	12.5	0.1
Magnesium	Strong Acid Extractable	ug/g	4400	6270	4460	1
Manganese	Strong Acid Extractable	ug/g	712	618	831	0.3
Mercury	Strong Acid Extractable	ug/g	0.153	0.223	0.336	0.003
Molybdenum	Strong Acid Extractable	ug/g	1.1	0.94	2.0	0.05
Nickel	Strong Acid Extractable	ug/g	30.3	32.6	43.9	0.1
Phosphorus	Strong Acid Extractable	ug/g	715	672	949	0.5
Potassium	Strong Acid Extractable	ug/g	799	853	785	5
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3	0.3
Silicon	Strong Acid Extractable	ug/g	59	111	57	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	105	156	76	1
Strontium	Strong Acid Extractable	ug/g	50.0	51.9	51.4	0.02
Thallium	Strong Acid Extractable	ug/g	0.4	<0.3	<0.3	0.3
Tin	Strong Acid Extractable	ug/g	0.6	0.4	0.5	0.2
Titanium	Strong Acid Extractable	ug/g	158	227	102	0.05
Vanadium	Strong Acid Extractable	ug/g	37.8	42.2	61.5	0.1
Zinc	Strong Acid Extractable	ug/g	110	122	277	0.1
Zirconium	Strong Acid Extractable	ug/g	3.1	4.1	2.5	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	14.1	23.8	31.8	0.1
850 micron sieve	% Retained	% by weight	7.4	4.2	19.3	0.1
425 micron sieve	% Retained	% by weight	11.2	2.6	22.7	0.1

## Analytical Report

Bill To: Alexco Resource Corp. Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: D.Desmarais Company: ACG	Project: ID: BC Quarterly Sampling Name: Brewery Creek Location: Brewery Creek LSD: P.O.: 4303-ACG Acct code: ALEX-06-BCM-01(Additional)	Lot ID: <b>569565</b> Control Number: Date Received: Aug 27, 2007 Date Reported: Oct 3, 2007 Report Number: 1051044
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	Reference Number	569565-19	569565-20	569565-21		
	<b>Sample Date</b>	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	<b>Sample Location</b>					
	<b>Sample Description</b>	BC3 - W4B-A	BC4 - W13-A	BC5 - W11-A		
	<b>Matrix</b>	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	12.9	2.5	9.3	0.1
150 micron sieve	% Retained	% by weight	9.7	2.7	3.7	0.1
106 micron sieve	% Retained	% by weight	5.5	2.4	1.9	0.1
53 micron sieve	% Retained	% by weight	30.3	25.1	7.1	0.1
Pan	% Retained	% by weight	8.4	35.9	3.6	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	8.0	8.1	7.9	0.5

**Analytical Report**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-22	569565-23	569565-24		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC6 - W09-A	BC31 - W2-A	BC32 - W3-A		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	6.330	8.605	5.980	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	9840	10200	6860	1
Antimony	Strong Acid Extractable	ug/g	1.9	4.8	55.3	0.5
Arsenic	Strong Acid Extractable	ug/g	11.8	18.5	108	0.2
Barium	Strong Acid Extractable	ug/g	522	778	642	0.03
Beryllium	Strong Acid Extractable	ug/g	0.50	0.55	0.54	0.01
Bismuth	Strong Acid Extractable	ug/g	1.1	1.7	1.1	0.5
Cadmium	Strong Acid Extractable	ug/g	1.1	1.6	2.7	0.05
Calcium	Strong Acid Extractable	ug/g	4630	6780	4680	2
Chromium	Strong Acid Extractable	ug/g	18.4	22.4	14.3	0.04
Cobalt	Strong Acid Extractable	ug/g	9.72	10.4	9.13	0.05
Copper	Strong Acid Extractable	ug/g	28.1	37.9	37.9	0.05
Iron	Strong Acid Extractable	ug/g	24800	26500	26700	1
Lead	Strong Acid Extractable	ug/g	10.2	10.1	16.4	0.3
Lithium	Strong Acid Extractable	ug/g	19.2	17.3	8.8	0.1
Magnesium	Strong Acid Extractable	ug/g	4690	4930	2400	1
Manganese	Strong Acid Extractable	ug/g	482	520	629	0.3
Mercury	Strong Acid Extractable	ug/g	0.135	0.237	0.675	0.003
Molybdenum	Strong Acid Extractable	ug/g	1.4	2.1	4.8	0.05
Nickel	Strong Acid Extractable	ug/g	32.2	41.9	35.1	0.1
Phosphorus	Strong Acid Extractable	ug/g	820	975	631	0.5
Potassium	Strong Acid Extractable	ug/g	796	902	986	5
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3	0.3
Silicon	Strong Acid Extractable	ug/g	110	61	117	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	96	83	62	1
Strontium	Strong Acid Extractable	ug/g	42.9	60.9	63.7	0.02
Thallium	Strong Acid Extractable	ug/g	<0.3	0.5	0.4	0.3
Tin	Strong Acid Extractable	ug/g	0.4	0.6	0.9	0.2
Titanium	Strong Acid Extractable	ug/g	83.2	83.3	32.4	0.05
Vanadium	Strong Acid Extractable	ug/g	43.8	63.0	48.8	0.1
Zinc	Strong Acid Extractable	ug/g	168	192	171	0.1
Zirconium	Strong Acid Extractable	ug/g	2.8	2.5	2.8	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	18.0	3.8	1.5	0.1
850 micron sieve	% Retained	% by weight	19.1	17.5	1.2	0.1
425 micron sieve	% Retained	% by weight	13.3	31.9	3.9	0.1

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	
Report To: Access Mining Consultants Ltd.	ID:	BC Quarterly Sampling
# 3 Calcite Business Centre	Name:	Brewery Creek
151 Industrial Road	Location:	Brewery Creek
Whitehorse, YT, Canada	LSD:	
Y1A 2V3	P.O.:	4303-ACG
Attn: Dave Desmarais	Acct code:	ALEX-06-BCM-01(Additional)
Sampled By: D.Desmarais		
Company: ACG		

Lot ID: **569565**  
 Control Number:  
 Date Received: Aug 27, 2007  
 Date Reported: Oct 3, 2007  
 Report Number: 1051044

	Reference Number	569565-22	569565-23	569565-24		
	<b>Sample Date</b>	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	<b>Sample Location</b>					
	<b>Sample Description</b>	BC6 - W09-A	BC31 - W2-A	BC32 - W3-A		
	<b>Matrix</b>	Soil	Soil	Soil		
<b>Analyte</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>Detection Limit</b>	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	8.0	16.3	9.3	0.1
150 micron sieve	% Retained	% by weight	7.7	9.6	17.6	0.1
106 micron sieve	% Retained	% by weight	5.4	3.6	10.6	0.1
53 micron sieve	% Retained	% by weight	20.9	7.7	26.6	0.1
Pan	% Retained	% by weight	6.3	8.1	27.7	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.8	7.9	7.9	0.5



## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-25	569565-26	569565-27	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC33 - W6A-A	BC34 - W7-A	BC35 - W14-A	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	7.731	12.04	7.651
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	11300	10300	10000
Antimony	Strong Acid Extractable	ug/g	2.6	4.2	4.0
Arsenic	Strong Acid Extractable	ug/g	5.6	7.6	17.9
Barium	Strong Acid Extractable	ug/g	718	548	755
Beryllium	Strong Acid Extractable	ug/g	0.63	0.64	0.40
Bismuth	Strong Acid Extractable	ug/g	0.7	1.1	1.2
Cadmium	Strong Acid Extractable	ug/g	3.9	4.2	2.0
Calcium	Strong Acid Extractable	ug/g	8090	8400	7040
Chromium	Strong Acid Extractable	ug/g	26.4	25.2	26.0
Cobalt	Strong Acid Extractable	ug/g	11.4	13.3	12.2
Copper	Strong Acid Extractable	ug/g	64.6	73.4	24.0
Iron	Strong Acid Extractable	ug/g	28900	26600	26200
Lead	Strong Acid Extractable	ug/g	9.4	9.9	5.4
Lithium	Strong Acid Extractable	ug/g	15.0	14.4	18.1
Magnesium	Strong Acid Extractable	ug/g	6210	5780	5290
Manganese	Strong Acid Extractable	ug/g	602	843	638
Mercury	Strong Acid Extractable	ug/g	0.345	0.400	0.472
Molybdenum	Strong Acid Extractable	ug/g	3.8	4.0	1.0
Nickel	Strong Acid Extractable	ug/g	62.2	74.3	50.1
Phosphorus	Strong Acid Extractable	ug/g	1510	1250	863
Potassium	Strong Acid Extractable	ug/g	1210	1120	704
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3
Silicon	Strong Acid Extractable	ug/g	94	67	47
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	80	80	87
Strontium	Strong Acid Extractable	ug/g	72.5	69.8	53.3
Thallium	Strong Acid Extractable	ug/g	<0.3	0.3	0.3
Tin	Strong Acid Extractable	ug/g	1.2	1.2	0.6
Titanium	Strong Acid Extractable	ug/g	174	126	114
Vanadium	Strong Acid Extractable	ug/g	102	103	51.4
Zinc	Strong Acid Extractable	ug/g	346	385	347
Zirconium	Strong Acid Extractable	ug/g	3.9	3.3	2.4
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	21.6	7.5	0.8
850 micron sieve	% Retained	% by weight	21.3	35.6	5.0
425 micron sieve	% Retained	% by weight	31.8	36.5	6.7

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-25	569565-26	569565-27		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC33 - W6A-A	BC34 - W7-A	BC35 - W14-A		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	17.0	9.4	7.7	0.1
150 micron sieve	% Retained	% by weight	3.6	3.3	13.9	0.1
106 micron sieve	% Retained	% by weight	1.0	1.6	11.8	0.1
53 micron sieve	% Retained	% by weight	1.5	2.8	32.4	0.1
Pan	% Retained	% by weight	1.5	2.7	21.5	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	8.2	8.2	8.0	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-28	569565-29	569565-30	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC36 - W16-A	BC37 - W5A-A	BC38 - W8-A	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	6.471	5.349	5.476
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	9500	10000	10700
Antimony	Strong Acid Extractable	ug/g	2.2	7.3	2.3
Arsenic	Strong Acid Extractable	ug/g	5.7	20.4	20.8
Barium	Strong Acid Extractable	ug/g	334	368	399
Beryllium	Strong Acid Extractable	ug/g	0.50	0.47	0.66
Bismuth	Strong Acid Extractable	ug/g	1.0	<0.5	1.5
Cadmium	Strong Acid Extractable	ug/g	1.4	0.98	1.6
Calcium	Strong Acid Extractable	ug/g	6060	5690	4230
Chromium	Strong Acid Extractable	ug/g	19.1	19.8	19.1
Cobalt	Strong Acid Extractable	ug/g	8.00	8.62	13.2
Copper	Strong Acid Extractable	ug/g	37.7	21.1	121
Iron	Strong Acid Extractable	ug/g	23200	22100	32500
Lead	Strong Acid Extractable	ug/g	7.0	7.5	13.6
Lithium	Strong Acid Extractable	ug/g	13.8	14.6	21.4
Magnesium	Strong Acid Extractable	ug/g	4400	4510	5370
Manganese	Strong Acid Extractable	ug/g	428	442	892
Mercury	Strong Acid Extractable	ug/g	0.175	0.092	0.131
Molybdenum	Strong Acid Extractable	ug/g	2.9	0.93	2.3
Nickel	Strong Acid Extractable	ug/g	37.6	25.7	42.9
Phosphorus	Strong Acid Extractable	ug/g	1020	753	929
Potassium	Strong Acid Extractable	ug/g	972	754	1180
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3
Silicon	Strong Acid Extractable	ug/g	59	64	146
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	79	125	88
Strontium	Strong Acid Extractable	ug/g	53.5	45.3	43.6
Thallium	Strong Acid Extractable	ug/g	0.4	<0.3	<0.3
Tin	Strong Acid Extractable	ug/g	0.5	0.6	6.8
Titanium	Strong Acid Extractable	ug/g	92.9	220	47.2
Vanadium	Strong Acid Extractable	ug/g	70.4	41.9	47.0
Zinc	Strong Acid Extractable	ug/g	222	90.8	179
Zirconium	Strong Acid Extractable	ug/g	2.4	4.0	4.5
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	4.3	1.8	<0.1
850 micron sieve	% Retained	% by weight	14.5	28.1	11.7
425 micron sieve	% Retained	% by weight	20.1	24.3	45.7

## Analytical Report

Bill To: Alexco Resource Corp. Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: D.Desmarais Company: ACG	Project: ID: BC Quarterly Sampling Name: Brewery Creek Location: Brewery Creek LSD: P.O.: 4303-ACG Acct code: ALEX-06-BCM-01(Additional)	Lot ID: <b>569565</b> Control Number: Date Received: Aug 27, 2007 Date Reported: Oct 3, 2007 Report Number: 1051044
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	Reference Number	569565-28	569565-29	569565-30		
	<b>Sample Date</b>	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	<b>Sample Location</b>					
	<b>Sample Description</b>	BC36 - W16-A	BC37 - W5A-A	BC38 - W8-A		
	<b>Matrix</b>	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	20.3	3.0	39.2	0.1
150 micron sieve	% Retained	% by weight	12.9	3.2	2.2	0.1
106 micron sieve	% Retained	% by weight	4.9	3.0	0.2	0.1
53 micron sieve	% Retained	% by weight	11.6	16.4	0.2	0.1
Pan	% Retained	% by weight	11.0	19.3	0.3	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.4	7.8	7.6	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-31	569565-32	569565-33	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC39 - W39-A	BC53 - W53-A	BC1 - W5-B	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	12.15	7.326	5.111
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	12800	11400	10000
Antimony	Strong Acid Extractable	ug/g	12.4	9.1	9.2
Arsenic	Strong Acid Extractable	ug/g	63.3	23.8	31.3
Barium	Strong Acid Extractable	ug/g	515	421	464
Beryllium	Strong Acid Extractable	ug/g	0.73	0.53	0.54
Bismuth	Strong Acid Extractable	ug/g	1.8	0.8	0.8
Cadmium	Strong Acid Extractable	ug/g	1.7	0.98	0.85
Calcium	Strong Acid Extractable	ug/g	6090	6440	5310
Chromium	Strong Acid Extractable	ug/g	22.4	22.5	20.9
Cobalt	Strong Acid Extractable	ug/g	12.3	10.3	8.35
Copper	Strong Acid Extractable	ug/g	36.5	33.1	25.4
Iron	Strong Acid Extractable	ug/g	32200	25600	23600
Lead	Strong Acid Extractable	ug/g	14.8	9.7	9.7
Lithium	Strong Acid Extractable	ug/g	24.4	16.4	15.4
Magnesium	Strong Acid Extractable	ug/g	4770	4950	4480
Manganese	Strong Acid Extractable	ug/g	1220	469	393
Mercury	Strong Acid Extractable	ug/g	0.318	0.118	0.128
Molybdenum	Strong Acid Extractable	ug/g	2.3	1.0	1.3
Nickel	Strong Acid Extractable	ug/g	33.1	30.0	25.0
Phosphorus	Strong Acid Extractable	ug/g	796	792	802
Potassium	Strong Acid Extractable	ug/g	1040	794	800
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3
Silicon	Strong Acid Extractable	ug/g	96	95	87
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	86	130	112
Strontium	Strong Acid Extractable	ug/g	54.3	51.6	49.1
Thallium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3
Tin	Strong Acid Extractable	ug/g	1.0	1.0	1.4
Titanium	Strong Acid Extractable	ug/g	39.3	207	181
Vanadium	Strong Acid Extractable	ug/g	59.8	45.8	47.2
Zinc	Strong Acid Extractable	ug/g	149	114	102
Zirconium	Strong Acid Extractable	ug/g	2.0	4.5	3.6
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	11.4	15.2	26.3
850 micron sieve	% Retained	% by weight	21.4	5.2	22.0
425 micron sieve	% Retained	% by weight	15.4	6.8	15.6

## Analytical Report

Bill To: Alexco Resource Corp. Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: D.Desmarais Company: ACG	Project: ID: BC Quarterly Sampling Name: Brewery Creek Location: Brewery Creek LSD: P.O.: 4303-ACG Acct code: ALEX-06-BCM-01(Additional)	Lot ID: <b>569565</b> Control Number: Date Received: Aug 27, 2007 Date Reported: Oct 3, 2007 Report Number: 1051044
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	Reference Number	569565-31	569565-32	569565-33		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC39 - W39-A	BC53 - W53-A	BC1 - W5-B		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	11.7	7.8	13.1	0.1
150 micron sieve	% Retained	% by weight	8.5	5.7	4.8	0.1
106 micron sieve	% Retained	% by weight	5.6	3.6	1.9	0.1
53 micron sieve	% Retained	% by weight	12.3	19.2	8.7	0.1
Pan	% Retained	% by weight	13.1	35.0	6.8	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.9	7.8	7.9	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-34	569565-35	569565-36	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC2 - W15-B	BC3 - W4B-B	BC4 - W13-B	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	2.312	7.825	4.086
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	8020	10400	8810
Antimony	Strong Acid Extractable	ug/g	1.8	15.3	6.9
Arsenic	Strong Acid Extractable	ug/g	4.2	41.6	34.7
Barium	Strong Acid Extractable	ug/g	177	415	625
Beryllium	Strong Acid Extractable	ug/g	0.27	0.67	0.37
Bismuth	Strong Acid Extractable	ug/g	<0.5	0.9	1.0
Cadmium	Strong Acid Extractable	ug/g	0.2	1.5	1.1
Calcium	Strong Acid Extractable	ug/g	3350	7180	7700
Chromium	Strong Acid Extractable	ug/g	14.0	22.3	18.5
Cobalt	Strong Acid Extractable	ug/g	5.78	13.0	8.52
Copper	Strong Acid Extractable	ug/g	12.1	30.1	22.0
Iron	Strong Acid Extractable	ug/g	16600	25500	23500
Lead	Strong Acid Extractable	ug/g	5.9	12.5	13.8
Lithium	Strong Acid Extractable	ug/g	10.2	16.9	13.3
Magnesium	Strong Acid Extractable	ug/g	3230	4840	4960
Manganese	Strong Acid Extractable	ug/g	196	845	519
Mercury	Strong Acid Extractable	ug/g	0.028	0.220	0.246
Molybdenum	Strong Acid Extractable	ug/g	0.3	1.2	1.2
Nickel	Strong Acid Extractable	ug/g	13.5	35.5	26.7
Phosphorus	Strong Acid Extractable	ug/g	576	799	726
Potassium	Strong Acid Extractable	ug/g	533	955	732
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3
Silicon	Strong Acid Extractable	ug/g	115	60	113
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	112	119	120
Strontium	Strong Acid Extractable	ug/g	22.1	57.9	48.6
Thallium	Strong Acid Extractable	ug/g	<0.3	0.3	<0.3
Tin	Strong Acid Extractable	ug/g	0.5	2.9	0.6
Titanium	Strong Acid Extractable	ug/g	181	193	183
Vanadium	Strong Acid Extractable	ug/g	25.2	45.8	43.0
Zinc	Strong Acid Extractable	ug/g	45.1	128	118
Zirconium	Strong Acid Extractable	ug/g	3.4	3.6	3.2
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	<0.1	25.8	13.1
850 micron sieve	% Retained	% by weight	0.6	5.5	23.9
425 micron sieve	% Retained	% by weight	0.4	7.2	16.6

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-34	569565-35	569565-36		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC2 - W15-B	BC3 - W4B-B	BC4 - W13-B		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	0.6	11.0	8.2	0.1
150 micron sieve	% Retained	% by weight	1.4	8.3	4.3	0.1
106 micron sieve	% Retained	% by weight	2.5	4.4	1.9	0.1
53 micron sieve	% Retained	% by weight	52.9	19.6	11.9	0.1
Pan	% Retained	% by weight	40.4	18.0	19.8	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.6	8.0	8.1	0.5



## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

		Reference Number	569565-37	569565-38	569565-39	
		Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
		Sample Location				
		Sample Description	BC5 - W11-B	BC6 - W09-B	BC31 - W2-B	
		Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	9.654	6.721	6.900	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	11500	10400	10200	1
Antimony	Strong Acid Extractable	ug/g	2.8	2.0	4.6	0.5
Arsenic	Strong Acid Extractable	ug/g	7.5	13.0	16.2	0.2
Barium	Strong Acid Extractable	ug/g	715	444	773	0.03
Beryllium	Strong Acid Extractable	ug/g	0.55	0.52	0.52	0.01
Bismuth	Strong Acid Extractable	ug/g	1.4	0.8	0.9	0.5
Cadmium	Strong Acid Extractable	ug/g	3.0	1.1	1.2	0.05
Calcium	Strong Acid Extractable	ug/g	8280	4740	6300	2
Chromium	Strong Acid Extractable	ug/g	24.8	19.2	22.2	0.04
Cobalt	Strong Acid Extractable	ug/g	11.3	9.79	9.71	0.05
Copper	Strong Acid Extractable	ug/g	48.9	32.7	31.9	0.05
Iron	Strong Acid Extractable	ug/g	26900	25600	26100	1
Lead	Strong Acid Extractable	ug/g	7.6	10.5	9.7	0.3
Lithium	Strong Acid Extractable	ug/g	15.7	19.9	17.2	0.1
Magnesium	Strong Acid Extractable	ug/g	5440	4770	4920	1
Manganese	Strong Acid Extractable	ug/g	1020	493	416	0.3
Mercury	Strong Acid Extractable	ug/g	0.340	0.154	0.208	0.003
Molybdenum	Strong Acid Extractable	ug/g	2.4	1.4	1.9	0.05
Nickel	Strong Acid Extractable	ug/g	56.7	32.4	36.6	0.1
Phosphorus	Strong Acid Extractable	ug/g	1140	824	996	0.5
Potassium	Strong Acid Extractable	ug/g	1030	889	880	5
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3	0.3
Silicon	Strong Acid Extractable	ug/g	53	89	76	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	94	99	84	1
Strontium	Strong Acid Extractable	ug/g	63.3	44.0	58.4	0.02
Thallium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3	0.3
Tin	Strong Acid Extractable	ug/g	0.9	0.8	0.5	0.2
Titanium	Strong Acid Extractable	ug/g	161	102	101	0.05
Vanadium	Strong Acid Extractable	ug/g	80.1	45.8	61.0	0.1
Zinc	Strong Acid Extractable	ug/g	354	166	178	0.1
Zirconium	Strong Acid Extractable	ug/g	3.2	3.0	2.5	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	29.6	9.5	0.1	0.1
850 micron sieve	% Retained	% by weight	18.5	30.4	0.8	0.1
425 micron sieve	% Retained	% by weight	21.9	6.9	3.4	0.1

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-37	569565-38	569565-39		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC5 - W11-B	BC6 - W09-B	BC31 - W2-B		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	12.4	9.1	9.2	0.1
150 micron sieve	% Retained	% by weight	4.8	14.2	19.2	0.1
106 micron sieve	% Retained	% by weight	1.8	5.5	12.7	0.1
53 micron sieve	% Retained	% by weight	5.5	13.3	32.4	0.1
Pan	% Retained	% by weight	5.1	10.2	21.8	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.9	7.4	7.9	0.5

**Analytical Report**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

		Reference Number	569565-40	569565-41	569565-42	
		Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
		Sample Location				
		Sample Description	BC32 - W3-B	BC33 - W6A-B	BC34 - W7-B	
		Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	7.018	10.56	9.861	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	7880	11900	11100	1
Antimony	Strong Acid Extractable	ug/g	52.2	3.6	3.5	0.5
Arsenic	Strong Acid Extractable	ug/g	110	6.4	5.2	0.2
Barium	Strong Acid Extractable	ug/g	758	700	627	0.03
Beryllium	Strong Acid Extractable	ug/g	0.56	0.72	0.62	0.01
Bismuth	Strong Acid Extractable	ug/g	1.6	1.0	0.8	0.5
Cadmium	Strong Acid Extractable	ug/g	2.7	3.8	3.5	0.05
Calcium	Strong Acid Extractable	ug/g	5420	9280	8400	2
Chromium	Strong Acid Extractable	ug/g	16.7	29.4	25.5	0.04
Cobalt	Strong Acid Extractable	ug/g	9.60	14.3	12.1	0.05
Copper	Strong Acid Extractable	ug/g	41.9	73.2	61.2	0.05
Iron	Strong Acid Extractable	ug/g	26700	30700	27200	1
Lead	Strong Acid Extractable	ug/g	15.1	11.1	10.1	0.3
Lithium	Strong Acid Extractable	ug/g	11.2	16.6	14.8	0.1
Magnesium	Strong Acid Extractable	ug/g	2980	6660	6000	1
Manganese	Strong Acid Extractable	ug/g	578	822	703	0.3
Mercury	Strong Acid Extractable	ug/g	0.691	0.363	0.308	0.003
Molybdenum	Strong Acid Extractable	ug/g	4.0	4.2	3.9	0.05
Nickel	Strong Acid Extractable	ug/g	39.1	76.6	61.4	0.1
Phosphorus	Strong Acid Extractable	ug/g	697	1570	1180	0.5
Potassium	Strong Acid Extractable	ug/g	951	1360	1140	5
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3	0.3
Silicon	Strong Acid Extractable	ug/g	67	80	50	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	68	83	88	1
Strontium	Strong Acid Extractable	ug/g	65.9	80.4	68.8	0.02
Thallium	Strong Acid Extractable	ug/g	0.3	0.4	0.6	0.3
Tin	Strong Acid Extractable	ug/g	1.1	1.4	1.2	0.2
Titanium	Strong Acid Extractable	ug/g	45.5	173	186	0.05
Vanadium	Strong Acid Extractable	ug/g	49.5	118	102	0.1
Zinc	Strong Acid Extractable	ug/g	187	413	366	0.1
Zirconium	Strong Acid Extractable	ug/g	2.7	3.8	4.0	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	15.7	23.0	30.4	0.1
850 micron sieve	% Retained	% by weight	8.5	10.9	25.1	0.1
425 micron sieve	% Retained	% by weight	5.1	25.2	23.0	0.1

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	
Report To: Access Mining Consultants Ltd.	ID:	BC Quarterly Sampling
# 3 Calcite Business Centre	Name:	Brewery Creek
151 Industrial Road	Location:	Brewery Creek
Whitehorse, YT, Canada	LSD:	
Y1A 2V3	P.O.:	4303-ACG
Attn: Dave Desmarais	Acct code:	ALEX-06-BCM-01(Additional)
Sampled By: D.Desmarais		
Company: ACG		

Lot ID: **569565**  
 Control Number:  
 Date Received: Aug 27, 2007  
 Date Reported: Oct 3, 2007  
 Report Number: 1051044

	Reference Number	569565-40	569565-41	569565-42		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC32 - W3-B	BC33 - W6A-B	BC34 - W7-B		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	4.8	19.2	7.0	0.1
150 micron sieve	% Retained	% by weight	6.2	6.4	4.8	0.1
106 micron sieve	% Retained	% by weight	5.2	2.6	2.4	0.1
53 micron sieve	% Retained	% by weight	26.8	6.5	4.2	0.1
Pan	% Retained	% by weight	26.8	5.8	3.1	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	7.9	8.3	8.0	0.5

## Analytical Report

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-43	569565-44	569565-45	
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
	Sample Location				
	Sample Description	BC35 - W14-B	BC36 - W16-B	BC37 - W5A-B	
	Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Aggregate Organic Constituents</b>					
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	10.05	6.081	3.457
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	10600	9030	11800
Antimony	Strong Acid Extractable	ug/g	5.0	2.5	7.7
Arsenic	Strong Acid Extractable	ug/g	20.2	5.7	24.7
Barium	Strong Acid Extractable	ug/g	829	308	394
Beryllium	Strong Acid Extractable	ug/g	0.46	0.49	0.55
Bismuth	Strong Acid Extractable	ug/g	1.4	0.8	<0.5
Cadmium	Strong Acid Extractable	ug/g	2.8	1.4	0.89
Calcium	Strong Acid Extractable	ug/g	8460	5620	6220
Chromium	Strong Acid Extractable	ug/g	27.3	18.4	22.5
Cobalt	Strong Acid Extractable	ug/g	12.5	7.90	9.35
Copper	Strong Acid Extractable	ug/g	32.1	37.3	25.6
Iron	Strong Acid Extractable	ug/g	26900	22400	25000
Lead	Strong Acid Extractable	ug/g	6.2	6.7	8.4
Lithium	Strong Acid Extractable	ug/g	19.0	12.7	16.6
Magnesium	Strong Acid Extractable	ug/g	5460	4170	5090
Manganese	Strong Acid Extractable	ug/g	619	389	367
Mercury	Strong Acid Extractable	ug/g	0.649	0.156	0.131
Molybdenum	Strong Acid Extractable	ug/g	1.2	2.9	0.99
Nickel	Strong Acid Extractable	ug/g	57.2	36.3	28.0
Phosphorus	Strong Acid Extractable	ug/g	840	990	694
Potassium	Strong Acid Extractable	ug/g	802	917	806
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	<0.3
Silicon	Strong Acid Extractable	ug/g	33	49	75
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2
Sodium	Strong Acid Extractable	ug/g	89	74	137
Strontium	Strong Acid Extractable	ug/g	62.0	50.4	50.2
Thallium	Strong Acid Extractable	ug/g	0.3	<0.3	<0.3
Tin	Strong Acid Extractable	ug/g	0.7	0.5	0.4
Titanium	Strong Acid Extractable	ug/g	117	95.2	220
Vanadium	Strong Acid Extractable	ug/g	56.4	69.9	44.0
Zinc	Strong Acid Extractable	ug/g	403	208	94.6
Zirconium	Strong Acid Extractable	ug/g	2.6	2.5	4.8
<b>Particle Size Analysis - Dry Sieve</b>					
2.0 mm sieve	% Retained	% by weight	0.9	1.7	2.5
850 micron sieve	% Retained	% by weight	3.8	2.8	2.1
425 micron sieve	% Retained	% by weight	6.2	6.5	2.5

## Analytical Report

Bill To: Alexco Resource Corp. Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: D.Desmarais Company: ACG	Project: ID: BC Quarterly Sampling Name: Brewery Creek Location: Brewery Creek LSD: P.O.: 4303-ACG Acct code: ALEX-06-BCM-01(Additional)	Lot ID: <b>569565</b> Control Number: Date Received: Aug 27, 2007 Date Reported: Oct 3, 2007 Report Number: 1051044
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	Reference Number	569565-43	569565-44	569565-45		
	<b>Sample Date</b>	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	<b>Sample Location</b>					
	<b>Sample Description</b>	BC35 - W14-B	BC36 - W16-B	BC37 - W5A-B		
	<b>Matrix</b>	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	9.6	11.8	3.1	0.1
150 micron sieve	% Retained	% by weight	13.4	15.7	4.0	0.1
106 micron sieve	% Retained	% by weight	8.6	10.3	3.2	0.1
53 micron sieve	% Retained	% by weight	31.6	28.2	19.6	0.1
Pan	% Retained	% by weight	25.8	22.2	61.4	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	8.0	7.4	7.7	0.5

## Analytical Report


Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

		Reference Number	569565-46	569565-47	569565-48	
		Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007	
		Sample Location				
		Sample Description	BC38 - W8-B	BC39 - W39-B	BC53 - W53-B	
		Matrix	Soil	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Aggregate Organic Constituents</b>						
Loss on Ignition @ 600C	Dried Basis -230 Mesh	%	18.92	8.816	8.874	
<b>Metals Strong Acid Digestion</b>						
Aluminum	Strong Acid Extractable	ug/g	10500	17500	11800	1
Antimony	Strong Acid Extractable	ug/g	1.9	11.7	9.8	0.5
Arsenic	Strong Acid Extractable	ug/g	22.4	124	30.5	0.2
Barium	Strong Acid Extractable	ug/g	503	691	434	0.03
Beryllium	Strong Acid Extractable	ug/g	0.65	1.08	0.63	0.01
Bismuth	Strong Acid Extractable	ug/g	0.9	1.9	0.8	0.5
Cadmium	Strong Acid Extractable	ug/g	1.0	3.1	1.2	0.05
Calcium	Strong Acid Extractable	ug/g	4160	9990	7110	2
Chromium	Strong Acid Extractable	ug/g	18.6	29.7	23.1	0.04
Cobalt	Strong Acid Extractable	ug/g	12.1	14.7	10.8	0.05
Copper	Strong Acid Extractable	ug/g	219	52.4	30.4	0.05
Iron	Strong Acid Extractable	ug/g	33900	41600	26300	1
Lead	Strong Acid Extractable	ug/g	15.6	20.4	9.6	0.3
Lithium	Strong Acid Extractable	ug/g	21.7	30.1	17.3	0.1
Magnesium	Strong Acid Extractable	ug/g	5440	6080	5190	1
Manganese	Strong Acid Extractable	ug/g	639	937	466	0.3
Mercury	Strong Acid Extractable	ug/g	0.101	0.559	0.143	0.003
Molybdenum	Strong Acid Extractable	ug/g	2.0	2.8	1.2	0.05
Nickel	Strong Acid Extractable	ug/g	39.6	47.8	32.4	0.1
Phosphorus	Strong Acid Extractable	ug/g	1440	1210	736	0.5
Potassium	Strong Acid Extractable	ug/g	1300	1680	860	5
Selenium	Strong Acid Extractable	ug/g	<0.3	0.6	<0.3	0.3
Silicon	Strong Acid Extractable	ug/g	203	106	41	1
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	<0.2	0.2
Sodium	Strong Acid Extractable	ug/g	82	128	129	1
Strontium	Strong Acid Extractable	ug/g	42.2	86.0	57.2	0.02
Thallium	Strong Acid Extractable	ug/g	<0.3	0.8	0.6	0.3
Tin	Strong Acid Extractable	ug/g	14.6	1.1	0.3	0.2
Titanium	Strong Acid Extractable	ug/g	31.9	49.4	195	0.05
Vanadium	Strong Acid Extractable	ug/g	43.6	83.3	47.8	0.1
Zinc	Strong Acid Extractable	ug/g	172	224	116	0.1
Zirconium	Strong Acid Extractable	ug/g	6.48	3.8	4.7	0.05
<b>Particle Size Analysis - Dry Sieve</b>						
2.0 mm sieve	% Retained	% by weight	16.3	7.5	1.4	0.1
850 micron sieve	% Retained	% by weight	19.0	23.1	5.4	0.1
425 micron sieve	% Retained	% by weight	42.1	19.4	7.7	0.1

**Analytical Report**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

	Reference Number	569565-46	569565-47	569565-48		
	Sample Date	Aug 21, 2007	Aug 21, 2007	Aug 21, 2007		
	Sample Location					
	Sample Description	BC38 - W8-B	BC39 - W39-B	BC53 - W53-B		
	Matrix	Soil	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Particle Size Analysis - Dry Sieve - Continued</b>						
250 micron sieve	% Retained	% by weight	15.1	13.3	7.2	0.1
150 micron sieve	% Retained	% by weight	4.0	10.9	7.2	0.1
106 micron sieve	% Retained	% by weight	0.9	5.2	4.4	0.1
53 micron sieve	% Retained	% by weight	1.0	8.7	19.9	0.1
Pan	% Retained	% by weight	0.5	9.6	45.3	
<b>Soil Acidity</b>						
pH	1:2 Soil:Water	pH	8.0	7.5	7.5	0.5

Approved by:   
 Walter Brandl  
 Operations Manager - Surrey



**Quality Control**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

**null**

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
106 micron sieve	g	346	0.0	0.0	0.0	yes
150 micron sieve	g	341	15.8	14.6	17.0	yes
2.0 mm sieve	g	428	487.6	487.1	488.1	yes
250 micron sieve	g	347	366.5	324.8	408.2	yes
425 micron sieve	g	389	0.0	0.0	0.0	yes
Check	%	98.8	99.600	97.680	101.520	yes

Material Used: 2007 Farmsoil Standard

Date Acquired: September 26, 2007

Acquired By: Sonja Babic

**Aggregate Organic Constituents**

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Loss on Ignition @ 600C	%	4.87	5.000	4.250	5.750	yes

Material Used: S0229 - LOI

Date Acquired: August 31, 2007

Acquired By: Juliet Then

**Metals Strong Acid Digestion**

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Aluminum	ug/g	<1	0	-3	3	yes
Antimony	ug/g	<0.5	0.0	-0.0	0.0	yes
Arsenic	ug/g	<0.2	0.0	-0.0	0.0	yes
Barium	ug/g	<0.03	0.00	-0.03	0.03	yes
Beryllium	ug/g	<0.01	0.00	-0.00	0.00	yes
Bismuth	ug/g	0.5	0.0	-0.0	0.0	yes
Cadmium	ug/g	<0.05	0.00	-0.00	0.00	yes
Calcium	ug/g	3	0	-6	6	yes
Chromium	ug/g	0.05	0.00	-0.00	0.00	yes
Cobalt	ug/g	<0.05	0.00	-0.00	0.00	yes
Copper	ug/g	<0.05	0.00	-0.00	0.00	yes
Iron	ug/g	<1	0	-6	6	yes
Lead	ug/g	<0.3	0.0	-0.0	0.0	yes
Lithium	ug/g	<0.1	0.0	-0.0	0.0	yes
Magnesium	ug/g	<1	0	-0	0	yes
Manganese	ug/g	<0.3	0.0	-0.1	0.1	yes
Mercury	ug/g	<0.003	0.000	-0.030	0.030	yes
Molybdenum	ug/g	<0.05	0.00	-0.00	0.00	yes
Nickel	ug/g	<0.1	0.0	-0.0	0.0	yes
Phosphorus	ug/g	<0.5	0.0	-0.1	0.1	yes
Potassium	ug/g	<5	0	-1	1	yes
Selenium	ug/g	<0.3	0.0	-0.0	0.0	yes
Silicon	ug/g	<1	0	-0	0	yes

**Quality Control**

Bill To: Alexco Resource Corp.      Project:  
 Report To: Access Mining Consultants Ltd.      ID: BC Quarterly Sampling  
           # 3 Calcite Business Centre      Name: Brewery Creek  
           151 Industrial Road      Location: Brewery Creek  
           Whitehorse, YT, Canada      LSD:  
           Y1A 2V3      P.O.: 4303-ACG  
 Attn: Dave Desmarais      Acct code: ALEX-06-BCM-01(Additional)  
 Sampled By: D.Desmarais  
 Company: ACG

Lot ID: **569565**  
 Control Number:  
 Date Received: Aug 27, 2007  
 Date Reported: Oct 3, 2007  
 Report Number: 1051044

**Metals Strong Acid Digestion - Continued**

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Silver	ug/g	<0.2	0.0	-0.0	0.0	yes
Sodium	ug/g	3	0	-0	0	yes
Strontium	ug/g	<0.02	0.00	-0.00	0.00	yes
Thallium	ug/g	<0.3	0.0	-0.0	0.0	yes
Tin	ug/g	<0.2	0.0	-0.0	0.0	yes
Titanium	ug/g	0.1	0.00	-0.00	0.00	yes
Vanadium	ug/g	<0.1	0.0	-0.0	0.0	yes
Zinc	ug/g	0.2	0.0	-0.0	0.0	yes
Zirconium	ug/g	<0.05	0.00	-0.00	0.00	yes
Material Used:	Metals Blank - soils					
Date Acquired:	September 26, 2007					
Acquired By:	Walter Brandl					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Aluminum	ug/g	8820	8670	30	10	yes
Antimony	ug/g	6.9	7.0	30.0	3.0	yes
Arsenic	ug/g	7.6	8.5	30.0	1.0	yes
Barium	ug/g	625	617	30.00	1.00	yes
Beryllium	ug/g	0.65	0.65	30.00	0.50	yes
Cadmium	ug/g	4.2	4.6	30.00	0.50	yes
Calcium	ug/g	8580	8410	30	10	yes
Chromium	ug/g	25.2	27.0	30.00	1.00	yes
Cobalt	ug/g	9.66	9.56	30.00	0.50	yes
Copper	ug/g	73.4	80.0	30.00	1.00	yes
Iron	ug/g	33900	33600	30	10	yes
Lead	ug/g	9.9	10.8	30.0	0.5	yes
Magnesium	ug/g	5780	6300	30	10	yes
Manganese	ug/g	843	926	30.0	1.0	yes
Molybdenum	ug/g	4.0	4.3	30.00	0.50	yes
Nickel	ug/g	74.3	81.8	30.0	0.5	yes
Phosphorus	ug/g	851	843	30.0	10.0	yes
Potassium	ug/g	782	766	30	10	yes
Selenium	ug/g	2.3	1.9	30.0	0.5	yes
Silver	ug/g	<0.2	<0.2	30.0	0.5	yes
Sodium	ug/g	82	86	30	1	yes
Strontium	ug/g	69.8	76.4	30.00	1.00	yes
Tin	ug/g	14.6	13.4	30.0	1.0	yes
Vanadium	ug/g	43.6	43.8	30.0	1.0	yes
Zinc	ug/g	84.7	84.1	30.0	1.0	yes
Zirconium	ug/g	6.48	6.17	30.00	0.50	yes
Material Used:	Metals Int. Duplicate - soils					
Date Acquired:	September 26, 2007					
Acquired By:	Kelly Restiaux					

**Quality Control**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 3, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1051044
Y1A 2V3	P.O.: 4303-ACG	
Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

**Metals Strong Acid Digestion - Continued**

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Aluminum	ug/g	15800	14000	11000	17000	yes
Antimony	ug/g	12.3	10.0	4.0	16.0	yes
Arsenic	ug/g	88.4	91.4	72.2	110.6	yes
Barium	ug/g	171	185.00	140.00	230.00	yes
Beryllium	ug/g	1.01	1.03	0.73	1.33	yes
Cadmium	ug/g	40.2	40.90	32.92	48.88	yes
Calcium	ug/g	19300	20400	14400	26400	yes
Chromium	ug/g	18.6	18.00	15.00	21.00	yes
Cobalt	ug/g	7.59	7.30	4.75	9.85	yes
Copper	ug/g	93.4	108.00	85.20	130.80	yes
Iron	ug/g	24700	22500	16500	28500	yes
Lead	ug/g	855	1097.0	836.0	1358.0	yes
Magnesium	ug/g	7180	7000	6400	7600	yes
Manganese	ug/g	527	515.0	365.0	665.0	yes
Mercury	ug/g	6.88	6.110	3.740	8.480	yes
Molybdenum	ug/g	0.96	1.02	0.72	1.32	yes
Nickel	ug/g	15.2	17.0	13.4	20.6	yes
Phosphorus	ug/g	652	677.0	515.0	839.0	yes
Potassium	ug/g	4100	4050	2850	5250	yes
Selenium	ug/g	<0.3	1.2	-0.3	2.7	yes
Silver	ug/g	2.5	2.0	-4.3	8.3	yes
Sodium	ug/g	209	226	76	376	yes
Strontium	ug/g	44.5	40.00	28.00	52.00	yes
Thallium	ug/g	1.5	1.0	-0.5	2.5	yes
Tin	ug/g	2.3	2.3	1.5	3.1	yes
Titanium	ug/g	95.6	281.00	191.00	371.00	yes
Vanadium	ug/g	41.8	44.0	33.5	54.5	yes
Zinc	ug/g	298	320.0	245.0	395.0	yes

Material Used: S0529 NIST 2711 - metals in soil

Date Acquired: September 26, 2007

Acquired By: Kelly Restiaux

Aluminum	ug/g	7580	8930	5180	12680	yes
Antimony	ug/g	1.0	0.0	-2.4	2.4	yes
Arsenic	ug/g	4.9	6.2	1.9	10.5	yes
Barium	ug/g	75.7	78.10	59.80	96.40	yes
Beryllium	ug/g	0.43	0.44	0.17	0.71	yes
Calcium	ug/g	22500	25300	18895	31705	yes
Chromium	ug/g	12.7	14.50	9.85	19.15	yes
Cobalt	ug/g	5.62	5.92	4.66	7.18	yes
Copper	ug/g	15.3	16.20	13.65	18.75	yes
Iron	ug/g	18600	18100	13999	22201	yes

**Quality Control**

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Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

**Metals Strong Acid Digestion - Continued**

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Lead	ug/g	13.6	14.8	11.5	18.1	yes
Magnesium	ug/g	12200	13300	10417	16183	yes
Manganese	ug/g	194	198.0	154.5	241.5	yes
Mercury	ug/g	0.17	0.210	0.150	0.270	yes
Molybdenum	ug/g	1.0	1.10	0.95	1.25	yes
Nickel	ug/g	16.1	18.8	14.0	23.6	yes
Phosphorus	ug/g	676	770.0	587.0	953.0	yes
Potassium	ug/g	1770	2070	1437	2703	yes
Selenium	ug/g	0.6	1.3	0.3	2.3	yes
Silver	ug/g	<0.2	0.2	-0.2	0.5	yes
Sodium	ug/g	291	316	252	380	yes
Strontium	ug/g	59.7	64.00	52.81	75.19	yes
Thallium	ug/g	<0.3	0.0	-1.5	1.5	yes
Titanium	ug/g	5.27	10.90	3.16	18.64	yes
Vanadium	ug/g	19.0	21.6	13.1	30.1	yes
Zinc	ug/g	62.8	73.8	59.1	88.5	yes

Material Used: S0531 - metals in sediment

Date Acquired: August 30, 2007

Acquired By: Kelly Restiaux

**Particle Size Analysis - Dry Sieve**

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
2.0 mm sieve	% by weight	31.3	31.3	10.0	0.5	yes
850 micron sieve	% by weight	7.6	7.5	10.0	0.5	yes
425 micron sieve	% by weight	36.8	36.8	10.0	0.5	yes
250 micron sieve	% by weight	5.0	5.0	10.0	0.5	yes
150 micron sieve	% by weight	8.4	8.4	10.0	0.5	yes
106 micron sieve	% by weight	5.7	5.7	10.0	0.5	yes
53 micron sieve	% by weight	8.4	8.4	10.0	0.5	yes

Material Used: Edmonton Duplicate

Date Acquired: September 25, 2007

Acquired By: Sonja Babic

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
2.0 mm sieve	% by weight	0.5	0.5	-0.5	1.5	yes
850 micron sieve	% by weight	9.8	0.0	0.0	0.0	yes
425 micron sieve	% by weight	15.8	0.0	0.0	0.0	yes
250 micron sieve	% by weight	13.0	36.0	31.5	40.5	yes
150 micron sieve	% by weight	11.6	14.4	8.4	20.4	yes
106 micron sieve	% by weight	9.2	0.0	0.0	0.0	yes
53 micron sieve	% by weight	26.0	29.6	25.9	33.3	yes
Pan	% by weight	23.9	0.0	0.0	0.0	yes

**Quality Control**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
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Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

**Particle Size Analysis - Dry Sieve - Continued**

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Material Used: 2007 Farmsoil Standard						
Date Acquired: August 30, 2007						
Acquired By: Sonja Babic						

**Soil Acidity**

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
pH	pH	8.0	8.0	100.2	99.6 - 100.8	yes
Material Used: CC - pH						
Date Acquired: September 27, 2007						
Acquired By: Ken Dykstra						

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
pH	pH	8.0	8.0	0.2	0.1	yes
Material Used: Surrey - Int. Duplicate 1						
Date Acquired: September 27, 2007						
Acquired By: Ken Dykstra						

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
pH	pH	6.1	6.1	5.9	6.2	yes
Material Used: Soil pH 98 FS-015						
Date Acquired: September 27, 2007						
Acquired By: Ken Dykstra						

## Methodology and Notes

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>569565</b>
Report To: Access Mining Consultants Ltd.	ID: BC Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Aug 27, 2007
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Attn: Dave Desmarais	Acct code: ALEX-06-BCM-01(Additional)	
Sampled By: D.Desmarais		
Company: ACG		

### Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Metals (Strong Acid Leachable) in soils	B.C.M.O.E	* Strong Acid Leachable Metals (SALM) in Soil, V 1.0, SALM	30-Aug-07	BTG Surrey
Metals (Strong Acid Leachable) in soils	B.C.M.O.E	* Strong Acid Leachable Metals (SALM) in Soil, V 1.0, SALM	26-Sep-07	BTG Surrey
Particle Size by Dry Sieve	Agronomy No 9, Part 1	* Particle Fractionation and Particle-Size Analysis, 43-1	25-Sep-07	BTG Edmonton
Particle Size by Dry Sieve	Agronomy No 9, Part 1	* Particle Fractionation and Particle-Size Analysis, 43-1	26-Sep-07	BTG Edmonton
Particle Size by Dry Sieve	Carter	* Sieve Analysis (Mechanical Method), 47.4	25-Sep-07	BTG Edmonton
Particle Size by Dry Sieve	Carter	* Sieve Analysis (Mechanical Method), 47.4	26-Sep-07	BTG Edmonton
pH and EC in Soil - 1:2 (Surrey)	McKeague	* 1:2 Soil:Water Ratio, 4.12	30-Aug-07	BTG Surrey
pH and EC in Soil - 1:2 (Surrey)	McKeague	* 1:2 Soil:Water Ratio, 4.12	27-Sep-07	BTG Surrey

\* Bodycote method(s) based on reference method

### References

Agronomy No 9,	Methods of Soil Analysis, Part 1
B.C.M.O.E	B.C. Ministry of Environment
Carter	Soil Sampling and Methods of Analysis
McKeague	Manual on Soil Sampling and Methods of Analysis

### Comments:

- The less than 150 um fraction of the sediment was analyzed for metals and LOI as requested by the Client Access Mining.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

**Appendix F  
SRK LIABILITY  
ESTIMATE,  
RECLAMATION  
ASSESSMENT AND  
GEOTECHNICAL  
REPORT**





# Outstanding Closure Liabilities at Brewery Creek Mine - September 2007



Report Prepared for  
**Alexco Resources Corp.**

Report Prepared by



November 2007



# **Outstanding Closure Liabilities at Brewery Creek Mine - September 2007**

## **Alexco Resources Corp.**

**Suite 2300, 200 Granville Street  
Vancouver, B.C. V6C 1S4**

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**SRK Project Number 1CA009.002**

**November 2007**

**Compiled by:**

**Daryl Hockley, P.Eng.**



## Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
<b>2</b>	<b>Methods .....</b>	<b>2</b>
2.1	Site Visit .....	2
2.2	Development of Liability Estimate .....	2
<b>3</b>	<b>Estimated Costs for Expected Activities .....</b>	<b>6</b>
<b>4</b>	<b>Estimated Costs for Mitigation Measures .....</b>	<b>8</b>
<b>5</b>	<b>Estimate of Outstanding Liability .....</b>	<b>9</b>

## List of Tables

Table 1:	Cost Estimates for Expected Decommissioning and Reclamation Activities .....	7
Table 2:	Cost and Likelihood Estimates for Possible Mitigation Measures .....	8
Table 3:	Outstanding Closure Liability at Brewery Creek Mine as of September 2007 .....	9

## List of Figures

Figure 1: Heap and BTC Water Quality

## List of Attachments

Attachment 1 Liability Estimate Spreadsheet  
Attachment 2 Review of Blue WRSA Predictions

# 1 Introduction

SRK Consulting Inc. was retained to provide an independent engineer's review of the outstanding closure liabilities at the Brewery Creek Mine near Dawson, Yukon. This report presents the results of SRK's work.

The September 2007 review is the fifth in a series prepared under the terms of a reclamation security agreement between the Government of the Yukon and the site owners. The first two reports were prepared for Viceroy Minerals Corporation.

The methodology employed is consistent with that described in full in the first report, dated November 2003. Section 2 below summarizes the methods. Sections 3 and 4 present the resulting estimates of outstanding liabilities. Expected costs are covered in Section 3 and costs for possible mitigation measures are covered in Section 4. All of the calculations leading to the Section 3 and 4 estimates are presented in tables appended to this report. Section 5 presents a summary opinion of the outstanding closure liabilities at the Brewery Creek Mine, as of September 2007.

## 2 Methods

### 2.1 Site Visit

The 2007 inspection was completed by the undersigned on July 24, 2007. Mr. Steve Januszewski, an engineer under contract to Government of Yukon, and Mr. Brad Thrall, who oversees the site decommissioning and reclamation work for Alexco Resource Corporation, also participated in the 2007 inspection. Mr. Januszewski has prepared a separate report.

### 2.2 Development of Liability Estimate

As was the case in the previous reports, the outstanding closure liability for the site was estimated in two components:

- Cost for activities needed to complete the expected decommissioning and reclamation measures.
- Costs for mitigation measures that might be required at some time in the future.

The methods and assumptions used in developing estimates for these two components are summarized in the following paragraphs, which are taken directly from the 2003 report.

#### **Cost Estimate Spreadsheet**

*The cost estimates for both the currently planned decommissioning and reclamation measures and the mitigation measures were developed in a spreadsheet. For ease of comparison to earlier (and future) estimates, the spreadsheet was based on one presented in the “2001 Decommissioning and Reclamation Plan, Volume IV”.*

*The spreadsheet, like the “Volume IV” version, assigns direct costs to eight “cost centers”, namely Mine Area Reclamation, Site Facilities Removal and Reclamation, Leach Pad Detoxification, Manpower, General and Administration, Process Water Treatment, Leach Pad Reclamation, and Post-Closure Monitoring. This structure is common in closure cost estimates produced by industry, and is readily convertible to other structures such as the RECLAIM spreadsheet used by DIAND.*

*A printout of the cost estimate spreadsheet is attached to this report. Electronic copies are available upon request.*

#### **Current Status and Standards for Completion**

*The “Volume IV” estimates for most of the cost centers were modified to take into account the current extent of completion and any deficiencies observed during the site visit. More details are provided in Section 3 below.*

*In assessing what activities would be needed to complete the expected decommissioning and reclamation measures, two sets of standards were taken into consideration. The first was the commitments made in the “2001 Decommissioning and Reclamation Plan” (including Volume IV). The second was the general standard of good mine closure practice elsewhere in Canada, as it is known to the undersigned. The “Draft Terrestrial Reclamation Standards for the Brewery Creek Mine” were also reviewed, and found to be generally consistent with both the plans set out in the “2001 Decommissioning and Reclamation Plan” and the standards of good practice elsewhere in Canada.*

### **Viceroy Costs vs. Contractor Costs**

*The “Volume IV” estimates were based on productivities and unit costs achieved by Viceroy Minerals Corporation. However, the independent estimate of closure liabilities is to consider the case where Viceroy is no longer on the site, and the Government of the Yukon needs to bring a local contractor in to complete the work. The productivities and unit costs assumed in the “Volume IV” estimates were therefore reviewed and adjusted to values that are more typical of Yukon contractors. For most tasks, it was assumed that the equipment used by local contractors would be one to two classes smaller than that used by Viceroy.*

*Unit costs for equipment were obtained from the 2003-2004 edition of “The Blue Book”, an equipment rate rental guide produced by the B.C. Road Builders and Heavy Construction Association. All-found rates, which include all costs, expenses and profit were used. When the guide indicated a difference between rates for new and older equipment, an average rate was used. All of the unit rates were increased by 10% as a northern allowance. Costs for mobilizing the equipment to the site were also added to the estimates as a separate line item.*

### **Contingencies**

*The “Volume IV” estimates applied contingencies of between 10% and 20% to the estimated total costs from each cost center. It is important to understand what is meant by “contingencies”. In common usage, contingencies are provisions for something that might never come to pass. However, the contingencies in these estimates are likely to be required. They are included to account for a number of costs and uncertainties that cannot be more explicitly detailed in this level of estimate.*

*The contingency percentages suggested in “Volume IV” are generally consistent with good practice elsewhere, particularly given the fact that there is now direct experience carrying out most of the required activities at this site. Some thought was given to increasing the contingency for Site Facilities Removal and Reclamation, on the grounds that there is as yet no site experience with this type of work and because costs of demolition projects elsewhere have proven difficult to estimate accurately. However, it was also noted that the current estimate takes no account of value that might be recovered from re-use or salvage of the site buildings. If that value were taken into account, it would act to offset cost overruns. The “Volume IV” contingency percentages were therefore accepted for all of the cost centers.*



## **Net Present Value Calculations**

*In preparing cost estimates for activities that can take place many years in future, it is important to take into account the effects of interest and inflation. The conventional way to do that is to use a Net Present Value or “NPV” calculation. In simple terms, the NPV calculation shows how much money one would need to set aside today in order to have enough money to carry out the future activities.*

*To complete the NPV calculations, all of estimated costs were set out on a timeline extending from 2004 to 2018. Costs were generally put in the earliest year when an activity might be required. That approach has the effect of resulting in a cautiously high estimate of the NPV.*

*The timeline of costs was then used to calculate the NPV of the estimates for each cost center and each mitigation measure, i.e. how much money would need to be set aside under each cost category. The interest rate used in such calculations is a question of policy, rather than engineering. Most corporate investors would use a relatively high rate, which would result in a lower NPV. In SRK’s experience, Canadian governments commonly use a much lower interest rate, roughly equivalent to the rate of return on long-term Government of Canada Savings Bonds.*

*The “Volume IV” estimates included an escalator for inflation. The escalator was applied to each year’s cost estimates. However, a simpler method is to recognize that inflation acts counter to interest, i.e. it requires one to put aside more money now to allow for the increased future costs. Inflation can then be accounted for within the NPV calculations. For example, an apparent interest rate of  $x\%$  and an annual inflation of  $y\%$  can be accounted for by simply assuming an “effective interest rate” of  $x-y\%$  in the NPV calculation.*

*That approach was used for the independent engineer’s estimate of the outstanding liability. An apparent interest rate of 5% was selected from tables of long term bond rates, and adjusted downward by an assumed inflation rate of 2%, resulting in the effective interest rate of 3% that was used in the NPV calculations.*

## **Mitigation Measures and Likelihood**

*Most of the closure activities at the Brewery Creek site are low risk. However, in the opinion of the undersigned, there are three areas where the uncertainties are greater. The three areas are the heap, the Lucky Haul road, and the Blue Dump. For each of those areas, mitigation measures that conceivably might be required at some time in the future were assessed and cost estimates were developed. Further details are provided in Section 4 below.*

*The likelihood that each of the mitigation measures will be required was then described using the terms “possible”, “unlikely” and “very unlikely”. The definitions of these terms were taken from SRK experience with qualitative risk assessments on similar projects:*

- *“Possible” implies that the event has happened elsewhere, perhaps several times, and could happen here;*

- “Unlikely” implies that the event may have happened elsewhere, but only under conditions that are less favourable than here; and,
- “Very unlikely” implies that the event is theoretically possible, or at least cannot be ruled out given currently available information, but would require a remote combination of circumstances.

### **Provision for Mitigation Measures in Outstanding Closure Liability**

*It could be argued that the estimate of outstanding liability should include provision for all of the above mitigation measures, regardless of their likelihood. The problem with such reasoning is that it is always possible to imagine a lower probability outcome requiring a more costly mitigation measure. Ultimately a policy decision is required to determine whether a probability is low enough that the risk can be accepted without a provision in the liability estimate. There is no single answer as to where the line should be drawn. It is clear that governments are less willing to accept risk than investors, and the line is drawn more cautiously when government is to be left holding the risk.*

*To come up with a basis for determining which mitigation costs should be included in the independent engineer’s estimate of the outstanding liability, reference was made to SRK’s experience with precedents involving government accepting mine closure-related risks. The precedents are three cases in British Columbia where the provincial government has participated in negotiations of final securities for closed mines.*

- *In the case of Equity Silver Mine, the negotiated security provides for perpetual collection and treatment of contaminated water, which is certainly “possible”, but does not provide for “unlikely” or “very unlikely” increases in contaminant concentrations.*
- *In the case of Britannia Mine, the provincial government negotiated with former owners of the property to pay for construction and operation of a water treatment plant. Again the plant was sized to handle “possible” current flows and chemistry, but not “unlikely” increases in either.*
- *In the third case, which is confidential, the owner was transferring the property to a third party and wanted an “exit ticket” from the provincial government. The negotiated security included provision for “possible” activities such as groundwater cleanup and collection of acidic pit water, but did not require provision for “unlikely” increases in acid generation.*

*On the basis of these precedents, only “possible” mitigation measures were included in the independent engineer’s estimate of outstanding liability for the Brewery Creek Mine.*

### 3 Estimated Costs for Expected Activities

Table 1 presents a summary of the estimated costs for the expected decommissioning and reclamation activities in each of the cost centers. The table shows both the undiscounted (no interest, no inflation) estimates and the NPV estimates.

The remaining cost items under the Mine Area Reclamation estimate include:

- Future mobilization and demobilization of equipment;
- Repairs to erosion damage and re-seeding in the Blue Waste Rock Storage and Blue Pit areas;
- A general provision for future erosion repairs and re-seeding anywhere in the mine area; and
- Scarification and re-contouring of the perimeter roads.

The remaining cost items under Site Facilities Removal and Reclamation are:

- Approximately 50% of the removal of the Warehouse & Maintenance Shop Building;
- Removal of the land application pipes;
- Continued land-farming of hydrocarbon contaminated soils in the Oil Storage Area and the Main Equipment Area; and
- Final re-grading and reclamation of the pond areas, (when management of the heap effluent is no longer required).

The Process and Water Treatment estimate was set to zero in the 2005 estimate, and any further costs for treating heap effluent continue to be accounted for as mitigation measures (see Section 4 below). The Manpower estimate was further reduced to reflect the minimal ongoing requirements. The General and Administration estimate was set to zero for the base estimate, but remains in the contingencies. Work under Leach Pad Detoxification was complete in 2003.

The remaining cost items under the Leach Pad Reclamation estimate is:

- Construction of a breach and ditches to allow free drainage from the heap (once water quality is acceptable for direct release).

Post-Closure Monitoring began in 2004. The “Volume IV” estimates for the remaining years were generally retained, along with the changes made after the September 2005 inspection. Specifically, an additional allowance for preparing monthly and annual reports and an additional \$10,000 for monitoring of the Blue Dump was added in 2005. The cost for long-term nutrient addition to the BTC, which was in the original estimate, was moved to a mitigation measure in 2003.

**Table 1: Cost Estimates for Expected Decommissioning and Reclamation Activities**

<b>Cost Center</b>	<b>Undiscounted Costs</b>	<b>Net Present Value Costs</b>
Mine Area Reclamation	\$ 99,000	\$ 96,000
Site Facilities Removal and Reclamation	\$ 114,000	\$ 109,000
Leach Pad Detoxification	-	-
Manpower	\$ 264,000	\$ 25,000
General and Admin	-	-
Process Water Treatment	-	-
Leach Pad Reclamation	\$ 21,000	\$ 21,000
Post-Closure Monitoring	\$ 439,000	\$ 362,000
<b>Subtotal Direct Costs</b>	<b>\$ 700,000</b>	<b>\$ 612,000</b>
Contingency	\$ 80,000	\$ 71,000
<b>Total</b>	<b>\$ 780,000</b>	<b>\$ 683,000</b>

## 4 Estimated Costs for Mitigation Measures

Table 2 presents a summary of the estimated costs for possible mitigation measures, and the likelihood that each mitigation measure will be needed. The terminology used to describe likelihood is defined in Section 2.2.

Figure 1 summarizes water quality analyses of heap effluent and direct discharges from the ponds, and demonstrates that concentrations continued to be stable in 2007. Contaminant concentrations in the heap effluent samples (Station BC-28a) and the pond discharge have generally been in compliance with direct discharge criteria since 2004. Various mitigation measures for the heap drainage were considered in earlier reports, and a biological treatment cell (BTC) was constructed and operated for one year. As Table 2 indicates, an additional year of treatment is now considered to be “unlikely”, an additional two to five years of treatment are considered to be “very unlikely”.

The slope instability below the Lucky Haul Road is continuing. The root cause appears to be either undercutting of the slope by earlier exploration roads or thawing of permafrost along the slope toe, or a combination of the two. The only feasible mitigation measure is additional resloping. However, the previous attempts at re-sloping have not completely solved the problem. It would be prudent to continue to monitor the area, until the whole extent of the instability is clear, before undertaking further work.

Monitoring of the Blue Dump cover continues to show low infiltration rates. The four-year average rate of infiltration remains about 6% of precipitation. Attachment 2 relates the currently available monitoring data to the original water quality predictions, and concludes that it is very unlikely that any substantial modifications of the Blue WRSA cover will be required.

**Table 2: Cost and Likelihood Estimates for Possible Mitigation Measures**

Mitigation Measure	Undiscounted Costs	Discounted Costs (NPV)	Likelihood that Measure will be Needed
Operate BTC for one year	\$ 152,000	\$ 146,000	Unlikely
Operate BTC for two years	\$ 303,000	\$ 286,000	Very unlikely
Operate BTC for five years	\$ 758,000	\$ 675,000	Very unlikely
Lucky Dump - Additional stabilization	\$ 36,000	\$ 35,000	Possible
Blue Dump cover improvements	\$ 1,074,000	\$ 1,033,000	Very unlikely

## 5 Estimate of Outstanding Liability

Table 3 summarizes the undersigned independent engineer’s opinion as to the outstanding closure liabilities at the Brewery Creek Mine, as of September 2007. The estimate includes the full cost of the expected decommissioning and reclamation activities, as well as provision for the “possible” mitigation measures.

**Table 3: Outstanding Closure Liability at Brewery Creek Mine as of September 2007**

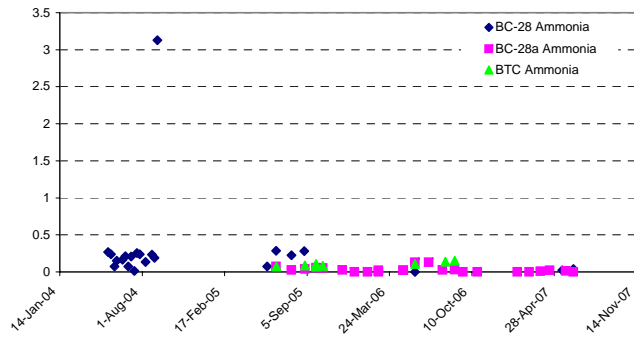
<b>Category</b>	<b>Outstanding Undiscounted Liability</b>	<b>Outstanding Net Present Value Liability</b>
Expected Decommissioning and Reclamation Activities	\$ 780,000	\$ 683,000
Possible Mitigation Measures (Additional stabilization of Lucky Dump)	\$ 36,000	\$ 35,000
<b>Total Outstanding Closure Liability</b>	<b>\$ 816,000</b>	<b>\$ 718,000</b>

**Figures**

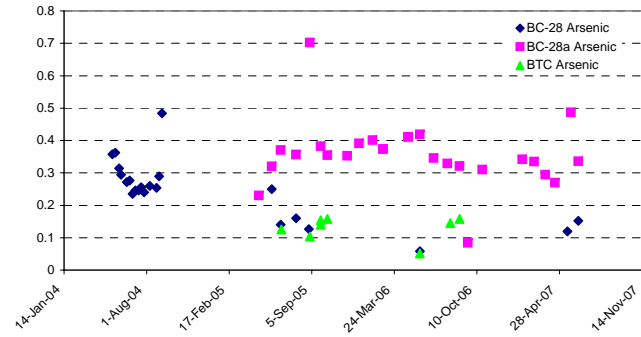




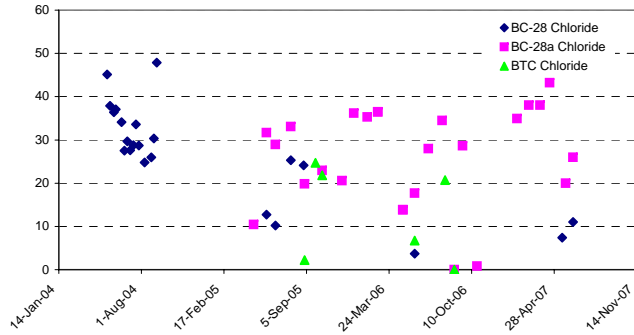
**Ammonia Criteria** Land App - 15 mg/L Direct Discharge - 5 mg/L



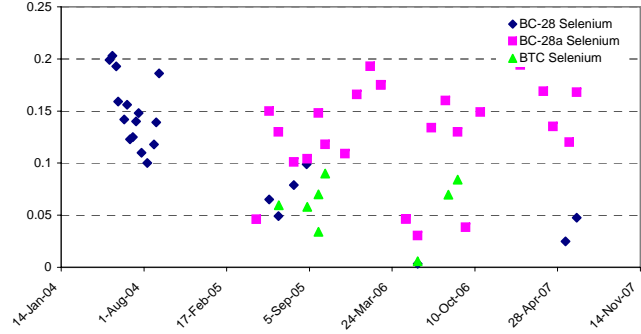
**Arsenic Criteria** Land App - 0.5 mg/L Direct Discharge - 0.5 mg/L



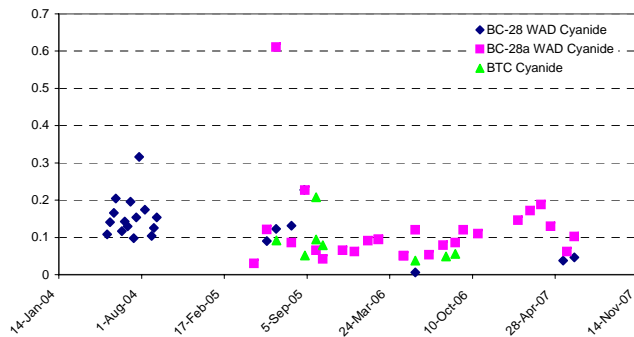
**Chloride**



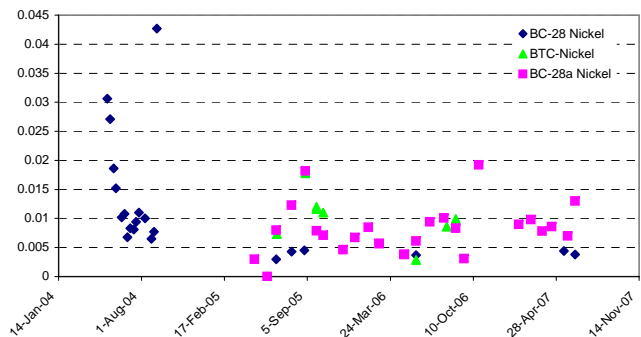
**Selenium Criteria** Land App - 0.75 mg/L Direct Discharge - 0.25 mg/L



**WAD Cyanide Criteria** Land App - 0.25 mg/L Direct Discharge - 0.25 mg/L



**Nickel Criteria** Land App - 0.8 mg/L Direct Discharge - 0.5 mg/L





**Attachment 1**  
**Liability Estimate Spreadsheet**



**Table 1**  
**Undiscounted Summary of All Items**

Cost Center	Estimates from Sept 2003 Review	Estimates from Sept 2004 Review	Estimates from Sept 2005 Review	Estimates from Sept 2006 Review	Estimates from Sept 2007 Review	Contingency Factors	Notes and references
Mine Area Reclamation	\$ 528,894	\$ 201,269	\$ 135,258	\$ 132,304	\$ 99,465	20%	See Tables 5 and 6.
Site Facilities Removal and Reclamation	\$ 576,829	\$ 219,515	\$ 140,851	\$ 118,545	\$ 113,673	10%	See Table 7.
Leach Pad Detox	\$ -	\$ -	\$ -	\$ -	\$ -	20%	Complete.
Manpower	\$ 260,550	\$ 64,125	\$ 92,813	\$ 92,813	\$ 26,190	10%	See Table 9.
General and Admin	\$ 444,915	\$ 44,626				10%	See Table 10.
Process Water Treatment	\$ 58,500	\$ -	\$ -	\$ -	\$ -	20%	Complete.
Leach Pad Reclamation	\$ 120,485	\$ 60,054	\$ 53,142	\$ 37,294	\$ 21,446	10%	See Table 8.
Post-Closure Monitoring	\$ 584,600	\$ 562,773	\$ 551,720	\$ 512,280	\$ 438,840	10%	See Table 12.
Direct Costs	\$ 2,574,774	\$ 1,152,362	\$ 973,784	\$ 893,236	\$ 699,614		
Contingency	\$ 316,217	\$ 135,363	\$ 110,904	\$ 102,554	\$ 79,908		
Inflation Allowance							Now covered in NPV calculation
Total	\$ 2,890,990	\$ 1,287,725	\$ 1,084,688	\$ 995,790	\$ 779,522		
NPV							

Mitigation Measures							
Operate BTC for one year			\$ 151,675	\$ 151,673	\$ 151,673		See Table 3
Operate BTC for two years		\$ 303,346	\$ 303,346	\$ 303,346	\$ 303,346		See Table 3
Operate BTC for five years	\$ 1,362,560	\$ 758,365	\$ 758,365	\$ 758,365	\$ 758,365		See Table 3
Lucky Dump Areas - Additional stabilization	\$ 83,064	\$ 34,603	\$ 36,061	\$ 36,061	\$ 36,061		See Table 3
Blue Dump cover improvement	\$ 1,074,239	\$ 1,074,239	\$ 1,074,239	\$ 1,074,239	\$ 1,074,239		See Table 3

Cases						
Base case	\$ 2,890,990	\$ 1,287,725	\$ 1,084,688	\$ 995,790	\$ 779,522	Likely
Base case with Lucky area stabilization					\$ 815,583	Possible
Base case with BTC for one year			\$ 1,236,363	\$ 1,147,463	\$ 931,195	Unlikely
Base case with BTC for one year and Lucky area stabilization				\$ 1,183,524	\$ 967,256	Unlikely
Base case with BTC for two years		\$ 1,591,071	\$ 1,388,034	\$ 1,299,136	\$ 1,082,868	Very unlikely
Base case with BTC for two years and Lucky area stabilization		\$ 1,625,674	\$ 1,424,096	\$ 1,335,197	\$ 1,118,930	Very unlikely
Base case with BTC for five years	\$ 4,253,550	\$ 2,046,090	\$ 1,843,054	\$ 1,754,155	\$ 1,537,887	Very unlikely
Base case with BTC for 5 years and Lucky area stabilization	\$ 4,336,614	\$ 2,080,693	\$ 1,879,115	\$ 1,790,216	\$ 1,573,949	Very unlikely
Base case with BTC for 5 years, Lucky area and Blue Dump	\$ 5,410,853	\$ 3,154,932	\$ 2,953,354	\$ 2,864,455	\$ 2,648,188	Very unlikely

**Table 2**  
**NPV Discounted Summary**

4%

Cost Center	NPV	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mine Area Reclamation	\$ 95,639	\$ 99,465	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Site Facilities Removal and Reclamation	\$ 109,301	\$ 113,673	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Leach Pad Detox	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Manpower	\$ 25,183	\$ 26,190	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General and Admin	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Process Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Leach Pad Reclamation	\$ 20,621	\$ 21,446	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Post-Closure Monitoring	\$ 361,745	\$ 73,440	\$ 73,440	\$ 30,440	\$ 30,440	\$ 39,440	\$ 30,440	\$ 30,440	\$ 39,440	\$ 30,440	\$ 30,440	\$ 30,440
Direct Costs	\$ 612,489	\$ 334,214	\$ 73,440	\$ 30,440	\$ 30,440	\$ 39,440	\$ 30,440	\$ 30,440	\$ 39,440	\$ 30,440	\$ 30,440	\$ 30,440
Contingency	\$ 70,813	\$ 43,368	\$ 7,344	\$ 3,044	\$ 3,044	\$ 3,944	\$ 3,044	\$ 3,044	\$ 3,944	\$ 3,044	\$ 3,044	\$ 3,044
Inflation Allowance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 683,302	\$ 377,582	\$ 80,784	\$ 33,484	\$ 33,484	\$ 43,384	\$ 33,484	\$ 33,484	\$ 43,384	\$ 33,484	\$ 33,484	\$ 33,484
NPV												

Mitigation Measures	NPV	2008	2009	2010	2011	2012
Operate BTC for one year	\$ 145,839	\$ 151,673				
Operate BTC for two years	\$ 286,070	\$ 151,673	\$ 151,673			
Operate BTC for five years	\$ 675,222	\$ 151,673	\$ 151,673	\$ 151,673	\$ 151,673	\$ 151,673
Lucky Dump Areas - Additional stabilization	\$ 34,674	\$ 36,061				
Blue Dump cover improvement	\$ 1,032,922	\$ 1,074,239				

Cases	NPV	Likelihood
Base case	\$ 683,302	Likely
Base case with Lucky area stabilization	\$ 717,976	Possible
Base case with BTC for one year	\$ 829,141	Unlikely
Base case with BTC for one year and Lucky area stabilization	\$ 863,816	Unlikely
Base case with BTC for two years	\$ 969,371	Very unlikely
Base case with BTC for two years and Lucky area stabilization	\$ 1,004,046	Very unlikely
Base case with BTC for five years	\$ 1,358,523	Very unlikely
Base case with BTC for 5 years and Lucky area stabilization	\$ 1,393,198	Very unlikely
Base case with BTC for 5 years, Lucky area and Blue Dump	\$ 2,426,120	Very unlikely

Contingency Factors	Percentage
Mine Area Reclamation	20%
Site Facilities Removal and Reclamation	10%
Leach Pad Detox	20%
Manpower	10%
General and Admin	10%
Process Water Treatment	20%
Leach Pad Reclamation	10%
Post-Closure Monitoring	10%

### Table 3 Mitigation Measures

#### Heap Area

##### Operate land application for additional two years

Operating cost	\$ -	See Table 12
G&A cost	\$ 136,673	See Table 11
Annual total	\$ 136,673	
Additional years	\$ 2	
Total	\$ 273,346	

##### Operate BTC for one year

Construct BTC		Complete in Sept 2004
Operate BTC	\$ 15,000	For nutrients and maintenance.
G&A cost	\$ 136,673	See Table 11
Annual total	\$ 151,673	
Additional years	\$ 1	
Total	\$ 151,673	

##### Operate BTC for two years

Construct BTC		Complete in Sept 2004
Operate BTC	\$ 15,000	For nutrients and maintenance.
G&A cost	\$ 136,673	See Table 11
Annual total	\$ 151,673	
Additional years	\$ 2	
Total	\$ 303,346	

##### Operate BTC for five years

Construct BTC		Complete in Sept 2004
Operate BTC	\$ 15,000	For nutrients, maintenance & monitoring.
G&A cost	\$ 136,673	See Table 11
Annual total	\$ 151,673	
Additional years	\$ 5	
Total	\$ 758,365	

#### Mine Area

##### Lucky Dump Areas - Additional stabilization

Regrade with backhoe		80 hours
Unit Cost	\$ 300.77	From Table 5
Removal cost	\$ 24,061	
Re-seed (2 ha @ \$2000/ha)	\$ 4,000	
Engineering & Supervision	\$ 10,000	
Mob/Demob	\$ 2,000	
Total	\$ 36,061	

##### Blue Dump cover improvement

Strip and compact current cover. Add 2 m new material. Revegetate. Assume borrow source available!						
Improve cover over total area	m <sup>2</sup>	106,000				
Strip vegetation	m <sup>2</sup>	106,000	2000	53	\$ 359	\$ 19,003
Compact	m <sup>2</sup>	106,000	1000	106	\$ 441	\$ 46,754
2m new cover over total area	m <sup>2</sup>	106,000				
Load growth media with front end loader (	m <sup>3</sup>	212,000	389	545	\$ 322	\$ 175,570
Haul growth media with haultrucks	m <sup>3</sup>	212,000	100	2120	\$ 292	\$ 618,913
Spread growth media with dozer	m <sup>3</sup>	212,000	1000	212	\$ 359	\$ 76,012
Broadcast seed and fertilizer	hectare	10.60			\$ 400	\$ 4,240
Regrade borrow area	m <sup>2</sup>	50,000	1000	50	\$ 135	\$ 6,749
Re-seed and fertilize borrow area	hectare	5.00			\$ 400	\$ 2,000
Engineering & Supervision						\$ 75,000
Mob/Demob						\$ 50,000
Total						\$ 1,074,239

**Table 4**  
**Unit Cost Table**

**Contractor Equipment Rates as Revised in Sept 2003**

<b>Revised Equipment Rates</b> <b>Unit of Equipment</b>	<b>Cost per</b> <b>Op Hour</b>	<b>Basis</b>	<b>All-Found Rates</b>			<b>Average</b>	<b>With 10%</b> <b>Northern Increase</b>
			<b>New</b>	<b>10-Year Old</b>	<b>Source</b>		
<b><u>Smaller fleet</u></b>							
D9 Bulldozer	\$ 283	D9 Bulldozer	\$ 269	\$ 245	(B.C.)	\$ 257	\$ 283
D8 Bulldozer	\$ 216	D8 Bulldozer	\$ 205	\$ 187	(B.C.)	\$ 196	\$ 216
12H Grader	\$ 124	12H Grader	\$ 117	\$ 109	(B.C.)	\$ 113	\$ 124
769 Haul truck (35 tonne)	\$ 194	769 Haul truck	\$ 177	\$ 177	(B.C.)	\$ 177	\$ 194
990 Front end loader	\$ 275	990 Front end loader	\$ 250	\$ 250		\$ 250	\$ 275
365 Backhoe	\$ 301	365 Backhoe	\$ 286	\$ 261	(B.C.)	\$ 273	\$ 301
<b><u>Large fleet</u></b>							
D10N Bulldozer	\$ 359	D10N Bulldozer	\$ 341	\$ 311	(B.C.)	\$ 326	\$ 359
14G Grader	\$ 135	14G Grader	\$ 127	\$ 118	(B.C.)	\$ 123	\$ 135
777 Haul truck (70 tonne)	\$ 292	777 Haul truck	\$ 265	\$ 265	(B.C.)	\$ 265	\$ 292
992 FEL	\$ 322	992 FEL	\$ 293	\$ 293	(Sask.)	\$ 293	\$ 322
375 Backhoe	\$ 317	365/385 Backhoe	\$ 301	\$ 275	(B.C.)	\$ 288	\$ 317
Compactor	\$ 83	Compactor	\$ 76	\$ 74	(B.C.)	\$ 75	\$ 83

**Viceroy Minerals Corporation Owned and Operated Equipment Rates**

<b>Unit of Equipment</b>	<b>Cost per</b> <b>Op Hour</b>
D10N Bulldozer	\$ 88
16G Grader	\$ 50
Haul truck (100 ton)	\$ 92
992 Front end loader	\$ 118
375 Backhoe	\$ 88
Labour	\$ 25

Operating costs include operator, fuel, maintenance, room and board

<b>Volume IV Equipment Rates</b> <b>Unit of Equipment</b>	<b>Cost per</b> <b>Op Hour</b>
D10N Bulldozer	\$ 164
14G Grader	\$ 77
Haul truck (100 ton)	\$ 189
992 FEL	\$ 235
375 Backhoe	\$ 194
Compactor	\$ 44

Operating costs for Dozer, Grader, Compactor based on quoted 1999 Leach Pad Construction inflated by 3% annually through 2002. Costs include operator, fuel and maintenance. Other equipment is 50% above Viceroy Minerals Costs for owning/operating for a conservative value for estimating Contractor Rates.



**Table 4**  
**Unit Cost Table**

**Actual Brewery Creek Mine Production Figures**

<b>Task Description</b>	<b>Unit of Measure</b>	<b>Production per Hour</b>	<b>Actual BCM \$/m3</b>	<b>Plan Costs \$/m3</b>
Stockpile to Dump Location (500 m)				
FEL/Backhoe (164,000 m <sup>3</sup> @ 422 hrs)	m <sup>3</sup>	389	\$ 0.30	\$ 0.83
Blue WRSA in April/May 2001				
D10N dozer (62,100 m <sup>3</sup> @ 202 hours)	m <sup>3</sup>	307	\$ 0.29	\$ 1.17
Blue In-pit Backfill				
D10N dozer (19,200 m <sup>3</sup> @ 65 hours)	m <sup>3</sup>	295	\$ 0.30	
North Golden WRSA Recontour May 2002				
D10N & 375 Backhoe (74,885 m <sup>3</sup> @150 Dozer hours, 15 Backhoe hours)	m <sup>3</sup>	453	\$ 0.23	\$ 0.38
Broadcast (includes seed and fertilizer)	hectare	\$ 400	Open Pits	
Hydroseed (includes mulch/seed/etc.)	hectare	\$ 5,000	Open Pits	
Broadcast (includes seed and fertilizer)	hectare	\$ 750	Leach Pad	

All production rates are actual machine hours that included idle running time.

Broadcast seed and fertilizer rates from August 2002 quotation - Pickseed Edmonton, AB

Hydroseed rates are quoted rates from Adorna Flowers and Landscaping Ltd.

Note: This table corresponds to Table 7-4 in "Volume IV".

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>Mobilization/Demobilization</b>	Season	1			\$ 80,000	\$ 80,000	100%	\$ -	
<u>Future Mobilization</u>		1			\$ 20,000	\$ 20,000	0%	\$ 20,000	
<b>Subtotal</b>									\$ 20,000
						\$ 100,000			
<b>Metal Uptake Study</b>									
<u>Field sampling, analysis, and reporting</u>	lot	1			\$ 20,000	\$ 20,000	100%	\$ -	
<b>Subtotal</b>									\$ -
						\$ 20,000			
<b>Upper Fosters Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	2,400	307	complete	\$ 359	complete			
Backhoe work to pull back slopes	m <sup>3</sup>	2,900	300	complete	\$ 317	complete			
Dozer recontouring areas	m <sup>2</sup>	3,800	600	complete	\$ 359	complete			
Total area to be reseeded	m <sup>2</sup>	36,700							
Load growth media with front end loader	m <sup>3</sup>	-	389	0	\$ 322	\$ -	100%	\$ -	
Haul growth media with haultrucks	m <sup>3</sup>	-	195	0	\$ 292	\$ -	100%	\$ -	
Spread growth media with dozer	m <sup>3</sup>	-	389	0	\$ 359	\$ -	100%	\$ -	
Broadcast seed and fertilizer	hectare	3.67			\$ 400	\$ 1,468	100%	\$ -	
2004-5 Erosion Repairs (5%)	m <sup>2</sup>	1,835							
Erosion repairs with dozer	m <sup>3</sup>	918	150	6	\$ 283	\$ 1,695	100%	\$ -	
Re-Seeding (2 ha)	m <sup>2</sup>	20,000							
Broadcast seed and fertilizer	hectare	2.00			\$ 400	\$ 800	100%	\$ -	
<b>Subtotal</b>									\$ -
						\$ 3,963			
<b>The Canadian Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	63,200	295	214	\$ 359	\$ 76,729	100%	\$ -	
Dozer work to construct diversion ditches	lot				\$ 359	\$ -	100%	\$ -	
Construct cap for waste landfill area	lot					\$ 5,000	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	91,500							
Load growth media with front end loader	m <sup>3</sup>	31,050	389	80	\$ 322	\$ 25,772	100%	\$ -	
Haul growth media with haultrucks	m <sup>3</sup>	31,050	195	159	\$ 292	\$ 46,418	100%	\$ -	
Spread growth media with dozer	m <sup>3</sup>	87,627	389	225	\$ 359	\$ 80,673	100%	\$ -	
Broadcast seed and fertilizer	hectare	9.15			\$ 400	\$ 3,660	100%	\$ -	
2004-5 Erosion Repairs (5%)	m <sup>2</sup>	4,575							
Erosion repairs with dozer	m <sup>3</sup>	2,288	150	15	\$ 283	\$ 4,238	100%	\$ -	
Re-Seeding (0%)	m <sup>2</sup>	54,900							
Broadcast seed and fertilizer	hectare	5.49			\$ 400	\$ 2,196	100%	\$ -	
<b>Subtotal</b>									\$ -
						\$ 244,685			

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>The Blue Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	19,200	295	complete	\$ 359	complete			
Dozer recontouring areas	lot			30	\$ 359	\$ 10,756	100%	\$ -	
Dozer/Backhoe work to construct diversion ditches	lot			complete	\$ 359	complete			
Construction of overflow sediment control works	lot					\$ 4,700	100%	\$ -	
Total area requiring seds/silt cap	m <sup>2</sup>	4,000					100%	\$ -	
Load seds/silt with front end loader	m <sup>3</sup>		389	0	\$ 322	\$ -	100%	\$ -	
Haul seds/silt with haultrucks	m <sup>3</sup>	-	195	0	\$ 292	\$ -	100%	\$ -	
Spread seds/silt with dozer	m <sup>3</sup>	-	389	0	\$ 359	\$ -	100%	\$ -	
Compact seds/silt with roller	m <sup>2</sup>			0	\$ 83	\$ -	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	49,300							
Load growth media with front end loader	m <sup>3</sup>	-	389	0	\$ 322	\$ -	100%	\$ -	
Haul growth media with haultrucks	m <sup>3</sup>	-	195	0	\$ 292	\$ -	100%	\$ -	
Spread growth media with dozer	m <sup>3</sup>	-	389	0	\$ 359	\$ -	100%	\$ -	
Broadcast seed and fertilizer	hectare	4.93			\$ 400	\$ 1,972	100%	\$ -	
2004-5 Erosion Repairs (5%)	m <sup>2</sup>	2,465							
Erosion repairs with dozer	m <sup>3</sup>	1,500	150	10	\$ 283	\$ 2,825	0%	\$ 2,825	
Re-Seeding (80%)	m <sup>2</sup>	39,440							
Broadcast seed and fertilizer	hectare	3.94			\$ 400	\$ 1,578	0%	\$ 1,578	
<b>Subtotal</b>								\$ 21,831	\$ 4,403

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>The Blue Waste Rock Storage Area</b>									
Equipment work to recontour Waste Rock Storage Area									
Dozer cut to fill slopes	m <sup>3</sup>	62,100	307	complete	\$ 359	complete			
Dozer recontouring areas	m <sup>2</sup>			complete		complete			
Dozer work to construct diversion ditches	lot			complete	\$ 359	complete			
Backhoe work to re-construct collection ditch	lot			complete	\$ 317	complete			
Total area requiring seds/silt cap	m <sup>2</sup>								
Load seds/silt with front end loader	m <sup>3</sup>		389	0	\$ 322	\$ -	100%	\$ -	
Haul seds/silt with haultrucks	m <sup>3</sup>		195	0	\$ 292	\$ -	100%	\$ -	
Spread seds/silt with dozer	m <sup>3</sup>		389	0	\$ 359	\$ -	100%	\$ -	
Compact seds/silt with roller	m <sup>2</sup>				\$ 83	\$ -	100%	\$ -	
Construct monitor locations downstream of WRSA	lot			20	\$ 317	complete			
Supplies and labour to set up monitor sites	lot					complete			
Complete Blue WRSA Field Program									
Recontour Canadian Creek Control Structure	lot					\$ 25,000	100%	\$ -	
Backhoe	lot			30	\$ 317	\$ 9,504	100%	\$ -	
Dozer	lot			30	\$ 359	\$ 10,756	100%	\$ -	
Revegetation	lot					\$ 1,000	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	106,000							
Load growth media with front end loader (soil cover)	m <sup>3</sup>	53,000	389	136	\$ 322	\$ 43,812	100%	\$ -	
Haul growth media with haultrucks	m <sup>3</sup>	53,000	195	272	\$ 292	\$ 79,408	100%	\$ -	
Spread growth media with dozer	m <sup>3</sup>	53,000	389	136	\$ 359	\$ 48,762	100%	\$ -	
Broadcast seed and fertilizer	hectare	10.60			\$ 400	\$ 4,240	100%	\$ -	
Erosion Repairs									
Erosion repairs with dozer	m <sup>3</sup>	4,500	150	30	\$ 283	\$ 8,476	0%	\$ 8,476	
Re-Seeding (2ha+50%)	m <sup>2</sup>	73,000							
Re-till compacted areas	hectare	1.00	0.1	10	\$ 283	\$ 2,825	0%	\$ 2,825	
Broadcast seed and fertilizer	hectare	7.30			\$ 400	\$ 2,920	0%	\$ 2,920	
Blue Dump ARD studies	lump					\$ 10,000	100%	\$ -	
Blue Dump cover monitoring	lump						0%	\$ -	
<b>Subtotal</b>								\$ 246,703	\$ 14,221

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>The Kokanee Open Pits</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	39,800	295	complete	\$ 359	complete			
Dozer recontouring areas	m <sup>2</sup>	70,400	600	complete	\$ 359	complete			
Dozer work to construct diversion ditches	lot				\$ 359	\$ -	100%	\$ -	
Construction of overflow sediment control works	lot					\$ 4,700	100%	\$ -	
Maintenance of outflow channel	lot					\$ 2,500	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	168,500							
Load growth media with front end loader	m <sup>3</sup>	14,079	389	36	\$ 322	complete			
Haul growth media with haultrucks	m <sup>3</sup>	2,079	195	11	\$ 292	complete			
Spread growth media with dozer	m <sup>3</sup>	19,679	389	51	\$ 359	complete			
Broadcast seed and fertilizer	hectare	16.85			\$ 400	complete			
2004-5 Erosion Repairs (15%)	m <sup>2</sup>	25,275							
Erosion repairs with dozer	m <sup>3</sup>	12,638	400	32	\$ 283	\$ 9,041	100%	\$ -	
Re-Seeding (25%)	m <sup>2</sup>	42,125							
Broadcast seed and fertilizer	hectare	4.21			\$ 400	\$ 1,685	100%	\$ -	
<b>Subtotal</b>								\$ 17,926	\$ -
<b>The North Golden Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	23,200	295	79	\$ 359	complete			
Dozer recontouring areas	m <sup>3</sup>	15,000	600	25	\$ 359	complete			
Dozer work to construct diversion ditches	lot				\$ 359	\$ -			
Total area to be reseeded	m <sup>2</sup>	112,200							
Load growth media with front end loader	m <sup>3</sup>	9,985	389	26	\$ 235	complete			
Haul growth media with haultrucks	m <sup>3</sup>	6,615	195	34	\$ 189	complete			
Spread growth media with dozer	m <sup>3</sup>	7,441	389	19	\$ 359	complete			
Broadcast seed and fertilizer	hectare	11.22			\$ 400	complete			
Bench dump to southeast of Pit	m <sup>3</sup>	15,000							
Small Backhoe	m <sup>3</sup>	15,000	200	75	\$ 301	\$ 22,558	100%	\$ -	
2004-5 Erosion Repairs (15%)	m <sup>2</sup>	16,830							
Erosion repairs with dozer	m <sup>3</sup>	8,415	400	21	\$ 283	\$ 5,933	100%	\$ -	
Swale maintenance	lot					\$ 2,500	100%	\$ -	
Re-Seeding (50%)	m <sup>2</sup>	56,100							
Broadcast seed and fertilizer	hectare	5.61			\$ 400	\$ 2,244	100%	\$ -	
<b>Subtotal</b>								\$ 33,235	\$ -

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>The South Golden Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	5,600	295	19	\$ 359	complete			
Backhoe cut to fill slopes	m <sup>3</sup>	9,100	300	30	\$ 317	complete			
Dozer recontouring areas	m <sup>2</sup>			60	\$ 359	complete			
Dozer work to construct highwall/road access berms	lm			10	\$ 359	complete			
Dozer work to construct diversion ditches	lm				\$ 359	\$ -			
Construction of overflow sediment control works	lot					\$ 4,700	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	13,800							
Load growth media with front end loader	m <sup>3</sup>	9,985	389	26	\$ 235	complete			
Haul growth media with haultrucks	m <sup>3</sup>	9,985	195	51	\$ 189	complete			
Spread growth media with dozer	m <sup>3</sup>	11,459	389	29	\$ 359	complete			
Broadcast seed and fertilizer	hectare	1.38			\$ 400	complete			
2004-5 Erosion Repairs (5%)	m <sup>2</sup>	690							
Erosion repairs with dozer	m <sup>3</sup>	345	150	2	\$ 322	\$ 644	100%	\$ -	
Re-Seeding (25%)	m <sup>2</sup>	3,450							
Broadcast seed and fertilizer	hectare	0.35			\$ 400	\$ 138	100%	\$ -	
<b>Subtotal</b>								\$ 5,482	\$ -

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>The Lucky Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	1,000	295	complete	\$ 359	complete			
Dozer recontouring areas	m <sup>2</sup>	40,800	600	68	\$ 359	complete			
Backhoe work to recontour stream channel	m <sup>3</sup>	1,900	300	complete	\$ 317	complete			
Construction of overflow sediment control works	lot			complete		complete			
Total area to be reseeded	m <sup>2</sup>	42,500							
Load growth media with front end loader	m <sup>3</sup>	5,500	389	14	\$ 235	complete			
Haul growth media with haultrucks	m <sup>3</sup>	5,500	195	28	\$ 189	complete			
Spread growth media with dozer	m <sup>3</sup>	5,900	389	15	\$ 359	complete			
Broadcast seed and fertilizer	hectare	4.25			\$ 400	complete			
2004-5 Erosion Repairs (15%)	m <sup>2</sup>	6,375							
Erosion repairs with dozer	m <sup>3</sup>	3,188	400	8	\$ 283	\$ 2,260	100%	\$ -	
Re-Seeding (50%)	m <sup>2</sup>	21,250							
Broadcast seed and fertilizer	hectare	2.13			\$ 400	\$ 850	100%	\$ -	
Stabilization of Haul Road									
Remove 100 m x 20 m x 6 m	m <sup>3</sup>	12,000							
Load with backhoe	m <sup>3</sup>	12,000	300	40	\$ 275	\$ 11,000	100%	\$ -	
Haul with haultrucks	m <sup>3</sup>	12,000	150	80	\$ 194	\$ 15,532	100%	\$ -	
<b>Subtotal</b>								\$ 29,642	\$ -
<b>The Lower Fosters Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer recontouring areas	m <sup>2</sup>	44,300	1000	complete	\$ 359	complete			
Dozer work to construct highwall/road access berms	lot			complete	\$ 359	complete			
Dozer work to construct diversion ditches	lot			complete	\$ 359	complete			
Total area to be reseeded	m <sup>2</sup>	44,300							
Broadcast seed and fertilizer	hectare	4.43			\$ 400	\$ 1,772	100%	\$ -	
2004 Erosion Repairs (5%)	m <sup>2</sup>	2,215							
Erosion repairs with dozer	m <sup>3</sup>	1,108	150	7	\$ 283	\$ 1,978	100%	\$ -	
2004 Re-Seeding (25%)	m <sup>2</sup>	11,075							
Broadcast seed and fertilizer	hectare	1.11			\$ 400	\$ 443	100%	\$ -	
<b>Subtotal</b>								\$ 4,193	\$ -

**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>The Pacific Open Pit &amp; Silt Borrow Area</b>									
Equipment work to recontour partially backfilled open pit									
Dozer cut to fill slopes	m <sup>3</sup>	12,545	307	41	\$ 359	\$ 14,700	100%	\$ -	
Dozer recontouring areas	m <sup>2</sup>	24,800	600	41	\$ 359	\$ 14,700	100%	\$ -	
Backhoe work to pull back veg/gm from trees in borrow area	lot			complete	\$ 317	complete			
Dozer work to construct diversion ditches	lot				\$ 359	\$ -			
Construction of overflow sediment control works	lot					\$ 4,700	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	116,500							
Load growth media with front end loader	m <sup>3</sup>	4,800	389	12	\$ 235	complete			
Haul growth media with haultrucks	m <sup>3</sup>	4,800	195	25	\$ 189	complete			
Spread growth media with dozer	m <sup>3</sup>	7,100	389	18	\$ 359	complete			
Broadcast seed and fertilizer	hectare	11.65			\$ 400	complete			
2004 Erosion Repairs (5%)	m <sup>2</sup>	5,825							
Erosion repairs with dozer	m <sup>3</sup>	2,913	150	19	\$ 322	\$ 6,121	100%	\$ -	
2004 Re-Seeding (25%)	m <sup>2</sup>	29,125							
Broadcast seed and fertilizer	hectare	2.91			\$ 400	\$ 1,165	100%	\$ -	
<b>Subtotal</b>								\$ 41,386	\$ -
<b>The Moosehead Open Pit</b>									
Equipment work to recontour partially backfilled open pit									
Dozer work to construct highwall/road access berms	lot			complete	\$ 359	complete			
Dozer work to construct diversion ditches	lot			complete	\$ 359	complete			
Construct cap for waste landfill area	lot					\$ 5,000	100%	\$ -	
Construction of overflow sediment control works	lot					\$ 4,700	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	29,600							
Load growth media with front end loader	m <sup>3</sup>		350	0	\$ 235	\$ -			
Haul growth media with haultrucks	m <sup>3</sup>		175	0	\$ 189	\$ -			
Spread growth media with dozer	m <sup>3</sup>	1,435	350	4	\$ 359	\$ 1,434	100%	\$ -	
Broadcast seed and fertilizer	hectare	2.96			\$ 400	\$ 1,184	100%	\$ -	
2004 Erosion Repairs (5%)	m <sup>2</sup>	1,480							
Erosion repairs with dozer	m <sup>3</sup>	740	150	5	\$ 283	\$ 1,413	100%	\$ -	
Haul road	m <sup>2</sup>	22,500							
Scarify with dozer	m <sup>2</sup>	22,500	1200	19	\$ 283	\$ 5,368	100%	\$ -	
Load growth media with front end loader	m <sup>3</sup>	4,500	300	15	\$ 275	\$ 4,125	100%	\$ -	
Haul growth media with haultrucks	m <sup>3</sup>	4,500	150	30	\$ 194	\$ 5,825	100%	\$ -	
Spread growth media with dozer	m <sup>3</sup>	4,500	200	23	\$ 283	\$ 6,498	100%	\$ -	
Re-Seeding (2 ha + haul road + landfill)	m <sup>2</sup>	40,000							
Broadcast seed and fertilizer	hectare	4.00			\$ 400	\$ 1,600	100%	\$ -	
<b>Subtotal</b>								\$ 37,147	\$ -



**Table 5**  
**Open Pit Mining and Waste Rock Storage Areas**

Note: This table corresponds to Table 7-5 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b><u>Allowance for Site-Wide Erosion Repairs and Re-Seeding</u></b>									
Erosion Repairs	m <sup>2</sup>	12,000							
Erosion repairs with dozer	m <sup>3</sup>	6,000	150	40	\$ 283	\$ 11,301	0%	\$ 11,301	
Re-Seeding	m <sup>2</sup>	40,000							
Broadcast seed and fertilizer	hectare	4.00			\$ 400	\$ 1,600	0%	\$ 1,600	
<b>Total Estimated Cost in Reclaiming Open Pits and WSRA's</b>						<b>\$ 806,195</b>		<b>\$ 38,624</b>	

**Table 6**  
**Haul Road and Perimeter Access Road Reclamation**

Note: This table corresponds to Table 7-6 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>Scarify &amp; Recontour Perimeter Roads (11,000 meters)</b>									
Grader	m	11,000	100	110	\$ 124	\$ 13,634	0%	\$ 13,634	
Dozer (25% of total)	m	2,750	50	55	\$ 301	\$ 16,542	0%	\$ 16,542	
Backhoe (25% of total)	m	2,750	50	55	\$ 283	\$ 15,539	0%	\$ 15,539	
Front end loader (25% of total)	m	2,750	50	55	\$ 275	\$ 15,125	0%	\$ 15,125	
<b>Subtotal</b>								\$ 60,840	\$ 60,840
<b>Removal of Main Haul Road Side Berms (8,000 meters)</b>									
Length	m	8,000							
Height	m	3.0							
Base	m	4.2							
Total Volume	m <sup>3</sup>	50,400							
Adjusted Volume (10% of berms remain to prevent highwall ar	m <sup>3</sup>	45,360							
FEL (10% of adjusted volume)	m <sup>3</sup>	4,536	300	15	\$ 275	\$ 4,125	100%	\$ -	
Backhoe (80% of adjusted volume)	m <sup>3</sup>	36,288	200	181	\$ 283	\$ 51,139	100%	\$ -	
Dozer (30% of adjusted volume)	m <sup>3</sup>	13,608	100	136	\$ 301	\$ 40,904	100%	\$ -	
Haul (25% of adjusted volume)	m <sup>3</sup>	11,340	150	76	\$ 194	\$ 14,755	100%	\$ -	
<b>Subtotal</b>								\$ 110,924	\$ -
<b>General Recontour of Haulroad Slopes (90% of existing haulroads)</b>									
(10% of existing slopes remain same above pit walls)									
length	m	7,200							
depth (6 m @ 2H : 1V)	m <sup>2</sup>	11							
Volume	m <sup>3</sup>	79,200							
Consists of sloping top 6 meters back to haul road at 2H:1V									
Backhoe (100% of total length)	m <sup>3</sup>	79,200	200	396	\$ 283	\$ 111,884	100%	\$ -	
Haul (25% of total material)	m <sup>3</sup>	19,800	150	132	\$ 194	\$ 25,628	100%	\$ -	
Dozer (75% of total)	m <sup>3</sup>	59,400	307	193	\$ 301	\$ 58,048	100%	\$ -	
Broadcast Seed and Fertilizer (4000 ft @ 13.4 meters of slope)	hectares	5.40			\$ 1,000	\$ 5,400	100%	\$ -	
Hydroseed (4000 ft @ 13.4 meters of slope)	hectares	5.40			\$ 5,000	\$ 27,000	100%	\$ -	
<b>Subtotal</b>								\$ 227,960	\$ -

**Table 6**  
**Haul Road and Perimeter Access Road Reclamation**

Note: This table corresponds to Table 7-6 in "Volume IV".

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>Upper Lucky Creek Crossing</b>									
Volume of material overlaying riprap	m <sup>3</sup>								
Volume of material to bring both slopes to 2H:1V with channel	m <sup>3</sup>								
Material volume subtotal	m <sup>3</sup>	10,864							
Total riprap in channel	m <sup>3</sup>	1,420							
100% of riprap currently in place	m <sup>3</sup>								
Material overlaying riprap and side slopes									
Backhoe (100% of adjusted volume)	m <sup>3</sup>	10,864	300	36	\$ 283	\$ 10,171	100%	\$ -	
Haultrucks (50% of adjusted volume)	m <sup>3</sup>	5,432	150	36	\$ 194	\$ 6,989	100%	\$ -	
Dozer Assist (100% of adjusted volume)	m <sup>3</sup>	10,864	300	36	\$ 301	\$ 10,828	100%	\$ -	
Place riprap									
Backhoe	m <sup>3</sup>	-	100	0	\$ 317	\$ -			
<b>Subtotal</b>						<b>\$ 27,988</b>			<b>\$ -</b>
<b>Six Culverts on Main Haul Road</b>									
Excavation to remove culverts and establish drainage channel (6 culverts)	m <sup>3</sup>	59,450							
Backhoe (100% of adjusted volume)	m <sup>3</sup>	59,450	200	297	\$ 283	\$ 83,913	100%	\$ -	
Haul trucks (50% of adjusted volume)	m <sup>3</sup>	29,725	100	297	\$ 194	\$ 57,663	100%	\$ -	
Dozer (100% of adjusted volume)	m <sup>3</sup>	59,450	300	198	\$ 301	\$ 59,552	100%	\$ -	
Load, Haul & Place riprap									
Make riprap	m <sup>3</sup>	3,200	17.5	183	\$ 100	\$ 18,300	100%	\$ -	
FEL	m <sup>3</sup>	3,200	200	16	\$ 275	\$ 4,400	100%	\$ -	
Haul trucks	m <sup>3</sup>	3,200	100	32	\$ 194	\$ 6,213	100%	\$ -	
Backhoe	m <sup>3</sup>	3,200	100	32	\$ 301	\$ 9,625	100%	\$ -	
<b>Subtotal</b>						<b>\$ 239,665</b>			<b>\$ -</b>
<b>Total Estimated Cost of Reclaiming Haul and Perimeter Roads</b>						<b>\$ 667,377</b>			<b>\$ 60,840</b>

**Table 7****Site Facilities Removal and Reclamation**

Note: This table corresponds to Table 7-7 in "Volume IV".

Area and Task Description	Estimated Hours	Unit Rate	Estimated Cost		Percent Complete	Subtotal Liability	Total Liability
<b>Building Dismantling and Salvaging</b>							
<b>Accommodation Camp - Prefabricated Modular Trailer Units</b>							
These units have been sold "as is where is" and are being prepared by buyer							
General cleanup of site	0	\$ 30	\$ -	complete	100%	\$ -	\$ -
<b>Subtotal</b>				\$ -			\$ -
<b>Administration Office Complex</b>							
These units have been sold "as is where is" and are being prepared by buyer							
General cleanup of site	0	\$ 30	\$ -	complete	0%	\$ -	\$ -
<b>Subtotal</b>				\$ -			\$ -
<b>Engineering Office Complex</b>							
These units have been sold "as is where is" and are being prepared by buyer							
General cleanup of site	0	\$ 30	\$ -	complete	0%	\$ -	\$ -
<b>Subtotal</b>				\$ -			\$ -
<b>Environmental Trailer</b>							
This unit has been sold "as is where is" and has left the property							
General cleanup of site	0	\$ 30	\$ -	complete	0%	\$ -	\$ -
<b>Subtotal</b>				\$ -			\$ -
<b>Warehouse &amp; Maintenance Shop Building (Steel Frame Building on Concrete Slab)</b>							
Remove hazardous materials	96	\$ 30	\$ 2,880		50%	\$ 1,440	
Remove salvageable materials and fittings	240	\$ 30	\$ 7,200		50%	\$ 3,600	
Remove and dispose of steel roof & wall panelling & insulation	480	\$ 38	\$ 18,240		50%	\$ 9,120	
Disassemble steel frame of building	480	\$ 38	\$ 18,240		50%	\$ 9,120	
Disassemble interior steel framing	240	\$ 38	\$ 9,120		50%	\$ 4,560	
Disconnect service piping and electrical cabling	120	\$ 38	\$ 4,560		50%	\$ 2,280	
Remove scrap to landfill	192	\$ 38	\$ 7,296		50%	\$ 3,648	
Prepare salvaged steel for shipment	72	\$ 38	\$ 2,736		50%	\$ 1,368	
Freight to ship building	lot		\$ 15,000		50%	\$ 7,500	
Crane support	144	\$ 100	\$ 14,400		50%	\$ 7,200	
General cleanup of site	24	\$ 30	\$ 720		0%	\$ 720	
Haul and place soil cover over slab (m <sup>3</sup> )	1100	\$ 2.25	\$ 2,475		0%	\$ 2,475	
<b>Subtotal</b>				\$ 102,867			\$ 53,031
<b>Surface Shop - Atco Fold Away - 12.2 m long x 9.1 m wide on concrete slab</b>							
Remove hazardous materials	12	\$ 30	\$ 360		100%	\$ -	
Remove salvageable materials and fittings	48	\$ 30	\$ 1,440		100%	\$ -	
Disassemble steel frame of building	192	\$ 38	\$ 7,296		100%	\$ -	
Disconnect service piping and electrical cabling	48	\$ 38	\$ 1,824		100%	\$ -	
Remove scrap to landfill	24	\$ 30	\$ 720		100%	\$ -	
Freight to ship building	lot		\$ 5,000		100%	\$ -	
Crane support	48	\$ 100	\$ 4,800		100%	\$ -	
General cleanup of site	12	\$ 30	\$ 360		100%	\$ -	
Haul and place soil cover over slab (m <sup>3</sup> )	150	\$ 2.25	\$ 338		100%	\$ -	
<b>Subtotal</b>				\$ 22,138			\$ -

**Table 7****Site Facilities Removal and Reclamation**

Note: This table corresponds to Table 7-7 in "Volume IV".

Area and Task Description	Estimated Hours	Unit Rate	Estimated Cost	Percent Complete	Subtotal Liability	Total Liability
<b>Camp Potable Water Tank - 455 m3 steel tank</b>						
Drain tank & disconnect piping	24	\$ 30	\$ 720	100%	\$ -	
Disconnect steel tank	192	\$ 38	\$ 7,296	100%	\$ -	
Haul scrap steel to landfill	24	\$ 30	\$ 720	100%	\$ -	
Haul and place soil over foundation (m3)	100	\$ 2.25	\$ 225	100%	\$ -	
<b>Subtotal</b>					\$ 8,961	\$ -
<b>Exploration Office &amp; Core Logging Facility - Wood Frame &amp; Truss Building - 9.8m wide x 12.5 m long</b>						
Remove hazardous materials	6	\$ 30	\$ 180	100%	\$ -	
Remove salvageable materials and fittings	48	\$ 30	\$ 1,440	100%	\$ -	
Disassemble wood frame of building	192	\$ 30	\$ 5,760	100%	\$ -	
Disconnect service piping and electrical cabling	24	\$ 38	\$ 912	100%	\$ -	
Remove scrap to landfill	24	\$ 30	\$ 720	100%	\$ -	
General cleanup of site	12	\$ 30	\$ 360	100%	\$ -	
<b>Subtotal</b>					\$ 9,372	\$ -
<b>Exploration Office Shipping Containers - Two 6.1 m shipping containers with wood roof cover</b>						
Remove salvageable materials and fittings	0	\$ 30	\$ - complete	0%	\$ -	
Disassemble wood frame of roof cover	0	\$ 30	\$ - complete	0%	\$ -	
Load and ship two containers off site	0	\$ 38	\$ - complete	0%	\$ -	
Freight cost to ship containers off site	0		\$ - complete	100%	\$ -	
General cleanup of site	12	\$ 30	\$ 360	100%	\$ -	
<b>Subtotal</b>					\$ 360	\$ -
<b>ADR Plant Building - Engineered Steel Frame Building - 70 m long x 21 m wide</b>						
Remove hazardous materials & clean plant interior	96	\$ 30	\$ 2,880	100%	\$ -	
Remove salvageable materials, equipment & fittings	480	\$ 30	\$ 14,400	100%	\$ -	
Remove and dispose of steel roof & wall panelling & insulation	480	\$ 38	\$ 18,240	100%	\$ -	
Disassemble steel frame of building	384	\$ 38	\$ 14,592	100%	\$ -	
Disassemble interior steel framing	240	\$ 38	\$ 9,120	100%	\$ -	
Disconnect service piping and electrical cabling	240	\$ 38	\$ 9,120	100%	\$ -	
Remove scrap to landfill	192	\$ 30	\$ 5,760	100%	\$ -	
Prepare salvaged steel for shipment	72	\$ 30	\$ 2,160	100%	\$ -	
Freight to ship building	lot		\$ 20,000	100%	\$ -	
Crane support	192	\$ 100	\$ 19,200	100%	\$ -	
General cleanup of site	24	\$ 30	\$ 720	100%	\$ -	
Haul and place soil cover over slab (m <sup>3</sup> )	1875	\$ 2.25	\$ 4,219	100%	\$ -	
Revegetation - 75m x 25m	1875	\$ 0.50	\$ 938	100%	\$ -	
<b>Subtotal</b>					\$ 121,348	\$ -

**Table 7****Site Facilities Removal and Reclamation**

Note: This table corresponds to Table 7-7 in "Volume IV".

Area and Task Description	Estimated Hours	Unit Rate	Estimated Cost	Percent Complete	Subtotal Liability	Total Liability
<b>Assay Lab Building - Engineered Steel Frame Building - 29.3 m long x 8.5 m wide</b>						
Remove hazardous materials & clean lab interior	48	\$ 30	\$ 1,440	100%	\$ -	
Remove salvageable materials, equipment & fittings	240	\$ 30	\$ 7,200	100%	\$ -	
Remove and dispose of steel roof & wall panelling & insulation	144	\$ 38	\$ 5,472	100%	\$ -	
Disassemble steel frame of building	144	\$ 38	\$ 5,472	100%	\$ -	
Disconnect service piping and electrical cabling	48	\$ 38	\$ 1,824	100%	\$ -	
Remove scrap to landfill	96	\$ 30	\$ 2,880	100%	\$ -	
Prepare salvaged steel for shipment	24	\$ 38	\$ 912	100%	\$ -	
Freight to ship building	lot		\$ 10,000	100%	\$ -	
Crane support	48	\$ 100	\$ 4,800	100%	\$ -	
General cleanup of site	24	\$ 30	\$ 720	100%	\$ -	
Haul and place soil cover over slab (m <sup>3</sup> )	300	\$ 2.25	\$ 675	100%	\$ -	
Revegetation - 30m x 10m	300	\$ 0.50	\$ 150	100%	\$ -	
<b>Subtotal</b>					\$ 41,545	\$ -
<b>Heap Leach Valve Houses - 7 Modular Steel Frame Buildings each 3.4 m x 3.7 m</b>						
Remove salvageable materials, equipment & fittings	96	\$ 30	\$ 2,880	100%	\$ -	
Remove and dispose of steel roof & wall panelling & insulation	120	\$ 30	\$ 3,600	100%	\$ -	
Disassemble steel frame of building	120	\$ 38	\$ 4,560	100%	\$ -	
Disconnect service piping and electrical cabling	96	\$ 38	\$ 3,648	100%	\$ -	
Remove scrap to landfill	96	\$ 30	\$ 2,880	100%	\$ -	
Crane support	48	\$ 100	\$ 4,800	100%	\$ -	
General cleanup of site	24	\$ 30	\$ 720	100%	\$ -	
<b>Subtotal</b>					\$ 23,088	\$ -
<b>Lime Silo - Bolted Steel Tank - 36 m high x 10 m diameter</b>						
Remove salvageable materials, equipment & fittings	96	\$ 30	\$ 2,880	100%	\$ -	
Disassemble bolted steel silo	192	\$ 38	\$ 7,296	100%	\$ -	
Disconnect and remove service piping and electrical cabling	48	\$ 38	\$ 1,824	100%	\$ -	
Remove scrap to landfill	24	\$ 30	\$ 720	100%	\$ -	
Crane support	48	\$ 100	\$ 4,800	100%	\$ -	
General cleanup of site	12	\$ 30	\$ 360	100%	\$ -	
Haul and place soil cover over slab (m <sup>3</sup> )	200	\$ 2.25	\$ 450	100%	\$ -	
Revegetation (m <sup>2</sup> )	200	\$ 0.50	\$ 100	100%	\$ -	
<b>Subtotal</b>					\$ 18,430	\$ -
<b>ADR Plant Fresh Water Tank - Steel Welded Tank - 637 m3 Capacity</b>						
Drain tank and disconnect piping	24	\$ 38	\$ 912	100%	\$ -	
Disassemble steel tank	192	\$ 38	\$ 7,296	100%	\$ -	
Haul scrap steel to land fill	24	\$ 30	\$ 720	100%	\$ -	
Haul and place soil cover over slab (m3)	50	\$ 2.25	\$ 113	100%	\$ -	
Revegetation (m2)	50	\$ 0.50	\$ 25	100%	\$ -	
<b>Subtotal</b>					\$ 9,066	\$ -

**Table 7****Site Facilities Removal and Reclamation**

Note: This table corresponds to Table 7-7 in "Volume IV".

Area and Task Description	Estimated Hours	Unit Rate	Estimated Cost	Percent Complete	Subtotal Liability	Total Liability
<b>Laura Creek Pumphouse - Steel Frame Building</b>						
Remove salvageable materials, equipment & fittings	96	\$ 30	\$ 2,880	100%	\$ -	
Remove and dispose of steel roof & wall panelling & insulation	96	\$ 38	\$ 3,648	100%	\$ -	
Disassemble steel frame of building	48	\$ 38	\$ 1,824	100%	\$ -	
Disconnect and remove service piping and electrical cabling	48	\$ 38	\$ 1,824	100%	\$ -	
Remove scrap to landfill	48	\$ 30	\$ 1,440	100%	\$ -	
Crane support	24	\$ 100	\$ 2,400	100%	\$ -	
General cleanup of site	24	\$ 30	\$ 720	100%	\$ -	
Haul and place soil cover over slab (m3)	50	\$ 2.25	\$ 113	100%	\$ -	
Revegetation (m2)	50	\$ 0.50	\$ 25	100%	\$ -	
<b>Subtotal</b>			\$ 14,874		\$ -	
<b>Electrical Distribution System</b>						
Remove above ground electrical distribution cabling	240	\$ 38	\$ 9,120	100%	\$ -	
Remove electrical transformers and switch gear	240	\$ 38	\$ 9,120	100%	\$ -	
<b>Subtotal</b>			\$ 18,240		\$ -	
<b>Surface Piping</b>						
Flush surface piping	96	\$ 30	\$ 2,880	100%	\$ -	
Disassemble and remove surface piping	480	\$ 30	\$ 14,400	100%	\$ -	
Dozer/FEL support	60	\$ 150	\$ 9,000	100%	\$ -	
<b>Subtotal</b>			\$ 26,280		\$ -	
<b>Removal of Site Fencing Around Heap Leach Facilities</b>						
Removal and disposal of fencing	336	\$ 30	\$ 10,080	100%	\$ -	
<b>Subtotal</b>			\$ 10,080		\$ -	
<b>Removal of Land Application Piping System</b>						
Removal and disposal of land application piping	160	\$ 30	\$ 4,800	0%	4,800	4,800
<b>Subtotal</b>			\$ 4,800		\$ 4,800	
<b>General Site Regrading/ Growth Media Placement/Runoff and Erosion Control</b>						
Regrading of general site with grader	52	\$ 123	\$ 6,396	100%	\$ -	
Survey of underground cable terminations	1	\$ 1,000	\$ 1,000	0%	1,000	
Haul and place soil cover over surface (0.15 meter)	7800	\$ 2.25	\$ 17,550	50%	8,775	
Revegetation (hectares)	5.18	\$ 1,000	\$ 5,180	0%	5,180	
Removal of culverts and resloping of culvert crossings	lot	\$ 2,500	\$ 17,500	100%	\$ -	
Runoff ditch maintenance and rock armouring	lot	\$ 50	\$ 12,500	100%	\$ -	
Removal of wash bay sediment control pond	lot	\$ 500	\$ 500	100%	\$ -	
<b>Subtotal</b>			\$ 60,626		\$ 14,955	

**Table 7****Site Facilities Removal and Reclamation**

Note: This table corresponds to Table 7-7 in "Volume IV".

Area and Task Description	Estimated Hours	Unit Rate	Estimated Cost	Percent Complete	Subtotal Liability	Total Liability
<b>Fuel and Reagent Storage Facilities</b>						
<b>Bulk Diesel Fuel Storage Tanks at Maintenance Shop Facility</b>						
Drain and remove remaining fuel inventory to ADR facility	lot	\$ 750	\$ 750	100%	\$ -	
Disassemble storage tanks	192	\$ 38	\$ 7,296	100%	\$ -	
Remove fueling equipment and steel platforms	96	\$ 38	\$ 3,648	100%	\$ -	
Crane support	72	\$ 100	\$ 7,200	100%	\$ -	
Clean out concrete containment berm	24	\$ 30	\$ 720	100%	\$ -	
Dispose of oil residue	lot	\$ 1,000	\$ 1,000	100%	\$ -	
Remove concrete containment berm to landfill	12	\$ 110	\$ 1,320	100%	\$ -	
Haul and place soil over foundation (m <sup>3</sup> )	50	\$ 2.25	\$ 113	100%	\$ -	
Revegetation (m <sup>2</sup> )	50	\$ 0.50	\$ 25	100%	\$ -	
<b>Subtotal</b>					\$ 22,072	\$ -
<b>Bulk Diesel Fuel Storage Tanks at ADR Plant Facility</b>						
Drain and remove remaining fuel inventory	lot	\$ 1,000	\$ 1,000	100%	\$ -	
Disassemble storage tanks	192	\$ 38	\$ 7,296	100%	\$ -	
Remove fueling equipment and steel platforms	48	\$ 38	\$ 1,824	100%	\$ -	
Crane support	72	\$ 100	\$ 7,200	100%	\$ -	
Clean out concrete containment berm	24	\$ 30	\$ 720	100%	\$ -	
Dispose of oil residue	lot	\$ 1,000	\$ 1,000	100%	\$ -	
Remove concrete containment berm to landfill	12	\$ 110	\$ 1,320	100%	\$ -	
Haul and place soil over foundation (m <sup>3</sup> )	50	\$ 2.25	\$ 113	100%	\$ -	
Revegetation (m <sup>2</sup> )	50	\$ 0.30	\$ 15	100%	\$ -	
<b>Subtotal</b>					\$ 20,488	\$ -
<b>Shipment of Remaining Inventory of Other Hydrocarbon Products</b>						
	lot	\$ 3,500	\$ 7,000	100%	\$ -	
<b>Subtotal</b>					\$ 7,000	\$ -
<b>Shipment of Remaining Inventory of Reagents, Chemicals and Wastes</b>						
Pallets of remaining material (25)	lot	\$ 3,500	\$ 10,500	100%	\$ -	
			\$ 5,000	0%	\$ 5,000	\$ 5,000
<b>Subtotal</b>					\$ 10,500	\$ 5,000
<b>Land Farming of Hydrocarbon Contaminated Soils</b>						
Grader to turn over soils	52	\$ 85	\$ 4,420	50%	\$ 2,210	
Analysis	lot	\$ 100	\$ 2,600	50%	\$ 1,300	
Ammonium Nitrate or other fertilizer	lot	\$ 50	\$ 100	0%	\$ 100	
<b>Subtotal</b>					\$ 7,120	\$ 3,610
<b>Close Out of Site Sewage Septic Systems - 3 Systems</b>						
Pump out sludge holding tanks and transport to sludge trench	lot	\$ 250	\$ 750	100%	\$ -	
Excavate and remove three septic tanks to landfill	lot	\$ 500	\$ 1,500	100%	\$ -	
Bury sewage sludge trench	lot	\$ 1,000	\$ 1,000	100%	\$ -	
<b>Subtotal</b>					\$ 3,250	\$ -



**Table 7****Site Facilities Removal and Reclamation**

Note: This table corresponds to Table 7-7 in "Volume IV".

Area and Task Description	Estimated Hours	Unit Rate	Estimated Cost		Percent Complete	Subtotal Liability	Total Liability
<b>Cleanup Site Boneyard</b>							
Decontaminate scrapped equipment in boneyard	lot	\$ 500	\$ 500		100%	\$ -	
Remove non-salvageable scrap to landfill	lot	\$ 2,500	\$ 2,500		100%	\$ -	
<b>Subtotal</b>				\$ 3,000			\$ -
<b>Close Out Site Landfill Area</b>							
Clean up landfill with dozer	10	\$ 327	\$ 3,270		100%	\$ -	
Load silt into trucks with FEL	4	\$ 293	\$ 1,172		100%	\$ -	
Haul in silt for cover	8	\$ 345	\$ 2,760		100%	\$ -	
Spread silt with dozer	4	\$ 327	\$ 1,308		100%	\$ -	
Compact silt	4	\$ 77	\$ 308		100%	\$ -	
Growth Media Placement (FEL @4 hrs., Haul Trucks @ 8 hrs., Dozer @ 4 hrs.)	lot		\$ 3,108		100%	\$ -	
Revegetate cover	1000	\$ 0.50	\$ 500			\$ 500	
<b>Subtotal</b>				\$ 12,426			\$ 500
<b>Close Out Pond Areas</b>							
Mobilization of D9	lot	\$ 2,000	\$ 2,000		0%	\$ 2,000	
Cut and fold over liners	lot	\$ 5,000	\$ 5,000		0%	\$ 5,000	
Cut outflow from lowest pond	20	\$ 283	\$ 5,651		0%	\$ 5,651	
Regrade with dozer	50	\$ 283	\$ 14,127		0%	\$ 14,127	
Revegetate area (m2)	lot	\$ 5,000.00	\$ 5,000			\$ 5,000	
<b>Subtotal</b>				\$ 31,777			\$ 31,777
<b>Contaminated Soil Survey</b>							
Field and lab testing	lot	\$ 15,000	\$ 15,000		100%	\$ -	
<b>Subtotal</b>				\$ 15,000			\$ -
<b>Total Estimated Cost of Reclaiming Ancillary and Support Facilities</b>				<b>\$ 624,706</b>			<b>\$ 113,673</b>

**Table 8**  
**Heap Leach Pad Reclamation**

Area and Task Description	Unit of Reclamation Measure	Estimated # of Units	Production Rate	Estimated Hours	Unit Cost	Estimated Task Cost	Percentage Complete Sept. 2006	Estimated Remaining Cost	Estimated Remaining Subtotals
<b>Leach Pad Resloping and Drainage Ditches</b>									
Dozer cut to fill slopes	m <sup>3</sup>	20,000	307	65	\$ 359	\$ 23,305	100%	\$ -	
General recontour prior to cap placement	lot			50	\$ 359	\$ 17,927	100%	\$ -	
Dozer work to construct drainage ditches	lot				\$ 359	\$ -			
Backhoe work to construct ditches	lot			20	\$ 317	\$ 6,336	0%	\$ 6,336	
Place riprap/gravel in channels/ditches	m <sup>3</sup>								
Load material	m <sup>3</sup>		200	0	\$ 322	\$ -			
Haul material	m <sup>3</sup>		100	0	\$ 292	\$ -			
Spread material	m <sup>3</sup>		200	0	\$ 317	\$ -			
Breach leach pad dike material	m <sup>3</sup>	3,250	50	65	\$ 194	\$ 12,610	0%	\$ 12,610	
Place riprap/gravel in dike breach	m <sup>3</sup>	500			\$ 5	\$ 2,500	0%	\$ 2,500	
<b>Subtotal</b>						\$ 62,679			\$ 21,446
<b>Leach Pad Soil Cover Construction</b>									
Total area requiring seds/silt cap	m <sup>2</sup>	-							
Load seds/silt with front end loader	m <sup>3</sup>		389	0	\$ 322	\$ -			
Haul seds/silt with haultrucks	m <sup>3</sup>		195	0	\$ 292	\$ -			
Spread seds/silt with dozer	m <sup>3</sup>		389	0	\$ 359	\$ -			
Compact seds/silt with roller	m <sup>2</sup>				\$ 83	\$ -			
<b>Subtotal</b>						\$ -			\$ -
<b>Leach Pad Revegetation</b>									
Total area to be reseeded (sloped surface area)	m <sup>2</sup>	323,000							
Load growth media with FEL (100% of area, 0.25 m)	m <sup>3</sup>	80,750	389	208	\$ 322	\$ 67,006	100%	\$ -	
Haul growth media	m <sup>3</sup>	80,750	130	621	\$ 292	\$ 181,295	100%	\$ -	
Spread growth media	m <sup>3</sup>	80,750	389	208	\$ 359	\$ 74,577	100%	\$ -	
Broadcast seed and fertilizer	hectares	32.3			\$ 750	\$ 24,225	100%	\$ -	
<b>Subtotal</b>						\$ 347,103			\$ -
<b>Previously Projected Cells 8 -10 (Northeast of Leach Pad)</b>									
Dozer work to recontour surface area	m <sup>2</sup>	30,000	600	50	\$ 359	\$ 17,927	100%	\$ -	
Total area to be reseeded	m <sup>2</sup>	172,800							
Load growth media with front end loader	m <sup>3</sup>		389	0	\$ 322	\$ -	100%	\$ -	
Haul growth media with haultrucks	m <sup>3</sup>		130	0	\$ 292	\$ -	100%	\$ -	
Spread growth media with dozer	m <sup>3</sup>	25,800	200	129	\$ 283	\$ 36,447	100%	\$ -	
Broadcast seed and fertilizer	hectares	17.3			\$ 400	\$ 6,912	100%	\$ -	
<b>Subtotal</b>						\$ 92,982			\$ -
<b>2005-6 Reclamation Repairs</b>									
2005 Erosion Repairs (10%)	m <sup>2</sup>	49,580							
Erosion repairs with dozer	m <sup>3</sup>	24,790	300	83	\$ 322	\$ 26,738	100%	\$ -	
2005 Re-Seeding (25%)	m <sup>2</sup>	123,950							
Broadcast seed and fertilizer	hectare	12.40			\$ 400	\$ 4,958	100%	\$ -	
						\$ 31,696			\$ -
<b>Total Leach Pad Earthworks</b>						\$ 534,461			\$ 21,446

Note: This table corresponds to Table 7-8 in "Volume IV".

**Table 9**  
**Manpower**

<b>Staff</b>	<b>\$/Annum</b>	<b>2003</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Site Manager	\$ 125,000		\$ 5,000	\$ 5,000	\$ 5,000
Administrative Manager	\$ 75,000	\$ -			
Process Manager/Engineer	\$ 65,000		\$ -	\$ -	\$ -
Accounts Payable	\$ 35,000				
Environmental Manager	\$ 75,000				
Reclamation Supervision	\$ 50,000				
Mine Technician	\$ 40,000				
Lab Technician	\$ 40,000				
Surface Operator	\$ 45,000		\$ 11,250	\$ 11,250	\$ 14,400
Process Operators	\$ 50,000				
Mechanic	\$ 50,000		\$ 12,500	\$ 12,500	\$ -
Electrician	\$ 55,000				
Equipment Operator	\$ 45,000		\$ 22,500	\$ 22,500	
Laborer	\$ 35,000		\$ 17,500	\$ 17,500	
Salary Load	35%	\$ -	\$ 24,063	\$ 24,063	\$ 6,790
<b>Total Manpower</b>		\$ -	\$ 92,813	\$ 92,813	\$ 26,190

Note: This table corresponds to Table 7-10 in "Volume IV".

**Table 10**  
**General Services & Administration**

Category	Area Total	Aug-04 29	Sep-04 30	Oct-04 31	Nov-04 32	Dec-04 33
<b><u>General Services &amp; Administration</u></b>						
Miscellaneous Operating Supplies	\$ -					
Insurance	\$ 5,000			\$ 5,000		
Freight	\$ 3,000			\$ 1,000	\$ 1,000	\$ 1,000
Propane	\$ -					
Water Supply	\$ -					
Access Road Maintenance	\$ 4,246			\$ 1,415	\$ 1,415	\$ 1,415
General Site Grounds	\$ 6,357			\$ 2,119	\$ 2,119	\$ 2,119
Waste Disposal	\$ -					
Light Vehicle Costs	\$ 2,689			\$ 896	\$ 896	\$ 896
Travel & Lodging	\$ 4,500			\$ 1,500	\$ 1,500	\$ 1,500
Tele,Fax,Internet,Radio,Satellite	\$ 4,500			\$ 1,500	\$ 1,500	\$ 1,500
Office Equipment/Lease Rent	\$ 3,000			\$ 1,000	\$ 1,000	\$ 1,000
Building Maintenance	\$ 1,500			\$ 500	\$ 500	\$ 500
Safety Supplies	\$ -					
Office Supplies	\$ -					
Crew Rotations & Transportation	\$ -					
Staff Housing	\$ -					
Crew Mobilization	\$ -					
Camp Operations	\$ -					
CS - Technical Consultants	\$ 4,500			\$ 1,500	\$ 1,500	\$ 1,500
CS - Legal	\$ 3,000			\$ 1,000	\$ 1,000	\$ 1,000
Environmental Monitoring	\$ -					
Geotechnical Inspections	\$ -					
Electrical Power	\$ 2,335			\$ 2,335		
<b>Total G &amp; A</b>	<b>\$ 44,626</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 19,765</b>	<b>\$ 12,431</b>	<b>\$ 12,431</b>

Annual totals \$ 44,626

Note: This table corresponds to Table 7-11 in "Volume IV".

**Table 11**  
**General Services & Administration for Contingency Cases where Land Application or BTC is operating**

Category	Area Total	Apr-02 1	Dec-04 33	Jan-05 34	Feb-05 35	Mar-05 36	Apr-05 37	May-05 38	Jun-05 39	Jul-05 40	Aug-05 41	Sep-05 42	Oct-05 43	Nov-05 44	Dec-05 45	
<b>General Services &amp; Administration</b>																
Miscellaneous Operating Supplies	\$ -															
Insurance	\$ -															
Freight	\$ 5,000							\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000				
Propane	\$ -															
Water Supply	\$ 8,000							\$ 1,600	\$ 1,600	\$ 1,600	\$ 1,600	\$ 1,600				
Access Road Maintenance	\$ 9,093						\$ 600	\$ 1,415	\$ 1,415	\$ 1,415	\$ 1,415	\$ 1,415	\$ 1,415			
General Site Grounds	\$ -															
Waste Disposal	\$ 800											\$ 800				
Light Vehicle Costs	\$ 8,250			\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750		
Travel & Lodging	\$ -															
Tele, Fax, Internet, Radio, Satellite	\$ -															
Office Equipment/Lease Rent	\$ -															
Building Maintenance	\$ -															
Safety Supplies	\$ 2,750						\$ 250	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500				
Office Supplies	\$ -															
Crew Rotations & Transportation	\$ -															
Staff Housing	\$ 10,000							\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000				
Crew Mobilization	\$ 2,500							\$ 2,500								
Camp Operations	\$ -															
CS - Technical Consultants	\$ -															
CS - Legal	\$ -															
Environmental Monitoring	\$ -															
Geotechnical Inspections	\$ -															
Electrical Power	\$ 16,343	\$ -					\$ 2,335	\$ 2,335	\$ 2,335	\$ 2,335	\$ 2,335	\$ 2,335	\$ 2,335	\$ 2,335		
<b>Labour</b>																
Shipper/Receiver/Accountant	\$ 35,438						\$ 5,063	\$ 5,063	\$ 5,063	\$ 5,063	\$ 5,063	\$ 5,063	\$ 5,063	\$ 5,063		
Process Operator/Technician	\$ 31,500						\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500	\$ 4,500		
Contract Maintenance	\$ 7,000						\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000		
	\$ 136,673															
<b>Total G &amp; A</b>	\$ 136,673	\$ -	\$ -	\$ 750	\$ 750	\$ 750	\$ 16,997	\$ 20,163	\$ 20,163	\$ 20,163	\$ 20,163	\$ 20,163	\$ 20,963	\$ 15,063	\$ 750	\$ -

Note: This table corresponds to Table 7-11B in "Volume IV".

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Area Total
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>	
Revegetation Inspections	\$ 16,500
Reclamation Maintenance	\$ 8,000
Annual Geotechnical Inspections	\$ 10,500
Environmental Studies	\$ -
Long Term Nutrients BTC/IG	\$ -
Contract Services Labor	\$ 40,875
Lab Analysis	\$ 163,107
Support Equipment (Helicopter)	\$ 18,118
Laura Creek AMP	
Blue Dump	
Monthly & Annual Reports	
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 438,840</b>

Annual totals

*Note: This table corresponds to Table 7-14 in "Volume IV".*

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2008	Feb 2008	Mar 2008	Apr 2008	May 2008	Jun 2008	Jul 2008	Aug 2008	Sep 2008	Oct 2008	Nov 2008	Dec 2008
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458
Reclamation Maintenance	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333
Annual Geotechnical Inspections	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750
Lab Analysis	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037
Support Equipment (Helicopter)	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333
Laura Creek AMP	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
Blue Dump	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 5,803</b>	<b>\$ 9,603</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>

Annual totals 73440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2009	Feb 2009	Mar 2009	Apr 2009	May 2009	Jun 2009	Jul 2009	Aug 2009	Sep 2009	Oct 2009	Nov 2009	Dec 2009
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458	\$ 458
Reclamation Maintenance	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333
Annual Geotechnical Inspections	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292	\$ 292
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750
Lab Analysis	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037	\$ 3,037
Support Equipment (Helicopter)	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333	\$ 333
Laura Creek AMP	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
Blue Dump	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 5,803</b>	<b>\$ 9,603</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>	<b>\$ 5,803</b>

Annual totals 73440

Note: This table corresponds to Table 7-14 in "Vol.



**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2010	Feb 2010	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010	Aug 2010	Sep 2010	Oct 2010	Nov 2010	Dec 2010
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	Jun 2012	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,500	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,500	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 11,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 39440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	Dec 2013
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2014	Feb 2014	Mar 2014	Apr 2014	May 2014	Jun 2014	Jul 2014	Aug 2014	Sep 2014	Oct 2014	Nov 2014	Dec 2014
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,500	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,500	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 11,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 39440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2017	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.



**Table 12**  
**Post Closure Monitoring & Maintenance**

Category	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>												
Revegetation Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reclamation Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Geotechnical Inspections	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Environmental Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Nutrients BTC/IG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services Labor	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375	\$ 375
Lab Analysis	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479	\$ 1,479
Support Equipment (Helicopter)	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166	\$ 166
Laura Creek AMP												
Blue Dump												
Monthly & Annual Reports	\$ 200	\$ 4,000	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
<b>Total Monitoring &amp; Maintenance</b>	<b>\$ 2,220</b>	<b>\$ 6,020</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>	<b>\$ 2,220</b>

Annual totals 30440

Note: This table corresponds to Table 7-14 in "Vol.

**Table 12**  
**Post Closure Monitoring & Maintenance**

<b>Category</b>	
<b><u>Post Closure Monitoring &amp; Maintenance</u></b>	
Revegetation Inspections	
Reclamation Maintenance	
Annual Geotechnical Inspections	
Environmental Studies	
Long Term Nutrients BTC/IG	
Contract Services Labor	
Lab Analysis	
Support Equipment (Helicopter)	
Laura Creek AMP	
Blue Dump	
Monthly & Annual Reports	
<b>Total Monitoring &amp; Maintenance</b>	

Annual totals

*Note: This table corresponds to Table 7-14 in "Vol.*

**Attachment 2**  
**Review of Blue WRSA Predictions**



## Memo

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<b>To:</b>	Brad Thrall, Alexco	<b>Date:</b>	September 25, 2007
<b>cc:</b>		<b>From:</b>	Daryl Hockley
<b>Subject:</b>	Brewery Creek – Blue Dump	<b>Project #:</b>	1CV001.002

---

My report on the outstanding closure liabilities at the Brewery Creek Mine referred to the likelihood that a new cover would need to be constructed on the Blue Waste Rock storage area as “very unlikely”. This memorandum summarizes the information behind that characterization.

### 1 Geochemical Modeling

The report issued by SRK in August 2003 presented estimates of contaminant concentrations in Laura Creek under conservative assumptions about the Blue WRSA. The key assumptions were:

- Infiltration through the WRSA cover would be 19% of mean annual precipitation, or 62.5 mm per year.
- Contaminant concentrations in the Blue WRSA pore water could be represented by conservative estimates referred to as ‘Approach A’ and “Approach B”

The conclusions of that work were that the ‘Approach A’ concentrations would result in arsenic , antimony and copper concentrations exceeding CCME criteria at station BC-1 in Laura Creek during winter low flow conditions, but the “Approach B” concentrations would result in arsenic concentrations equal to, antimony concentrations well below, and copper concentrations only slightly above their respective CCME criteria.

Table 1 summarizes the assumed source concentrations and the estimated concentrations at BC-1.

**Table 1. Results of Initial Geochemical Modeling (SRK 2003)**

	Arsenic	Antimony	Copper
<b>Blue WRSA pore water</b>			
Approach A (mg/L)	7	7	62
Approach B (mg/L)	0.3	0.3	0.8
<b>Winter low flow condition at BC-1</b>			
Approach A (mg/L)	0.008	0.03	0.04
Approach B (mg/L)	0.005	0.004	0.003
<b>CCME criteria</b>	0.005	0.02	0.002

## 2 Sequential Leach Extraction Tests

A set of sequential leach extraction tests was undertaken to provide more definitive estimates of contaminant concentrations in the Blue WRSA pore water. The results were presented in an SRK report issued in February 2004.

Table 2 summarizes the results of the sequential leach extraction testing and compares them to the assumptions made in the initial modeling. The comparison clearly shows that the expected concentrations in the Blue WRSA pore water are much lower than those assumed in the initial “Approach A” modeling. They are also lower than those assumed in the “Approach B” modeling, by factors of 6x for arsenic, 3.75x for antimony, and 10x for copper.

The report concluded “based on these findings, the earlier conclusion of negligible effects on monitoring point BC-1 in Laura Creek and the South Klondike River is confirmed”.

**Table 2. Results of Sequential Leach Extraction Testing (SRK 2004)**

	<b>Arsenic</b>	<b>Antimony</b>	<b>Copper</b>
<b>Estimates from sequential tests</b>	0.05	0.08	0.08
<b>Initial estimates</b>			
Approach A (mg/L)	7	7	62
Approach B (mg/L)	0.3	0.3	0.8

## 3 Cover Monitoring

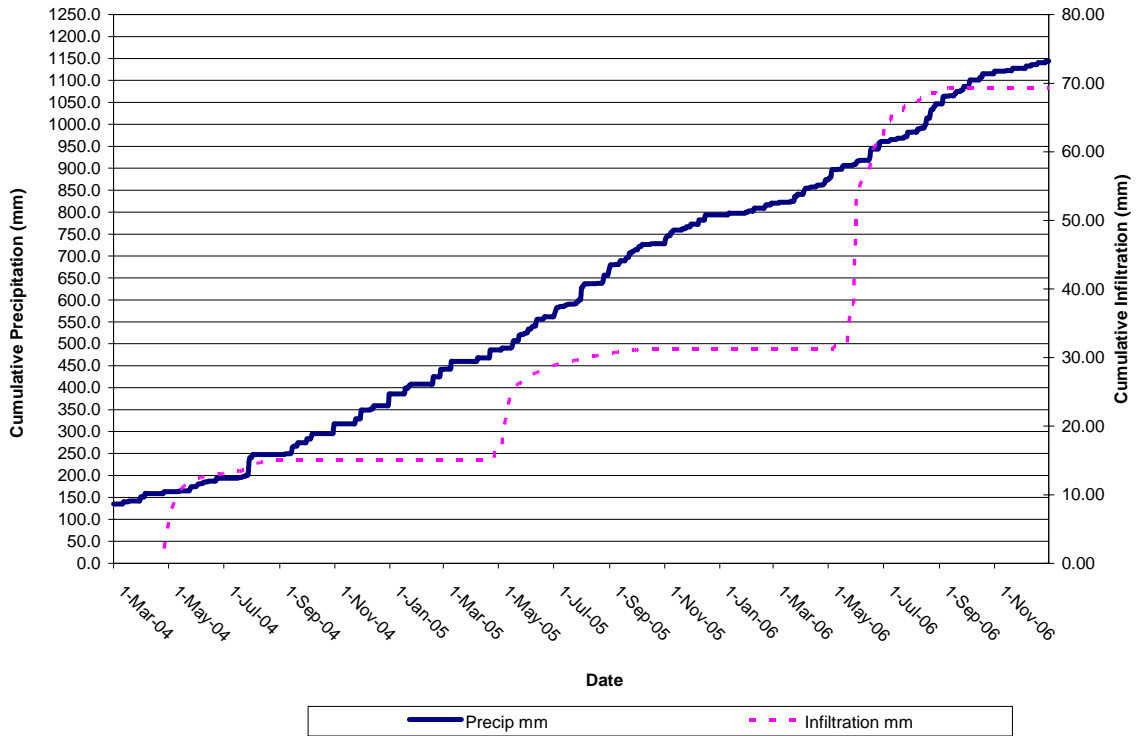
A lysimeter was constructed to directly measure infiltration through the cover on the Blue WRSA, and thereby to allow the assumed value of 19% of mean annual precipitation to be checked. The two plots on the following page show the results.

- Total infiltration into the lysimeter during the years 2004, 2005 and 2006 was about 75 mm;
- The average annual infiltration is only about 25 mm, much less than the 62.5 mm assumed in the initial modeling; and,
- The average infiltration is only about 6.3% of precipitation, which is over 3x less than the estimate used in the initial modeling.

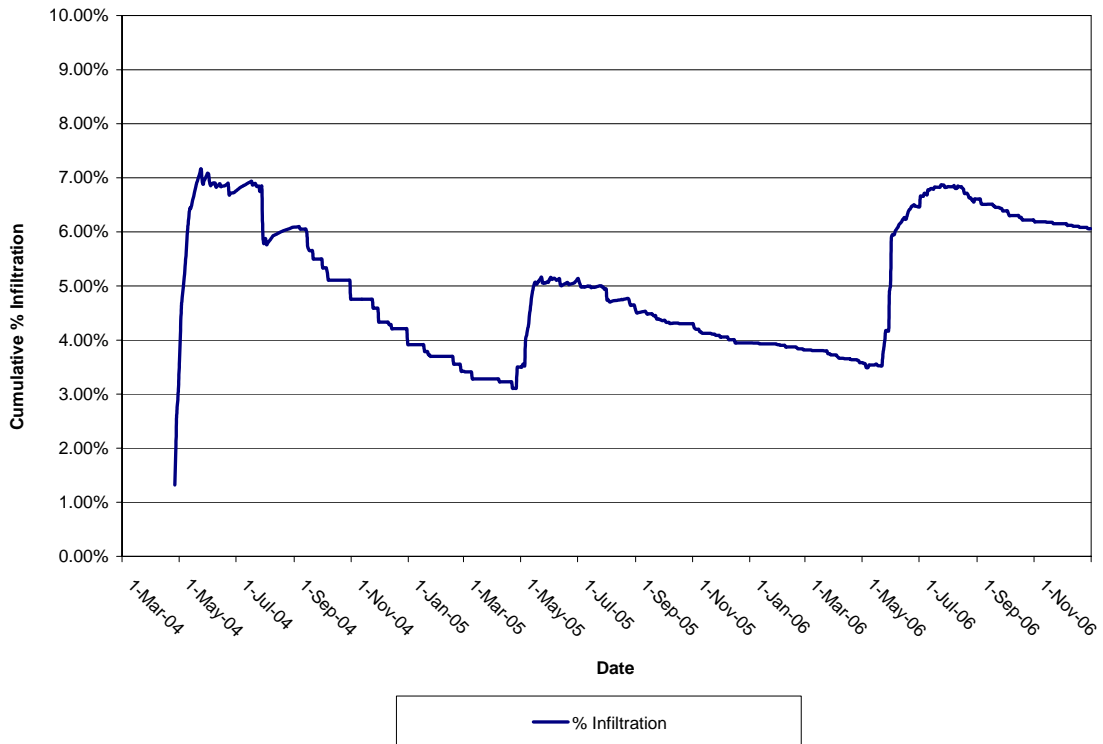
## 4 Conclusion

The initial geochemical modeling indicated that, under the “Approach B” assumptions, there would be negligible effect on water quality in Laura Creek. The sequential extraction tests indicate that contaminant concentrations in the Blue WRSA pore water are in fact expected to be 3-10x below the “Approach B” assumptions. Furthermore, the field lysimeter data indicate that infiltration rates through the cover are 3x below the rates assumed in the modelling. It is well known that both predictive tests and field lysimeters are subject to some inaccuracy. Nonetheless, it is hard to conceive of a combination of inaccuracies that would lead to a prediction of the Blue WRSA having any significant effect on water quality in Laura Creek. It is therefore very unlikely that any substantial modifications of the Blue WRSA cover will be required.

**Blue WRSA Lysimeter  
Soil Cover Infiltration Performance**



**Blue WRSA Lysimeter**



**Appendix G**  
**RECLAMATION**  
**PICTURES**





# Golden Pit



## Blue WRSA looking toward Laura Creek



## Blue WRSA and the Blue Pit



## Haul road to Golden Pit



## Haul road to Lucky Pit



## Haul road to Golden Pit



## Haul road to Kokanee Pit





## Main Haul Road near Kokanee Pit



## Blue WRSA looking southeast towards Laura Creek



## Blue WRSA looking downslope



## Heap Leach Pad looking west



## Heap Leach Pad looking northeast



## Pacific looking northeast



## Road to Blue Pit – seeded in spring 2007



## Moosehead Pit Access Road





## Canadian WRSA looking west towards Blue Zone



# Canadian Zone looking west over WRSA & stockpile towards Fosters Zone



## Upper Fosters looking north



## Main Haul Road looking west near North Golden



## Lucky Haul Road – seeded in spring of 2007



## Access Road to Laura Creek



**Appendix H**  
**SOIL SURVEY REPORT**







**ALEXCO**

## **Soil Survey Report**

### **Brewery Creek Mine Yukon Territory**

**February, 2008**

Prepared by:



**ACCESS**  
CONSULTING GROUP

[www.accessconsulting.ca](http://www.accessconsulting.ca)



## TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	METHODOLOGY.....	2
3.0	RESULTS.....	7
4.0	CONCLUSIONS.....	8

## LIST OF FIGURES

Figure 1	Brewery Creek Mine General Location Map.....	4
Figure 2	Brewery Creek Mine Sample Site Locations.....	5
Figure 3	Brewery Creek Mine Minesite Soil Sample Site Locations.....	6

## LIST OF TABLES

Table 1	Brewery Creek Mine Soil Sampling Site Information.....	3
Table 2	Brewery Creek Mine Soil Sampling Results.....	8

## LIST OF APPENDICES

Appendix A	Soil Sampling Selected Plates
Appendix B	Norwest Labs Analytical Results

## 1.0 INTRODUCTION

Alexco Resources Corp. (Alexco) is presently undertaking decommissioning and reclamation activities at the Brewery Creek Mine located near Dawson City, Yukon Territory. The site is being decommissioned in accordance with their approved Decommissioning and Reclamation Plan (“Viceroy DRP”) and terms and conditions of Water Use Licence QZ96-007, including subsequent amendments, and Quartz Mining Licence (A99-001 and amendment 04-001). Schedule C, Section F of the Quartz Mining Licence requires that the following be undertaken:

*“Soils to be tested for contamination around equipment storage and maintenance areas at the camp and around dismantled fuel storage areas. Where contamination is detected, the soil will be treated with appropriate measures as described in the DRP.”*

Access Consulting Group (ACG) of Whitehorse, Yukon Territory, was retained by Alexco to collect soil samples at specific locations at the Brewery Creek Mine. The sampling procedures, methods and contaminated soil criteria are those prescribed in the Yukon *Contaminated Sites Regulation* (CSR) and the appropriate American Society for Testing and Materials (ASTM) standards (D 4547-03<sup>1</sup> and D 5633-04<sup>2</sup>).

---

<sup>1</sup> Standard Guide for Sampling Waste and Soils for Volatile Organic Compounds

<sup>2</sup> Standard Practice for Sampling with a Scoop

## 2.0 METHODOLOGY

Soil samples were collected by D. Desmarais of ACG on August 22, 2007. Weather conditions were ideal and the ground was not frozen during sampling. Figure 1 provides a general location map of the Brewery Creek Mine, while Figure 2 shows sites where soils were sampled on the property. Figure 3 shows a detailed location map of the administration building area where the two sample sites are located.

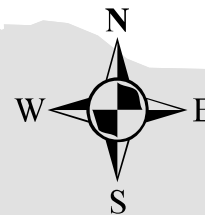
The soil survey was conducted specifically to characterize soils at the Main Equipment Ready Area (site EQ-S-#12) and the Oil Storage Area (site OS-S-#7) for total metals and petroleum hydrocarbon levels. The CSR and the appropriate ASTM Standards for soil sampling were used to provide guidance for sampling procedures and to assess soil contamination for an industrial undertaking.

Sampling was undertaken by excavating a hole in the soil using a mattock and samples were taken consistently at a depth of 10 cm at each site with a clean, inert, sampling trowel. The trowel was wiped clean after each sample was taken. Within the sample site five locations were chosen to be representative of the area and to form composite samples for analysis for the area. From each sample location, two aliquots and one discreet sample were obtained: one aliquot to create a 1 kg composite for metals testing, another aliquot to create a 500 ml sample for hydrocarbon testing, and the discreet sample as 250 ml of soil to provide a back-up grab sample. Table 1 gives a description of each sample site, their positions, and the number of aliquots used to form each composite. Appendix A contains selected plates from the soil sampling activities.

The composite samples were kept cool and flown by Air North and delivered to Bodycote Norwest Labs (a CAEAL-certified laboratory) in Vancouver for analysis of soils total metals, extractable petroleum hydrocarbons (EPH), heavy extractable petroleum hydrocarbons (HEPH), light extractable petroleum hydrocarbons (LEPH) and polyaromatic hydrocarbons (PAH).

**Table 1 Brewery Creek Mine - Soil Sampling Site Information**

Site ID	Sample Site Description	UTM Easting <sup>1</sup>	UTM Northing <sup>1</sup>	Depth of Sample	Soil Type	# of Samples	Analytical Parameters
OS-S-#7	Oil Storage Area	632406	7104982	10cm	silty sand with small angular gravel	5	Total Metals, EPH, LEPH, HEPH, PAH
EQ-S-#12	Main Equipment Ready Area (in front of Administration Bldg)	632332	7104998	10cm	sandy silt with small angular gravel and rock	5	Total Metals, EPH, LEPH, HEPH, PAH



## Project Location

### General Location Map of the Yukon Territory

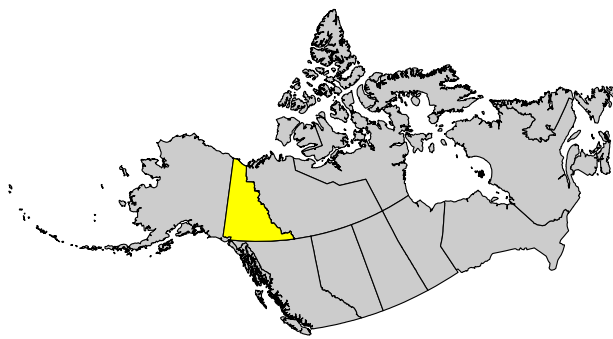
Scale 1 : 6 000 000



Alaska (United States of America)

Northwest Territories (Canada)

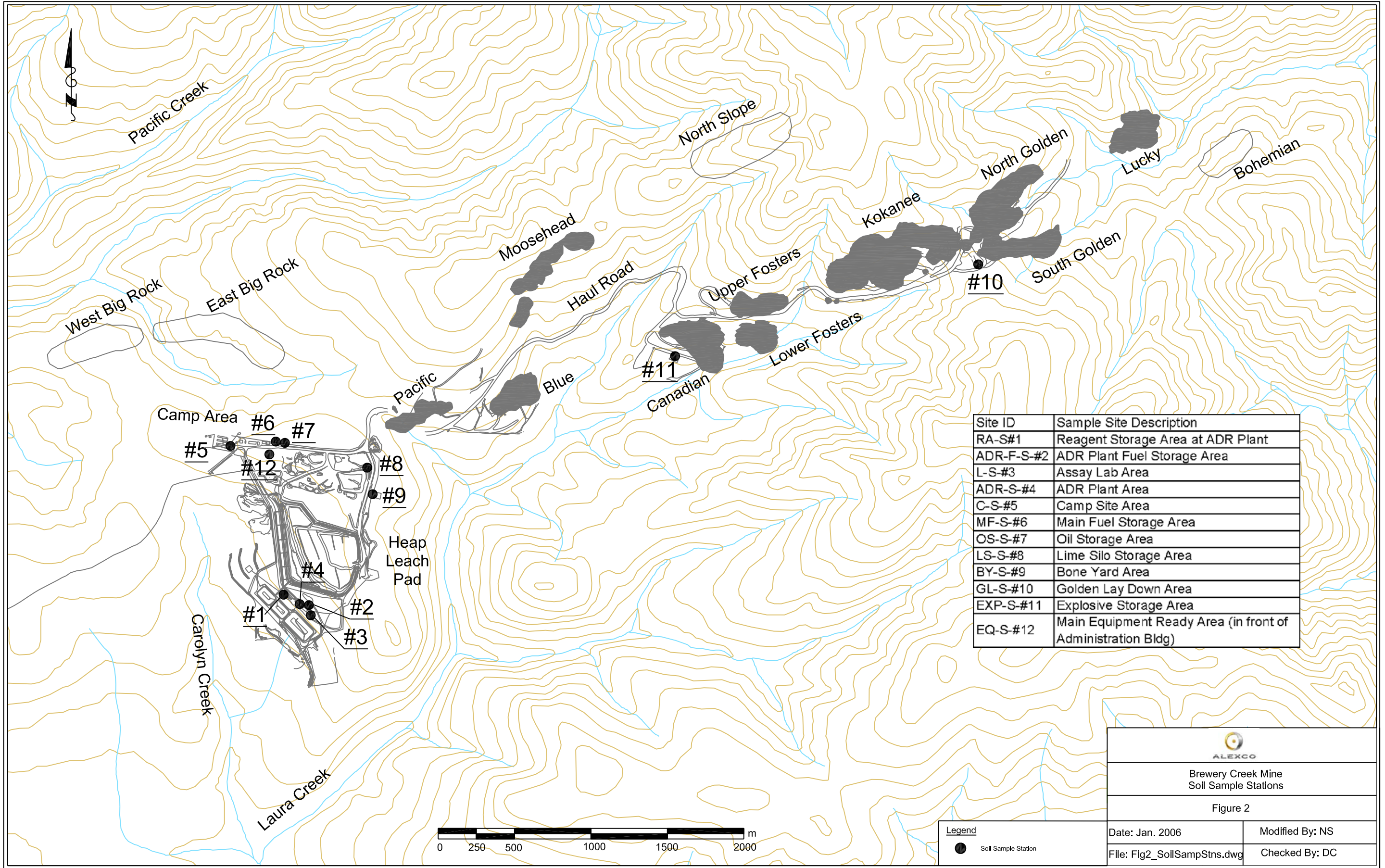
British Columbia (Canada)




### Soil Survey Brewery Creek Mine, Yukon Territory

Drawn By: HD	Figure 1
Checked By: DC	Date: Jan. 2006

Our file: D:\Project\AllProjects\ALEX-05-01\gis\mxd\BreweryCreek\Fig1\_Loc.mxd




Site ID	Sample Site Description
RA-S#1	Reagent Storage Area at ADR Plant
ADR-F-S-#2	ADR Plant Fuel Storage Area
L-S-#3	Assay Lab Area
ADR-S-#4	ADR Plant Area
C-S-#5	Camp Site Area
MF-S-#6	Main Fuel Storage Area
OS-S-#7	Oil Storage Area
LS-S-#8	Lime Silo Storage Area
BY-S-#9	Bone Yard Area
GL-S-#10	Golden Lay Down Area
EXP-S-#11	Explosive Storage Area
EQ-S-#12	Main Equipment Ready Area (in front of Administration Bldg)

 <b>ALEXCO</b>	
Brewery Creek Mine Soil Sample Stations	
Figure 2	
Date: Jan. 2006	Modified By: NS
File: Fig2_SoilSampStns.dwg	Checked By: DC

Legend	
	Soil Sample Station





 <b>ALEXCO</b>	
Brewery Creek Mine Site Soil Sample Stations	
Figure 3	
Date: Jan. 2006	Modified By: NS
File: Fig3_SoilSampStnsMineSite.dwg	Checked By: DC

### 3.0 RESULTS

Table 2 displays the analytical results of the soil samples analysis by Bodycote Norwest Labs in Vancouver. Also included are the detection limits and Yukon *Contaminated Sites Regulations* (CSR) criteria for applicable parameters. Appendix B contains laboratory analytical results from Norwest Labs.

Table 2: Brewery Creek Mine Soil Analytical Results Compared with Yukon Contaminated Sites Regulations

Sample Description	Units	Oil Storage	Equipment Area	Oil Storage	Equipment Area	Detection Limit	Yukon CSR* - Industrial	Yukon CSR* - Parkland
Site Id		OS-S-#7	EQ-S-#12	OS-S-#7	EQ-S-#12			
Lot Id		495182-22	495182-23	579406-2	579406-1			
Date Sampled		20-Sep-06	20-Sep-06	22-Aug-07	22-Aug-07			
Sampled By		D.Desmarais	D.Desmarais	D.Desmarais	D.Desmarais			
Sample Depth		10cm	10cm	10cm	10cm			
<b>Parameter</b>								
<b>Metals (Strong Acid Leachable)</b>								
Antimony	µg/g	607	221	686	206	0.5	40	20
Arsenic	µg/g	1010	361	1480	438	0.2	100*	50*
Barium	µg/g	825	1040	704	900	0.03	2000	500
Beryllium	µg/g	0.73	0.89	0.68	0.96	0.01	8	4
Cadmium	µg/g	2.3	3.1	11.5	5.61	0.05	500*	70*
Chromium	µg/g	27.4	23.5	29	21.3	0.04	700*	300*
Cobalt	µg/g	12.7	11.2	13.2	11.5	0.05	300	50
Copper	µg/g	45.5	42.3	48.1	47	0.05	250*	150*
Lead	µg/g	32.1	29.8	34.8	60.5	0.3	2000*	1000*
Mercury	µg/g	1.55	0.996	1.83	2.9	0.003	150*	100*
Molybdenum	µg/g	7.66	8.76	5.93	7.8	0.05	40	10
Nickel	µg/g	63.2	68.7	46	48	0.1	500	100
Selenium	µg/g	0.4	2.1	<0.3	<0.3	0.3	10	3
Silver	µg/g	0.7	1.1	<0.2	<0.2	0.2	40	20
Thallium	µg/g					0.3		
Tin	µg/g	0.5	0.6	2.1	1.1	0.2	300	50
Vanadium	µg/g	59.7	66.1	62.2	61.8	0.1	None	200
Zinc	µg/g	262	353	265	308	0.1	600*	450*
<b>pH in soil</b>								
pH		7	7.2	6.6	7.7	0.5		
<b>EPHs</b>								
LEPHs	µg/g	138	390	214	513	20	2000	1000
HEPHs	µg/g	2420	6860	2820	4260	20	5000	1000
<b>PAHs</b>								
Acenaphthene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Acenaphthylene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Anthracene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Benzo(a)anthracene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	10	1
Benzo(a)pyrene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	10*	1*
Benzo(b)fluoranthene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	10	1
Benzo(g,h,i)perylene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Benzo(k)fluoranthene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	10	1
Chrysene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Dibenzo(a,h)anthracene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	10	1
Fluoranthene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Fluorene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05		
Indeno(1,2,3-c,d)pyrene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	10	1
Naphthalene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	50	5
Phenanthrene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	50	5
Pyrene	µg/g	<0.05	<0.05	<0.05	<0.05	0.05	100	10
2-Fluorobiphenyl (%)	%	90	99	92	92	40-130		
Nitrobenzene-d5 (%)	%	130	116	87	115	40-130		
p-Terphenyl-d14 (%)	%	107	112	122	121	40-130		

Notes:

\* Contaminated Sites Regulation standards for Environmental Protection, toxicity to soil invertebrates and plants

Yellow highlight indicates result exceeds CSR criteria for industrial site - for grab sample

## 4.0 CONCLUSIONS

The elevated levels of arsenic are notable for their exceedances of the CSR for Industrial soil criteria, but also notable for their natural exceedances as outlined by the pre-mining exploration sampling collected from 1989-1994. Prior to construction the Oil Storage Area was constructed with a 30 mil polyethylene liner to prevent any potential spills from contaminating the adjacent areas. Thus this area can easily be converted into a land treatment facility (LTF) to remediate. HEPH and LEPH levels in the Oil Storage Area are now below industrial standards and have been significantly reduced from 2005 levels. In the Oil Storage Area, HEPH levels have been reduced from a 2005 value of 14,400 ug/g to a 2007 level of 2,620 ug/g. This demonstrates the success of the land farming and fertilization program. Follow up HEPH and LEPH sampling should be conducted in 3 years to confirm results and stability of hydrocarbons in soils.

Should you have any questions regarding this report, or require further information, please contact the undersigned at Access Consulting Group in Whitehorse, Yukon.

Respectfully submitted and prepared by:

**ACCESS CONSULTING GROUP**

A registered trade name for Access Mining Consultants Ltd.



---

**Dave Desmarais**

Environmental Technologist

# **Appendix A**

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## **Soil Sampling Selected Plates**



Plate 1. Main Equipment Ready Area – sample site EQ-S-#12.



Plate 2. Oil Storage Area – sample site OS-S-#7.

## **Appendix B**

---

### **Norwest Labs Analytical Results**





Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Approval Status: Approved
# 3 Calcite Business Centre	Name: Brewery Creek	Invoice Frequency: by Lot
151 Industrial Road	Location: Brewery Creek	COD Status:
Whitehorse, YT, Canada	LSD:	Control Number:
Y1A 2V3	P.O.: ALEX-06-BCM-01	Date Received: Oct 10, 2007
Attn: Dave Desmarais	Acct code:	Date Reported: Oct 17, 2007
Sampled By: D. Desmarais		Report Number: 1058683
Company: ACG		

Contact	Company	Address
Scott Keesey	Access Mining Consultants Ltd.	# 3 Calcite Business Centre, 151 Industrial Road Whitehorse, YT Y1A 2V3
		Phone: (867) 668-6463      Fax: (867) 667-6680
		Email: <a href="mailto:scott@accessconsulting.ca">scott@accessconsulting.ca</a>

Copies	Delivery	Format
1	Email - Multiple Reports	PDF
1	Email - Multiple Reports	Standard Crosstab

Dave Desmarais	Access Mining Consultants Ltd.	# 3 Calcite Business Centre, 151 Industrial Road Whitehorse, YT Y1A 2V3
		Phone: (867) 668-6463      Fax: (867) 667-6680
		Email: <a href="mailto:dave@accessconsulting.ca">dave@accessconsulting.ca</a>

Copies	Delivery	Format
M 1	Post	
1	Email - Multiple Reports	PDF
1	Email - Multiple Reports	Standard Crosstab

\_\_\_\_\_ PAGES IN THIS TRANSMISSION

**Notes To Clients:**

- Analysis was completed on samples that exceeded the recommended holding time for CTEH9 analysis.

**Reports associated with this Lot**

<u>Id/Format/Report Date</u>	<u>Id/Format/Report Date</u>	<u>Id/Format/Report Date</u>
------------------------------	------------------------------	------------------------------

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**Sample Custody**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

**Sample Disposal Date: November 16, 2007**

All samples will be stored until this date unless other instructions are received. Please indicate other requirements below and return this form to the address or fax number on the bottom of this page.

Extend Sample Storage Until \_\_\_\_\_ (MM/DD/YY)

The following charges apply to extended sample storage:

Storage for 1 to 5 samples per month	\$ 10.00
Storage for 6 to 20 samples per month	\$ 15.00
Storage for 21 to 50 samples per month	\$ 30.00
Storage for 51 to 200 samples per month	\$ 60.00
Storage for more than 200 samples per month	\$ 110.00

Return Sample, collect, to the address below via:

Greyhound

Loomis

Purolator

Other (specify) \_\_\_\_\_

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Signature \_\_\_\_\_

## Analytical Report


Bill To: Alexco Resource Corp. Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: D. Desmarais Company: ACG	Project: ID: Quarterly Sampling Name: Brewery Creek Location: Brewery Creek LSD: P.O.: ALEX-06-BCM-01 Acct code:	Lot ID: <b>579406</b> Control Number: Date Received: Oct 10, 2007 Date Reported: Oct 17, 2007 Report Number: 1058683
--	--	--

	<b>Reference Number</b>	579406-1	579406-2		
	<b>Sample Date</b>	Aug 22, 2007	Aug 22, 2007		
	<b>Sample Location</b>				
	<b>Sample Description</b>	Oil Storage Area / OS Soil	Main Equipment Area / EQ Soil		
	<b>Matrix</b>				
<b>Analyte</b>	<b>Units</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>	<b>Detection Limit</b>
<b>Metals Strong Acid Digestion</b>					
Antimony	Strong Acid Extractable	ug/g	686	206	0.5
Arsenic	Strong Acid Extractable	ug/g	1480	438	0.2
Barium	Strong Acid Extractable	ug/g	704	900	0.03
Beryllium	Strong Acid Extractable	ug/g	0.68	0.96	0.01
Cadmium	Strong Acid Extractable	ug/g	11.5	5.61	0.05
Chromium	Strong Acid Extractable	ug/g	29.0	21.3	0.04
Cobalt	Strong Acid Extractable	ug/g	13.2	11.5	0.05
Copper	Strong Acid Extractable	ug/g	48.1	47.0	0.05
Lead	Strong Acid Extractable	ug/g	34.8	60.5	0.3
Mercury	Strong Acid Extractable	ug/g	1.83	2.90	0.003
Molybdenum	Strong Acid Extractable	ug/g	5.93	7.80	0.05
Nickel	Strong Acid Extractable	ug/g	46.0	48.0	0.1
Selenium	Strong Acid Extractable	ug/g	<0.3	<0.3	0.3
Silver	Strong Acid Extractable	ug/g	<0.2	<0.2	0.2
Tin	Strong Acid Extractable	ug/g	2.1	1.1	0.2
Vanadium	Strong Acid Extractable	ug/g	62.2	61.8	0.1
Zinc	Strong Acid Extractable	ug/g	265	308	0.1
<b>Soil Acidity</b>					
pH	1:2 Soil:Water	pH	6.6	7.7	0.5
<b>Extractable Petroleum Hydrocarbons - Soil</b>					
LEPHs	Dry Weight	ug/g	214	513	20
HEPHs	Dry Weight	ug/g	2820	4260	20
<b>Polycyclic Aromatic Hydrocarbons - Soil</b>					
Acenaphthene	Dry Weight	ug/g	<0.05	<0.05	0.05
Acenaphthylene	Dry Weight	ug/g	<0.05	<0.05	0.05
Anthracene	Dry Weight	ug/g	<0.05	<0.05	0.05
Benzo(a)anthracene	Dry Weight	ug/g	<0.05	<0.05	0.05
Benzo(a)pyrene	Dry Weight	ug/g	<0.05	<0.05	0.05
Benzo(b)fluoranthene	Dry Weight	ug/g	<0.05	<0.05	0.05
Benzo(g,h,i)perylene	Dry Weight	ug/g	<0.05	<0.05	0.05
Benzo(k)fluoranthene	Dry Weight	ug/g	<0.05	<0.05	0.05
Chrysene	Dry Weight	ug/g	<0.05	<0.05	0.05
Dibenzo(a,h)anthracene	Dry Weight	ug/g	<0.05	<0.05	0.05
Fluoranthene	Dry Weight	ug/g	<0.05	<0.05	0.05
Fluorene	Dry Weight	ug/g	<0.05	<0.05	0.05
Indeno(1,2,3-c,d)pyrene	Dry Weight	ug/g	<0.05	<0.05	0.05
Naphthalene	Dry Weight	ug/g	<0.05	<0.05	0.05
Phenanthrene	Dry Weight	ug/g	<0.05	<0.05	0.05

**Analytical Report**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

Analyte	Units	Reference Number	Results	Results	Detection Limit
		Sample Date	Oil Storage Area / OS Soil	Main Equipment Area / EQ Soil	
<b>Polycyclic Aromatic Hydrocarbons - Soil - Continued</b>					
Pyrene	Dry Weight	579406-1	<0.05	<0.05	0.05
<b>PAH - Soil - Surrogate Recovery</b>					
2-Fluorobiphenyl	PAH - Surrogate	Aug 22, 2007	92	92	40-130
Nitrobenzene-d5	PAH - Surrogate	Aug 22, 2007	87	115	40-130
p-Terphenyl-d14	PAH - Surrogate		122	121	40-130

Approved by:   
 Walter Brandl  
 Operations Manager - Surrey

## Quality Control

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

### Metals Strong Acid Digestion

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Antimony	ug/g	<0.5	0.0	-0.0	0.0	yes
Arsenic	ug/g	<0.2	0.0	-0.0	0.0	yes
Barium	ug/g	<0.03	0.00	-0.03	0.03	yes
Beryllium	ug/g	<0.01	0.00	-0.00	0.00	yes
Cadmium	ug/g	<0.05	0.00	-0.00	0.00	yes
Chromium	ug/g	<0.04	0.00	-0.00	0.00	yes
Cobalt	ug/g	<0.05	0.00	-0.00	0.00	yes
Copper	ug/g	<0.05	0.00	-0.00	0.00	yes
Lead	ug/g	<0.3	0.0	-0.0	0.0	yes
Mercury	ug/g	<0.003	0.000	-0.030	0.030	yes
Molybdenum	ug/g	<0.05	0.00	-0.00	0.00	yes
Nickel	ug/g	<0.1	0.0	-0.0	0.0	yes
Selenium	ug/g	<0.3	0.0	-0.0	0.0	yes
Silver	ug/g	<0.2	0.0	-0.0	0.0	yes
Thallium	ug/g	<0.3	0.0	-0.0	0.0	yes
Tin	ug/g	<0.2	0.0	-0.0	0.0	yes
Vanadium	ug/g	<0.1	0.0	-0.0	0.0	yes
Zinc	ug/g	0.1	0.0	-0.0	0.0	yes

Material Used: Metals Blank - soils  
 Date Acquired: October 12, 2007  
 Acquired By: Kelly Restiaux

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Antimony	ug/g	<0.5	<0.5	30.0	3.0	yes
Arsenic	ug/g	2.4	2.1	30.0	1.0	yes
Barium	ug/g	41.3	39.3	30.00	1.00	yes
Beryllium	ug/g	0.22	0.21	30.00	0.50	yes
Cadmium	ug/g	0.1	0.2	30.00	0.50	yes
Chromium	ug/g	31.1	27.0	30.00	1.00	yes
Cobalt	ug/g	22.4	21.6	30.00	0.50	yes
Copper	ug/g	126	126	30.00	1.00	yes
Lead	ug/g	2.9	2.5	30.0	0.5	yes
Molybdenum	ug/g	<0.05	0.06	30.00	0.50	yes
Nickel	ug/g	28.9	27.6	30.0	0.5	yes
Selenium	ug/g	<0.3	<0.3	30.0	0.5	yes
Silver	ug/g	<0.2	<0.2	30.0	0.5	yes
Tin	ug/g	<0.2	<0.2	30.0	1.0	yes
Vanadium	ug/g	129	126	30.0	1.0	yes
Zinc	ug/g	75.9	72.9	30.0	1.0	yes

Material Used: Metals Int. Duplicate - soils  
 Date Acquired: October 12, 2007  
 Acquired By: Kelly Restiaux

## Quality Control

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

### Metals Strong Acid Digestion - Continued

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Antimony	ug/g	9.2	10.0	4.0	16.0	yes
Arsenic	ug/g	93.5	91.4	72.2	110.6	yes
Barium	ug/g	184	185.00	140.00	230.00	yes
Beryllium	ug/g	0.94	1.03	0.73	1.33	yes
Cadmium	ug/g	42.0	40.90	32.92	48.88	yes
Chromium	ug/g	18.3	18.00	15.00	21.00	yes
Cobalt	ug/g	7.87	7.30	4.75	9.85	yes
Copper	ug/g	111	108.00	85.20	130.80	yes
Lead	ug/g	1280	1097.0	836.0	1358.0	yes
Mercury	ug/g	6.12	6.110	3.740	8.480	yes
Molybdenum	ug/g	1.0	1.02	0.72	1.32	yes
Nickel	ug/g	15.5	17.0	13.4	20.6	yes
Selenium	ug/g	<0.3	1.2	-0.3	2.7	yes
Silver	ug/g	<0.2	2.0	-4.3	8.3	yes
Thallium	ug/g	1.4	1.0	-0.5	2.5	yes
Tin	ug/g	2.6	2.3	1.5	3.1	yes
Vanadium	ug/g	39.9	44.0	33.5	54.5	yes
Zinc	ug/g	305	320.0	245.0	395.0	yes

Material Used: S0529 NIST 2711 - metals in soil

Date Acquired: October 12, 2007

Acquired By: Kelly Restiaux

Antimony	ug/g	0.8	7.3	1.1	13.5	yes
Arsenic	ug/g	24.0	23.3	18.9	27.7	yes
Barium	ug/g	79.6	294.00	101.10	486.90	yes
Beryllium	ug/g	0.37	0.41	0.33	0.49	yes
Chromium	ug/g	46.9	48.10	37.35	58.85	yes
Cobalt	ug/g	8.97	8.75	6.10	11.40	yes
Copper	ug/g	317	297.00	263.49	330.51	yes
Lead	ug/g	158	167.0	139.5	194.5	yes
Mercury	ug/g	0.704	2.880	2.590	3.170	yes
Molybdenum	ug/g	4.6	4.57	3.75	5.39	yes
Nickel	ug/g	31.0	31.6	24.8	38.4	yes
Selenium	ug/g	<0.3	0.0	0.0	0.0	yes
Silver	ug/g	<0.2	1.2	0.9	1.5	yes
Thallium	ug/g	1.5	0.5	0.2	0.8	yes
Vanadium	ug/g	74.0	74.4	57.8	91.0	yes
Zinc	ug/g	338	337.0	285.1	388.9	yes

Material Used: S0535 - PACS-2 marine sediment

Date Acquired: October 12, 2007

Acquired By: Kelly Restiaux

### Soil Acidity

**Quality Control**

Bill To: Alexco Resource Corp.  
 Report To: Access Mining Consultants Ltd.  
 # 3 Calcite Business Centre  
 151 Industrial Road  
 Whitehorse, YT, Canada  
 Y1A 2V3  
 Attn: Dave Desmarais  
 Sampled By: D. Desmarais  
 Company: ACG

Project: Quarterly Sampling  
 ID: Brewery Creek  
 Name: Brewery Creek  
 Location: Brewery Creek  
 LSD:  
 P.O.: ALEX-06-BCM-01  
 Acct code:

Lot ID: **579406**  
 Control Number:  
 Date Received: Oct 10, 2007  
 Date Reported: Oct 17, 2007  
 Report Number: 1058683

**Soil Acidity**

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
pH	pH	8.0	8.0	99.9	99.6 - 100.8	yes
Material Used: CC - pH						
Date Acquired: October 12, 2007						
Acquired By: Heather Johnson						

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
pH	pH	6.2	6.2	0.2	0.1	yes
Material Used: Surrey - Int. Duplicate 1						
Date Acquired: October 12, 2007						
Acquired By: Heather Johnson						

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
pH	pH	6.1	6.1	5.9	6.2	yes
Material Used: Soil pH 98 FS-015						
Date Acquired: October 12, 2007						
Acquired By: Heather Johnson						

**Extractable Petroleum Hydrocarbons - Soil**

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
EPHs10-19	ug/g	<20	0	-20	20	yes
EPHs19-32	ug/g	<20	0	-20	20	yes
Material Used: Method Blank - EPH						
Date Acquired: October 11, 2007						
Acquired By: Sandra Chu						

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
EPHs10-19	ug/mL	53.0	50	107	80 - 120	yes
EPHs19-32	ug/mL	53.0	50	107	80 - 120	yes
Material Used: Calibration Check - EPH						
Date Acquired: October 11, 2007						
Acquired By: Sandra Chu						

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
EPHs10-19	ug/g	513	502	60	100	yes
EPHs19-32	ug/g	4260	4520	60	100	yes
Material Used: Matrix Spike Duplicate 2 - EPH						
Date Acquired: October 11, 2007						
Acquired By: Sandra Chu						

Matrix Spike	Units	Measured	Actual	% Recovery	Criteria (%)	Passed QC
EPHs10-19	ug/g	26	25.3	53	73 - 113	yes
EPHs19-32	ug/g	27	26.42	80	75 - 115	yes

**Quality Control**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

**Extractable Petroleum Hydrocarbons - Soil - Continued**

Matrix Spike	Units	Measured	Actual	% Recovery	Criteria (%)	Passed QC
Material Used: Matrix Spike - EPH						
Date Acquired: October 11, 2007						
Acquired By: Sandra Chu						

**Polycyclic Aromatic Hydrocarbons - Soil**

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Acenaphthene	ug/g	<0.05	0.00	-0.05	0.05	yes
Acenaphthylene	ug/g	<0.05	0.00	-0.05	0.05	yes
Anthracene	ug/g	<0.05	0.00	-0.05	0.05	yes
Benzo(a)anthracene	ug/g	<0.05	0.00	-0.05	0.05	yes
Benzo(a)pyrene	ug/g	<0.05	0.00	-0.05	0.05	yes
Benzo(b)fluoranthene	ug/g	<0.05	0.00	-0.05	0.05	yes
Benzo(g,h,i)perylene	ug/g	<0.05	0.00	-0.05	0.05	yes
Benzo(k)fluoranthene	ug/g	<0.05	0.00	-0.05	0.05	yes
Chrysene	ug/g	<0.05	0.00	-0.05	0.05	yes
Dibenzo(a,h)anthracene	ug/g	<0.05	0.00	-0.05	0.05	yes
Fluoranthene	ug/g	<0.05	0.00	-0.05	0.05	yes
Fluorene	ug/g	<0.05	0.00	-0.05	0.05	yes
Indeno(1,2,3-c,d)pyrene	ug/g	<0.05	0.00	-0.05	0.05	yes
Naphthalene	ug/g	<0.05	0.00	-0.05	0.05	yes
Phenanthrene	ug/g	<0.05	0.00	-0.05	0.05	yes
Pyrene	ug/g	<0.05	0.00	-0.05	0.05	yes
Material Used: Method Blank - PAH(Sry)						
Date Acquired: October 11, 2007						
Acquired By: Craig Stehr						

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
Acenaphthene	ng/mL	998.9	1000.00	99.89	79.99 - 120.01	yes
Acenaphthylene	ng/mL	1005.6	1000.00	100.56	79.99 - 120.01	yes
Anthracene	ng/mL	1021.0	1000.00	102.10	79.99 - 120.01	yes
Benzo(a)anthracene	ng/mL	1018.2	1000.00	101.82	79.99 - 120.01	yes
Benzo(a)pyrene	ng/mL	1023.0	1000.00	102.30	79.99 - 120.01	yes
Benzo(b)fluoranthene	ng/mL	1028.2	1000.00	102.82	79.99 - 120.01	yes
Benzo(g,h,i)perylene	ng/mL	1023.7	1000.00	102.37	79.99 - 120.01	yes
Benzo(k)fluoranthene	ng/mL	1023.9	1000.00	102.39	79.99 - 120.01	yes
Chrysene	ng/mL	1000.3	1000.00	100.03	79.99 - 120.01	yes
Dibenzo(a,h)anthracene	ng/mL	1031.0	1000.00	103.10	79.99 - 120.01	yes
Fluoranthene	ng/mL	1012.4	1000.00	101.24	79.99 - 120.01	yes
Fluorene	ng/mL	1006.4	1000.00	100.64	79.99 - 120.01	yes
Indeno(1,2,3-c,d)pyrene	ng/mL	1032.5	1000.00	103.25	79.99 - 120.01	yes
Naphthalene	ug/mL	1003.0	1000.00	100.30	79.99 - 120.01	yes
Phenanthrene	ng/mL	1006.6	1000.00	100.66	79.99 - 120.01	yes



**Quality Control**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

**Polycyclic Aromatic Hydrocarbons - Soil - Continued**

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
Pyrene	ng/mL	1016.2	1000.00	101.62	79.99 - 120.01	yes
Material Used:	Calibration Check - PAH(Sry)					
Date Acquired:	October 11, 2007					
Acquired By:	Craig Stehr					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Acenaphthene	ug/g	<0.05	<0.05	60.00	0.25	yes
Acenaphthylene	ug/g	<0.05	<0.05	60.00	0.25	yes
Anthracene	ug/g	<0.05	<0.05	60.00	0.25	yes
Benzo(a)anthracene	ug/g	<0.05	<0.05	60.00	0.25	yes
Benzo(a)pyrene	ug/g	<0.05	<0.05	60.00	0.25	yes
Benzo(b)fluoranthene	ug/g	<0.05	<0.05	60.00	0.25	yes
Benzo(g,h,i)perylene	ug/g	<0.05	<0.05	60.00	0.25	yes
Benzo(k)fluoranthene	ug/g	<0.05	<0.05	60.00	0.25	yes
Chrysene	ug/g	<0.05	<0.05	60.00	0.25	yes
Dibenzo(a,h)anthracene	ug/g	<0.05	<0.05	60.00	0.25	yes
Fluoranthene	ug/g	<0.05	<0.05	60.00	0.25	yes
Fluorene	ug/g	<0.05	<0.05	60.00	0.25	yes
Indeno(1,2,3-c,d)pyrene	ug/g	<0.05	<0.05	60.00	0.25	yes
Naphthalene	ug/g	<0.05	<0.05	60.00	0.25	yes
Phenanthrene	ug/g	<0.05	<0.05	60.00	0.25	yes
Pyrene	ug/g	<0.05	<0.05	60.00	0.25	yes
Material Used:	Matrix Spike Duplicate 2 - PAH(Sry)					
Date Acquired:	October 11, 2007					
Acquired By:	Craig Stehr					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Acenaphthene	ug/g	98.1	90.00	50.01	129.99	yes
Acenaphthylene	ug/g	91.4	90.00	50.01	129.99	yes
Anthracene	ug/g	74.1	90.00	50.01	129.99	yes
Benzo(a)anthracene	ug/g	89.3	90.00	50.01	129.99	yes
Benzo(a)pyrene	ug/g	80.9	90.00	50.01	129.99	yes
Benzo(b)fluoranthene	ug/g	86.6	90.00	50.01	129.99	yes
Benzo(g,h,i)perylene	ug/g	82.8	90.00	50.01	129.99	yes
Benzo(k)fluoranthene	ug/g	85.9	90.00	50.01	129.99	yes
Chrysene	ug/g	98.3	90.00	50.01	129.99	yes
Dibenzo(a,h)anthracene	ug/g	73.5	90.00	50.01	129.99	yes
Fluoranthene	ug/g	92.4	90.00	50.01	129.99	yes
Fluorene	ug/g	94.2	90.00	50.01	129.99	yes
Indeno(1,2,3-c,d)pyrene	ug/g	74.5	90.00	50.01	129.99	yes
Naphthalene	ug/g	100	90.00	50.01	129.99	yes
Phenanthrene	ug/g	96.6	90.00	50.01	129.99	yes

**Quality Control**

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
151 Industrial Road	Location: Brewery Creek	Date Reported: Oct 17, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

**Polycyclic Aromatic Hydrocarbons - Soil - Continued**

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Pyrene	ug/g	90.7	90.00	50.01	129.99	yes
Material Used:	Matrix Spike - PAH(Sry)					
Date Acquired:	October 11, 2007					
Acquired By:	Craig Stehr					

**PAH - Soil - Surrogate Recovery**

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
2-Fluorobiphenyl	%	97.3	100	97	80 - 120	yes
Nitrobenzene-d5	%	101.7	100	102	80 - 120	yes
p-Terphenyl-d14	%	106.2	100	106	80 - 120	yes
Material Used:	Calibration Check - PAH(Sry)					
Date Acquired:	October 11, 2007					
Acquired By:	Craig Stehr					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
2-Fluorobiphenyl	%	92	98	60	0	yes
Nitrobenzene-d5	%	115	93	60	0	yes
p-Terphenyl-d14	%	121	115	60	0	yes
Material Used:	Matrix Spike Duplicate 2 - PAH(Sry)					
Date Acquired:	October 11, 2007					
Acquired By:	Craig Stehr					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
2-Fluorobiphenyl	%	103	85	40	130	yes
Nitrobenzene-d5	%	101	85	40	130	yes
p-Terphenyl-d14	%	98	85	40	130	yes
Material Used:	Matrix Spike - PAH(Sry)					
Date Acquired:	October 11, 2007					
Acquired By:	Craig Stehr					

## Methodology and Notes

Bill To: Alexco Resource Corp.	Project:	Lot ID: <b>579406</b>
Report To: Access Mining Consultants Ltd.	ID: Quarterly Sampling	Control Number:
# 3 Calcite Business Centre	Name: Brewery Creek	Date Received: Oct 10, 2007
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Whitehorse, YT, Canada	LSD:	Report Number: 1058683
Y1A 2V3	P.O.: ALEX-06-BCM-01	
Attn: Dave Desmarais	Acct code:	
Sampled By: D. Desmarais		
Company: ACG		

### Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
EPH - Soil	B.C.M.O.E	* EPH in Solids by GC/FID (Dec. 31, 2000), EPH in Solids	11-Oct-07	BTG Surrey
Metals (Strong Acid Leachable) in soils	B.C.M.O.E	* Strong Acid Leachable Metals (SALM) in Soil, V 1.0, SALM	12-Oct-07	BTG Surrey
PAH - Soil (Surrey)	B.C.M.O.E	* PAHs in Soil by GC/MS/SIM (November 2002), PAH	11-Oct-07	BTG Surrey
PAH - Soil (Surrey)	US EPA	* Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry, 8270	11-Oct-07	BTG Surrey
pH and EC in Soil - 1:2 (Surrey)	McKeague	* 1:2 Soil:Water Ratio, 4.12	12-Oct-07	BTG Surrey

*\* Bodycote method(s) based on reference method*

### References

B.C.M.O.E	B.C. Ministry of Environment
McKeague	Manual on Soil Sampling and Methods of Analysis
US EPA	US Environmental Protection Agency Test Methods

### Comments:

- Analysis was completed on samples that exceeded the recommended holding time for CTEH9 analysis.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.



# Hydrocarbon Chromatogram

#104 - 19575 55A Avenue

Surrey, BC V3S 8P8

Phone: (604) 514-3322

Fax: (604) 514-3323

Agri-Food & Environmental Group  
Calgary Edmonton Winnipeg Lethbridge Surrey

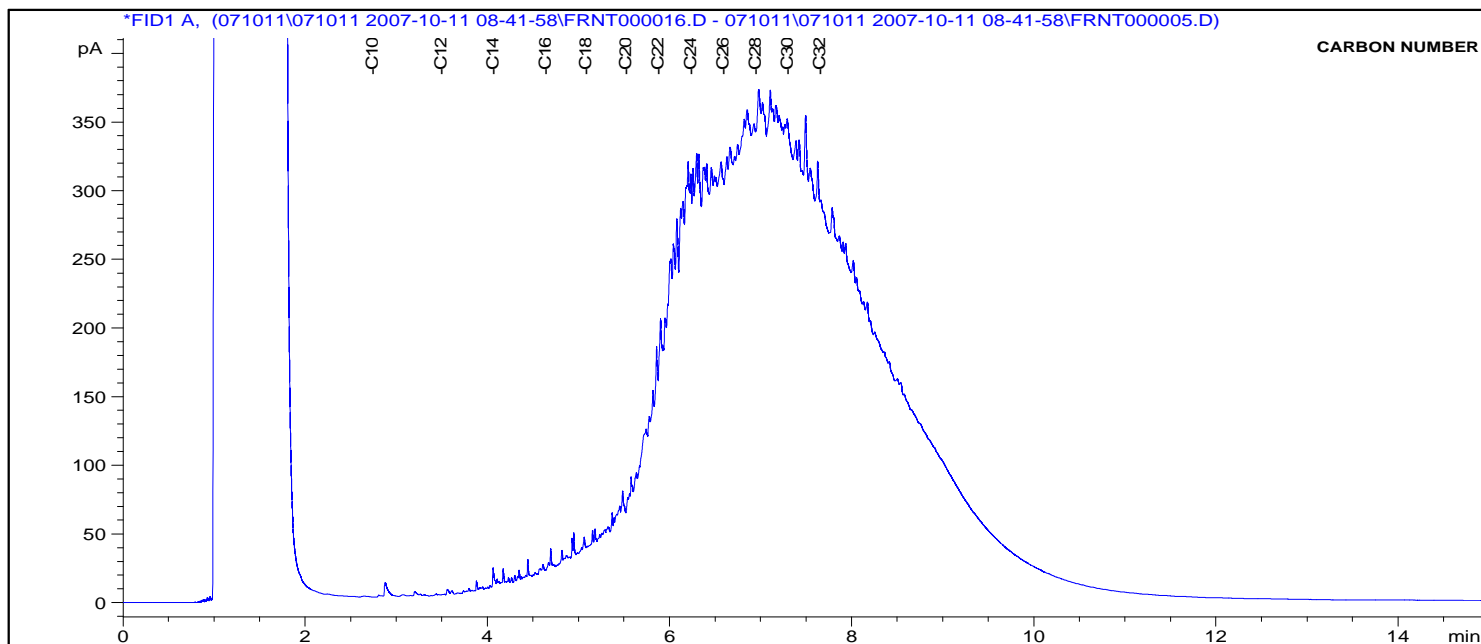
**Bill to:** Access Mining Consultants Ltd.  
**Report to:** Access Mining Consultants Ltd.  
# 3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, YT, Canada  
Y1A 2V3  
Attn: Dave Desmarais  
Sampled by: D. Desmarais  
ACG

**Project ID:** Quarterly Sampling  
**Name:** Brewery Creek  
**Location:** Brewery Creek  
**LSD:**  
**P.O.:**

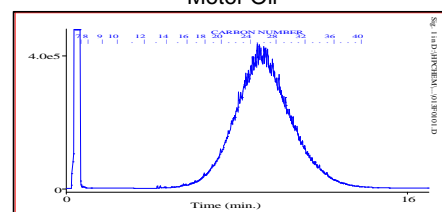
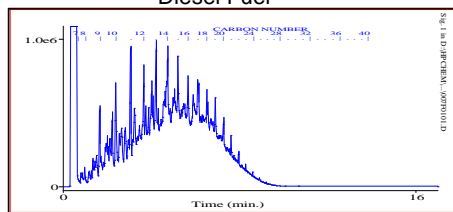
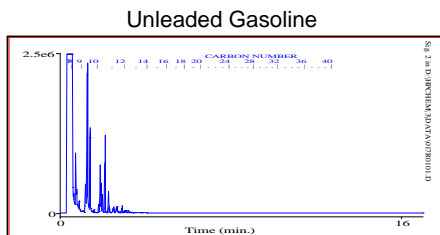
**NWL Lot ID:** 579406  
**Control Number:**  
**Date Received:** Oct 10, 2007  
**Date Reported:**

NWL Number: 579406-1  
Sample Date: Aug 22, 2007

Sample Description: OS Oil Storage Area



### TYPICAL PRODUCT CHROMATOGRAMS



Product Carbon Number Ranges					
Gasoline	C4-C12	Kerosene	C7-C16	Lubricating Oils	C20-C40
Varsol	C8-C12	Diesel	C8-C22	Crude Oils	C3-C60+



# Hydrocarbon Chromatogram

#104 - 19575 55A Avenue

Surrey, BC V3S 8P8

Phone: (604) 514-3322

Fax: (604) 514-3323

Agri-Food & Environmental Group  
 Calgary Edmonton Winnipeg Lethbridge Surrey

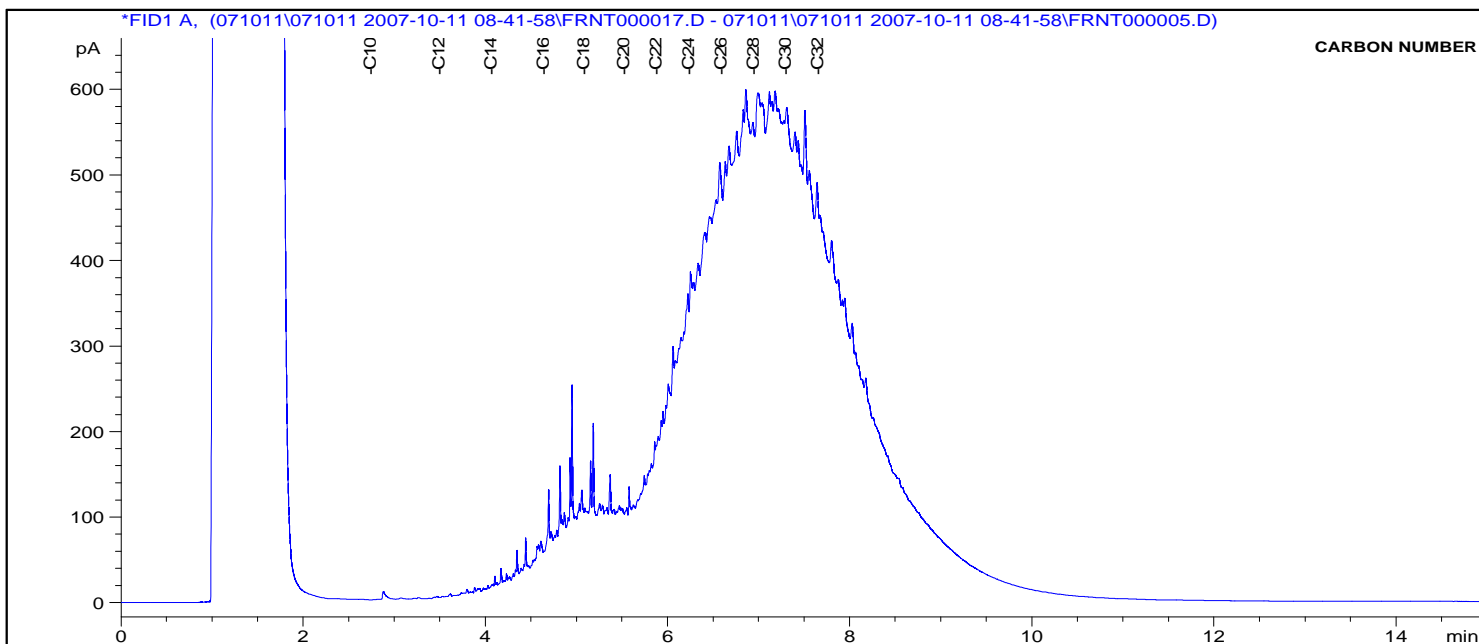
**Bill to:** Access Mining Consultants Ltd.  
**Report to:** Access Mining Consultants Ltd.  
 # 3 Calcite Business Centre  
 151 Industrial Road  
 Whitehorse, YT, Canada  
 Y1A 2V3  
 Attn: Dave Desmarais  
 Sampled by: D. Desmarais  
 ACG

**Project ID:** Quarterly Sampling  
**Name:** Brewery Creek  
**Location:** Brewery Creek  
**LSD:**  
**P.O.:**

**NWL Lot ID:** 579406  
**Control Number:**  
**Date Received:** Oct 10, 2007  
**Date Reported:**

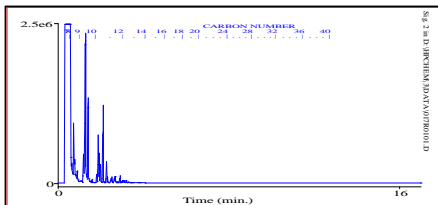
NWL Number: 579406-2  
 Sample Date: Aug 22, 2007

Sample Description: EQ Main Equipment Area

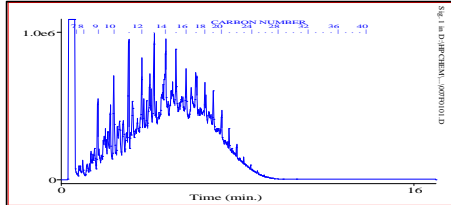


### TYPICAL PRODUCT CHROMATOGRAMS

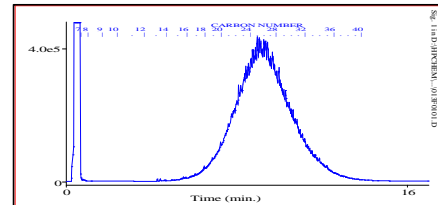
Unleaded Gasoline



Diesel Fuel



Motor Oil



### Product Carbon Number Ranges

Gasoline C4-C12  
 Varsol C8-C12

Kerosene C7-C16  
 Diesel C8-C22

Lubricating Oils C20-C40  
 Crude Oils C3-C60+

**Appendix I**  
**REVEGATATION AND**  
**METALS UPTAKE**  
**ASSESSMENT**



# **Brewery Creek Mine 2007 Revegetation Assessment**

**Site Assessment Report Prepared for  
Alexco Resources Corp.**



**January 2008**



# Contents

1.0	BACKGROUND	1
2.0	2007 SURVEY OF PERMANENT MONITORING PLOTS	3
2.1	Survey Methods	3
2.2	2007 Survey Results	3
2.3	Summary	7
3.0	2007 SURVEY OF OTHER REVEGETATED AREAS	8
3.1	Survey Methods	8
3.2	2007 Survey Results	8
3.3	Revegetation Progress Assessment	15
4.0	RECOMMENDATIONS	17
5.0	REFERENCES	18

Appendix A      Photographic Record

## LIST OF TABLES

Table No.

1	Blue Zone WRSA Plots	4
2	Leach Pad Plots	5
3	Control Plots	6
4	Tree Species Colonizing the Brewery Creek Mine in 2007	16

## 1.0 Background

A revegetation program has been ongoing at the Brewery Creek Mine since 1996. Several seed mixes have been used. Earlier revegetation efforts were focused on the recontoured Canadian Zone waste rock dump and haul road, an area to the west of the Pacific Zone, and an area below the leach pad and reclaim ponds.

Two seed mixes were acquired by Viceroy Minerals Corporation in 2003.

The 'wet site' seed mix consisted of:

<b>Common Name</b>	<b>Scientific Name</b>	<b>Percentage by Weight</b>
Violet Wheatgrass	<i>Agropyron violaceum</i>	33%
Fowl Bluegrass	<i>Poa palustris</i>	33%
Alkaligrass	<i>Puccinellia distans</i>	13%
Tufted Hairgrass	<i>Deschampsia caespitosa</i>	13%
White Clover	<i>Trifolium repens</i>	8%

The 'leach pad' mix consisted of:

<b>Common Name</b>	<b>Scientific Name</b>	<b>Percentage by Weight</b>
Slender Wheatgrass	<i>Agropyron trachycaulus</i>	50%
Kentucky Bluegrass	<i>Poa pratensis</i>	20%
Red Fescue	<i>Festuca rubra</i>	20%
Alfalfa	<i>Medicago sativa</i>	10%

These two seed mixes were used to revegetate a number of areas of the mine site between 2003 and 2006 (see Sections 2.0 and 3.0).

Alexco Resources Inc. acquired a new seed mix in early 2006.

The 'Brewery Creek Blend' consisted of:

<b>Common Name</b>	<b>Scientific Name</b>	<b>Percentage by Weight</b>
Violet Wheatgrass	<i>Agropyron violaceum</i>	36%
Ticklegrass	<i>Agrostis scabra</i>	15%
Sheep Fescue	<i>Festuca ovina</i>	14%
Rocky Mountain Fescue	<i>Festuca saximontana</i>	14%
Glaucous Bluegrass	<i>Poa glauca</i>	11%
Alfalfa	<i>Medicago sativa</i>	10%

This seed mix was used to revegetate a number of areas of the mine site in 2006 and the spring of 2007 (see Section 3.0).

As detailed in Section 7 of the Heap Leach Pad Cover and Facilities Monitoring Program, and Section 6 of the Blue Zone Monitoring and Assessment Program, annual terrestrial monitoring is to be conducted on the vegetation on the Leach Pad and in the Blue Zone

Waste Rock Storage Area (WRSA). Three 5m X 5m permanent monitoring plots were therefore established in 2005 at each of the following locations:

Blue Zone Waste Rock Storage Area  
Leach Pad  
Control (West of Pacific Zone)

The Blue Zone Waste Rock Storage Area and the Leach Pad were both seeded in the fall of 2003 with the 'leach pad' seed mix. The control plot was seeded in the fall of 2001 with the 'Brewery Creek' seed mix (see Section 2.2).

A survey of the permanent monitoring plots and other revegetated areas was carried out in July 2005 and July 2006. Survey methods and results are presented in reports by Laberge Environmental Services (2006 and 2007). The permanent monitoring plots and other revegetated areas were resurveyed on August 21<sup>th</sup> and 22<sup>th</sup>, 2007, by Stu Withers and Bonnie Burns. The results of the 2007 survey are presented in this report.

## 2.0 2007 Survey of Permanent Monitoring Plots

### 2.1 Survey Methods

At each plot the following information was recorded:

- UTM coordinates
- Elevation, slope and aspect
- Vegetative cover using the following 5 grades:
  - 0-1%
  - 1-12.5%
  - 12.5-25%
  - 25-50%
  - 50-100%
- Seeded species composition
- Natural colonization by other plant species
- Root depth penetration of seeded species
- In-situ soil pH
- In-situ soil moisture (% relative saturation at bottom of test pit)
- Evidence of erosion

Site photographs were also taken.

### 2.2 2007 Survey Results

Photographs of all the assessed sites are presented in Appendix A. Although at first glance it may appear that patches of the vegetated sites are dead, this is due to the pinkish-brown colour of fescue grasses, which are common throughout all of the seeded areas, and the beige colour of the wheatgrasses, ticklegrass and tufted hairgrass.

#### ***Blue WRSA - Seeded in the Fall of 2003***

Seed mix included:	Slender Wheatgrass	<i>(Agropyron trachycaulus)</i>	50%
	Kentucky Bluegrass	<i>(Poa pratensis)</i>	20%
	Red Fescue	<i>(Festuca rubra)</i>	20%
	Alfalfa	<i>(Medicago sativa)</i>	10%

**Table 1 Blue WRSA Plots**

	<b>Plot 1</b>	<b>Plot 2</b>	<b>Plot 3</b>
UTM Coordinates	07W 0633674E 7105241N	07W 0633716E 7105262N	07W 0633755E 7105257N
Elevation (m)	815	815	807
Estimated Slope (°)	30	35	35
Aspect	South	South	South
In-situ Soil pH	7.0	6.4	6.6
In-situ Soil Moisture (% relative saturation)	19	32	39
Vegetative Cover (%)	50-100	50-100	25-50
Species Composition (seeded species in order of dominance)	Slender Wheatgrass Alfalfa Red Fescue Kentucky Bluegrass	Slender Wheatgrass Red Fescue Alfalfa Kentucky Bluegrass	Red Fescue Slender Wheatgrass Alfalfa Kentucky Bluegrass
Root Depth Penetration (mm)	S. Wheatgrass 80 R. Fescue 145 K. Bluegrass 75 Alfalfa 210	S. Wheatgrass 160 R. Fescue 110 K. Bluegrass 90 Alfalfa 285	S. Wheatgrass 105 R. Fescue 110 K. Bluegrass 70 Alfalfa 230
Other Species	Arctic Lupine	Arctic Lupine	Arctic Lupine Annual Hawk's-beard
Evidence of Erosion	Minor erosion gully at lower end of plot	Minor erosion gully with maximum depth of 10 cm	1 gully with maximum depth of 24 cm (grass growing in gully)
Additional Comments	Plot located over lysimeter  All seeded grass species in seed, Alfalfa in flower  Lots of litter from previous years' growth  Photographs taken	All seeded grass species in seed, Alfalfa in flower  Lots of litter from previous years' growth  Photographs taken	Seeded grass species in seed (although some Red Fescue without seed), Alfalfa in flower  Photographs taken

**Leach Pad - Seeded in the Fall of 2003**

Seed mix included: Slender Wheatgrass (*Agropyron trachycaulus*) 50%  
 Kentucky Bluegrass (*Poa pratensis*) 20%  
 Red Fescue (*Festuca rubra*) 20%  
 Alfalfa (*Medicago sativa*) 10%

**Table 2 Leach Pad Plots**

	<b>Plot 1</b>	<b>Plot 2</b>	<b>Plot 3</b>
UTM Coordinates	07W 0632807E 7104611N	07W 0632716E 7104655N	07W 0632856E 7104587N
Elevation (m)	859	849	853
Estimated Slope (°)	0	<10	20
Aspect	Neutral	North	Southeast
In-situ Soil pH	6.3	5.8	6.2
In-situ Soil Moisture (% relative saturation)	29	40	32
Vegetative Cover (%)	50-100	50-100	50-100
Species Composition (seeded species in order of dominance)	Red Fescue Slender Wheatgrass Kentucky Bluegrass	Slender Wheatgrass Red Fescue Kentucky Bluegrass Alfalfa	Slender Wheatgrass Kentucky Bluegrass Red Fescue Alfalfa
Root Depth Penetration (mm)	S. Wheatgrass 90 R. Fescue 95 K. Bluegrass 100	S. Wheatgrass 120 R. Fescue 90 K. Bluegrass 100 Alfalfa 170	S. Wheatgrass 120 R. Fescue 100 K. Bluegrass 90 Alfalfa 220
Other Species	Tansy Mustard Raspberry Common Horsetail Foxtail Barley	None	Annual Hawk's-beard Tansy Mustard
Evidence of Erosion	None	None	None
Additional Comments	All seeded grass species in seed  No sign of Alfalfa  Photographs taken	All seeded grass species in seed, Alfalfa in flower  Very little Alfalfa  Lots of litter from previous years' growth  Photographs taken	All seeded grass species in seed, Alfalfa in flower  Very little Alfalfa  Photographs taken

**Control (West of Pacific Zone) - Seeded in the Fall of 2001**

Seed mix included:	Violet Wheatgrass	( <i>Agropyron violaceum</i> )	35%
	Slender Wheatgrass	( <i>Agropyron trachycaulus</i> )	13%
	Fowl Bluegrass	( <i>Poa palustris</i> )	16%
	Alpine Bluegrass	( <i>Poa alpina</i> )	13%
	Sheep Fescue	( <i>Festuca ovina</i> )	13%
	Rocky Mountain Fescue	( <i>Festuca saximontana</i> )	10%

**Table 3 Control Plots**

	<b>Plot 1</b>	<b>Plot 2</b>	<b>Plot 3</b>
UTM Coordinates	07W 0632890E 7105434N	07W 0632899E 7105457N	07W 0632920E 7105520N
Elevation (m)	837	838	835
Estimated Slope (°)	0	0	0
Aspect	Neutral	Neutral	Neutral
In-situ Soil pH	6.5	6.4	6.2
In-situ Soil Moisture (% relative saturation)	48	30	41
Vegetative Cover (%)	50-100	50-100	50-100
Species Composition (seeded species in order of dominance)	Fowl Bluegrass Rocky Mountain/ Sheep Fescue Violet/Slender Wheatgrass Alpine Bluegrass	Fowl Bluegrass Rocky Mountain/ Sheep Fescue Violet/Slender Wheatgrass Alpine Bluegrass	Rocky Mountain/ Sheep Fescue Fowl Bluegrass Alpine Bluegrass Violet/Slender Wheatgrass
Root Depth Penetration (mm)	V/S Wheatgrass 130 RM/S Fescue 110 F Bluegrass 120	V/S Wheatgrass 100 RM/S Fescue 110 F Bluegrass 90	V/S Wheatgrass 90 RM/S Fescue 120 F Bluegrass 80
Other Species	Fireweed Tall Jacob's Ladder Common Yarrow Willow	Fireweed Arctic Lupine Tall Jacob's Ladder Common Dandelion Common Horsetail Common Timothy	Fireweed Blue-joint Grass Kentucky Bluegrass Willow
Evidence of Erosion	None	None	None
Additional Comments	All seeded grass species in seed  Very dense, high vegetative growth and lots of grass litter from previous years' growth  Photographs taken	All seeded grass species in seed  Lots of grass litter from previous years' growth  Photographs taken	All seeded grass species in seed  Photographs taken

## **2.3 Summary**

- Soil pH's, particularly on the leach pad plots (5.8-6.3), were more acidic than during the 2006 survey.
- Soil moisture was higher at the leach pad plots than during the 2006 survey, but similar at the Blue WRSA and control plots.
- The grades of vegetative cover remained the same at each of the plots except for an increase at Plot I of the Blue Zone WSRSA and an increase at Plot 3 of the control.
- The species composition at the plots was generally the same as in 2006, except for a decline in Alfalfa at the leach pad plots (absent from Plot 1).
- The rooting depth of the grass species was quite variable compared to those in 2006. The rooting depth of Alfalfa (Blue Zone WRSA and Leach Pad plots) was greater in 2007.
- The number of plant species invading the plot was similar to that in 2006.
- The only evidence of erosion continues to be on the Blue Zone WRSA plots, and these small gullies appear to be minor and are revegetating.
- Willows are appearing for the first time, in the control zone (Plots 1 and 3) representing another successional stage in the natural revegetation process of this area.



### 3.0 2007 Revegetation Survey

#### 3.1 Survey Methods

A brief visual survey of other seeded areas of the mine site was carried out. These areas included recontoured and scarified pit infills, waste rock dumps, and haul roads, as well as the areas around the reclaimed leach pad. These areas were located with the assistance of the site manager. The survey included an estimate of the overall vegetative cover, a non-quantitative seeded species composition and a record of other plant species observed colonizing the area.

#### 3.2 2007 Survey Results

##### ***Pacific Pit***

Approximately 11.7 ha were broadcast-seeded in the fall of 2001 using the second 'Brewery Creek' seed mix. This mix included:

Violet Wheatgrass	<i>(Agropyron violaceum)</i>	35%
Slender Wheatgrass	<i>(Agropyron trachycaulus)</i>	13%
Fowl Bluegrass	<i>(Poa palustris)</i>	16%
Alpine Bluegrass	<i>(Poa alpina)</i>	13%
Sheep Fescue	<i>(Festuca ovina)</i>	13%
Rocky Mountain Fescue	<i>(Festuca saximontana)</i>	10%

This steep slope has a patchy, variable (up to 90%) vegetative cover.

The seeded cover is now a mix of Fowl Bluegrass and Wheatgrass, with lesser amounts of Fescue and Alpine Bluegrass. White Clover also occurs in patches, although it was not seeded on this slope.

Colonizing species observed include Black Spruce (*Picea mariana*), Alaska Birch (*Betula neoalaskana*), Balsam Poplar (*Populus balsamifera*), Trembling Aspen (*Populus tremuloides*), Raspberry (*Rubus idaeus*), Fireweed (*Epilobium angustifolium*), Arctic Dock (*Rumex arcticus*), Arctic Lupine (*Lupinus arcticus*), Blue-joint Reed Grass (*Calamagrostis canadensis*), Annual Hawk's-beard (*Crepis tectorum*) and Foxtail Barley (*Hordeum jubatum*).

##### ***Blue Inpit Backfill***

Approximately 4.9 ha were drill-seeded in the fall of 2003 using the wet area seed mix.

Overall vegetative cover is about 80%, although a few areas have a thinner cover and a few spots were missed by the seeder.

The seeded cover is mostly Violet Wheatgrass and Tufted Hairgrass. There is very little Fowl Bluegrass and no evidence of Alkaligrass. White Clover is sparse and patchy.

Colonizing species observed include Raspberry (*Rubus idaeus*), Foxtail Barley (*Hordeum jubatum*) and Fleabane (*Erigeron* sp.).

The newly seeded access road to the Blue Zone pit (seeded with the new Brewery Creek blend in the spring of 2007) is dominated by a thick growth of Ticklegrass with a lesser amount of Violet Wheatgrass. There is also some Rocky Mountain Fescue, Glaucous Bluegrass (not yet in seed) and a little Alfalfa.

A small erosion channel was observed beside the access road near the bottom of the hill.

### ***Moosehead***

Approximately 3.0 ha were seeded (drill-seeded and broadcast-seeded by ATV) in the fall of 2003 using the wet area seed mix.

The vegetative cover is variable, but averages about 70%.

The seeded cover is mostly Tufted Hairgrass, with lesser amounts of Violet Wheatgrass and Fowl Bluegrass. There is little evidence of Alkaligrass. There is more White Clover than in previous years although it occurs in dense patches.

Colonizing species observed include Black Spruce (*Picea mariana*), Alaska Birch (*Betula neoalaskana*), Balsam Poplar (*Populus balsamifera*), Willows (*Salix* spp.), Alders (*Alnus crispa*), Raspberry (*Rubus idaeus*), Prickly Rose (*Rosa acicularis*), Alaskan Knotweed (*Polygonum alaskanum*) and Hawk's-beard (*Crepis nana*).

### ***Moosehead Road and Main Haul Road West of Moosehead Zone***

This area was seeded in the spring of 2006 with the new Brewery Creek Blend.

The area has a variable vegetative cover averaging about 50%, with the densest growth occurring in depressions. The seeded cover is dominated by Ticklegrass.

### ***Canadian Waste Rock Storage Area***

Approximately 9.2 ha were seeded in the fall of 1997 with a bulk mixer truck using the 'Brewery Creek' seed mix. This mix included:

Fowl Bluegrass	( <i>Poa palustris</i> )	17%
Kentucky Bluegrass	( <i>Poa pratensis</i> )	16%
Wild Rye	( <i>Elymus</i> ?)	16%
Sheep Fescue	( <i>Festuca ovina</i> )	16%
Red Fescue	( <i>Festuca rubra</i> )	12%
Common Timothy	( <i>Phleum pratense</i> )	10%
Alsike Clover	( <i>Trifolium hybridum</i> )	8%
Alfalfa	( <i>Medicago sativa</i> )	5%

This area has a variable cover, averaging about 80%.

Ten years after the initial seeding, the seeded cover now consists of Fowl Bluegrass, Sheep Fescue, Common Timothy and occasional Red Fescue, with large patches of Alsike Clover and Alfalfa. There is currently no evidence of Kentucky Bluegrass or Wild Rye on these slopes.

Colonizing species observed include White Spruce (*Picea glauca*), Black Spruce (*Picea mariana*), Trembling Aspen (*Populus tremuloides*), Willow (*Salix* spp.), Alaska Birch (*Betula neoalaskana*), Alder (*Alnus crispa*), Rose (*Rosa acicularis*), Fireweed (*Epilobium angustifolium*), Arctic Lupine (*Lupinus arcticus*), Common Yarrow (*Achillea millefolium*), Smooth Brome (*Bromus inermis*), Blue-joint Reed Grass (*Calamagrostis canadensis*) and Common Horsetail (*Equisetum arvense*).

### ***Canadian Stockpile***

Approximately 1.0 ha was drill-seeded in the fall 2003 using the wet area seed mix.

The area has a very good vegetative cover (80-90%).

The seeded cover is dominated by Violet Wheatgrass, Tufted Hairgrass and patches of White Clover, with lesser amounts of Fowl Bluegrass. Alkaligrass is sparse and occurs only at the base of the slope.

Colonizing species observed include Alders (*Alnus crispa*), Willow (*Salix* spp.), Alaska Birch (*Betula neoalaskana*), Balsam Poplar (*Populus balsamifera*), Common Yarrow, (*Achillea millefolium*) and Blue-joint Reed Grass (*Calamagrostis Canadensis*).

### ***Flanks of Main Haul Road West of Canadian Zone at Stream Crossing***

This area was seeded in the fall of 2005 with the leach pad mix and in the spring of 2006 with the new Brewery Creek blend.

It has a good vegetative cover (up to 70%).

The seeded cover is dominated by a heavy cover of Alfalfa and Wheatgrass with lesser amounts of Red Fescue and Kentucky Bluegrass.

### ***Upper Fosters***

Approximately 8.0 ha were drill-seeded in the fall 2003 using the wet area seed mix.

The area has good cover on the lower flats (70-80%), with a thinner growth (50-60%) on the upper slopes.

The seeded cover on the upper slopes is Violet Wheatgrass and Fowl Bluegrass with lesser amounts of Tufted Hairgrass and White Clover. Revegetation on the lower flat area is mostly Tufted Hairgrass and Violet Wheatgrass with some Fowl Bluegrass and thick patches of White Clover.

Colonizing species observed include Alaska Birch (*Betula neoalaskana*), Willow (*Salix* sp.), Blue-joint Reed Grass (*Calamagrostis canadensis*), Foxtail Barley (*Hordeum jubatum*), Wood Rush (*Luzula parviflora*) and lots of Fireweed (*Epilobium angustifolium*).

### ***Kokanee Above Pit***

Approximately 11.0 ha were broadcast-seeded by ATV in the fall of 2003 using the wet area seed mix.

The vegetative cover is variable, ranging from 60 to 80%.

The seeded cover is dominated by a heavy growth of White Clover, along with Violet Wheatgrass, Fowl Bluegrass and Tufted Hairgrass. There is no evidence of Alkaligrass.

The colonizing species observed include Fireweed (*Epilobium angustifolium*), Annual Hawk's-beard (*Crepis tectorum*), Wormwood (*Artemisia* sp.) and Blue-joint Reedgrass (*Calamagrostis canadensis*).

### ***Kokanee Inpit Backfill***

Approximately 5.0 ha were broadcast-seeded by ATV in the fall of 2003 using the wet area seed mix.

The vegetative cover is variable, ranging from about 70 to 80%.

The upper slopes are dominated by a fairly evenly mixed growth of Fowl Bluegrass, Tufted Hairgrass and Violet Wheatgrass. There is a heavy, although patchy, growth of White Clover.

Colonizing species observed include Annual Hawk's-beard (*Crepis tectorum*), Shepherd's-purse (*Capsella bursa-pastoris*) and the occasional Arctic Lupine (*Lupinus arcticus*).

### ***North Golden Inpit Backfill***

Approximately 11.2 ha of the lower slopes were broadcast-seeded by ATV in the fall 2003 using the wet area seed mix. The upper slopes were seeded in the fall of 2005 with the wet area seed mix and reseeded in the spring of 2006 and again in the spring of 2007 with the new Brewery Creek blend.

The lower area has good cover, ranging from 70-90%, with the exception of a few small patches on the slope that were missed by the seeder.

The vegetative cover on the lower slopes is a mix of Violet Wheatgrass, Fowl Bluegrass and Tufted Hairgrass with patches of White Clover. Alkaligrass was not observed at this site.

The newly seeded upper slopes now have a good cover (up to 80%).

This most recently seeded area has a vegetative cover dominated by Ticklegrass and Violet Wheatgrass with lesser amounts of Bluegrass, Fescue and Alfalfa.

Colonizing species observed include Balsam Poplar (*Populus balsamifera*), Felt-leaf Willow (*Salix alaxensis*), Annual Hawk's-beard (*Crepis tectorum*) and Fireweed (*Epilobium angustifolium*).

### ***Lucky***

Approximately 4.3 ha, including the waste rock dump and the inpit backfill, were broadcast-seeded by ATV in the fall 2003 using the wet area seed mix. The waste rock

dump, the old Lucky haul road and the lower road to Bohemian were reseeded with the Brewery Creek blend in the spring of 2007.

The inpit backfill has a dense vegetative cover, up to 100%.

The seeded cover in the inpit backfill is dominated by Tufted Hairgrass, Violet Wheatgrass and White Clover, with lesser amounts of Fowl Bluegrass. There is no evidence of Alkaligrass.

The newly reseeded areas of the waste rock dump, the Lucky haul road and the lower road to Bohemian also now have a good cover.

The revegetation on these areas consists of Violet Wheatgrass, Tufted Hairgrass and White Clover from the earlier seeding (2003) and Ticklegrass, Alfalfa and grasses not yet in seed (Violet Wheatgrass, Bluegrass and Fescue) from the recent seeding (2007).

Colonizing species observed in the Lucky zone area include Black Spruce (*Picea mariana*), Alaska Birch (*Betula neoalaskana*), Willow (*Salix* sp.), Raspberry (*Rubus idaeus*), Fireweed (*Epilobium angustifolium*), Arctic Dock (*Rumex arcticus*), Common Yarrow (*Achillea millefolium*), Siberian Yarrow (*Achillea sibirica*), Blue-joint Reed Grass (*Calamagrostis Canadensis*) and Horsetail (*Equisetum* sp.).

#### ***Main Haul Road***

Approximately 24.0 ha of the main haul road were broadcast-seeded by ATV in the spring of 2005 using the leach pad seed mix.

This part of the main haul road now has a good vegetative cover ranging from 70-90%.

The main haul road is now covered with a fairly even mix of Slender Wheatgrass, Kentucky Bluegrass and Alfalfa.

Colonizing species observed include Annual Hawk's-beard (*Crepis tectorum*), Shepherd's-purse (*Capsella bursa-pastoris*) and Fireweed (*Epilobium angustifolium*).

#### ***Valve House Road***

This area was seeded in the fall of 2005 and the spring of 2006 with the wet area seed mix.

This area now has a good vegetative cover of about 80%.

The seeded cover largely consists of Violet Wheatgrass with some Fowl Bluegrass and Tufted Hairgrass, and a little White Clover.

Colonizing species include Common Timothy (*Phleum pratense*), Annual Hawk's-beard (*Crepis tectorum*), Tansy Mustard (*Descurainia incana*) and Foxtail Barley (*Hordeum jubatum*).

### **Pipe Laydown Area**

This area was seeded in the spring of 2006 with the new Brewery Creek blend.

The area now has a vegetative cover of about 50%.

The new vegetation is dominated by Ticklegrass, with Fowl Bluegrass, Glaucous Bluegrass, Fescue, Alfalfa and patches of Violet Wheatgrass.

Colonizing species include Willow (*Salix* spp.), Annual Hawk's-beard (*Crepis tectorum*), Tansy Mustard (*Descurainia incana*), Common Timothy (*Phleum pratense*), Foxtail Barley (*Hordeum jubatum*), Crested Wheatgrass (*Agropyron pectiniforme*), Smooth Brome (*Bromus inermis*) and Common Dandelion (*Taraxacum officinale*).

### **Laura Creek Road and Lysimeter Access**

This area was seeded in the spring of 2006 with the new Brewery Creek blend.

The area now has a vegetative cover of about 40%.

The new vegetation is primarily Ticklegrass and Glaucous Bluegrass, with a little Violet Wheatgrass and Alfalfa.

Colonizing species include Fireweed (*Epilobium angustifolium*), Alaskan Knotweed (*Polygonum alaskanum*), Common Yarrow (*Achillea millefolium*), White Clover (*Trifolium repens*), Common Timothy (*Phleum pratense*) and Common Horsetail (*Equisetum arvense*). Smooth Brome (*Bromus inermis*) and Blue-joint Reedgrass (*Calamagrotis canadensis*) occur along the edges of the seeded area.

### **Pond Bypass Road**

This area was seeded in the spring of 2006 with the wet area seed mix.

The area has a vegetative cover of about 70%.

The seeded cover is now dominated by Violet Wheatgrass with some Tufted Hairgrass, Fowl Bluegrass and dense patches of White Clover

Colonizing species include Alaskan Birch (*Betula neonlaskana*), Trembling Aspen (*Populus tremuloides*), Willow (*Salix* spp.), Annual Hawk's-beard (*Crepis tectorum*), Common Yarrow (*Achillea millefolium*) and Red Clover (*Trifolium pratense*).

### **ADR Building Site**

This area was seeded in the spring of 2006 with the wet area seed mix.

The area now has a vegetative cover of about 70% on the level ground with a lesser cover on the slope above.

The seeded cover is dominated by Tufted Hairgrass and Fowl Bluegrass, with lesser amounts of Violet Wheatgrass and White Clover.

Colonizing species include Willow (*Salix* spp.), Annual Hawk's-beard (*Crepis tectorum*), Common Yarrow (*Achillea millefolium*), Tansy Mustard (*Descurainia incana*), Foxtail Barley (*Hordeum jubatum*) and Fireweed (*Epilobium angustifolium*).

#### **Treatment Pond Area**

This area was seeded in the fall of 2005 with the wet area seed mix.

The area has a variable vegetative cover, averaging about 50%

The patchy seeded cover consists of Fowl Bluegrass, Tufted Hairgrass, Violet Wheatgrass and a little White Clover.

Colonizing species include Raspberry (*Rubus idaeus*), Annual Hawk's-beard (*Crepis tectorum*), Fireweed (*Epilobium angustifolium*), Rock Harlequin (*Corydalis sempervirens*), Common Yarrow (*Achillea millefolium*), Sheep Fescue (*Festuca ovina*) and Common Timothy (*Phleum pratense*).

#### **Shale Hill**

This area was seeded in the spring of 2006 with the new Brewery Creek Blend.

The area still has a rather sparse vegetative cover (about 30%), with most seeded plants growing in the grooves formed by the ripper teeth during soil scarification.

The new vegetation includes Violet Wheatgrass, Ticklegrass, Fescue, Glauous Bluegrass and Alfalfa.

Colonizing plant species include Annual Hawk's-beard (*Crepis tectorum*), Fleabane (*Erigeron* sp.), Tansy Mustard (*Descurainia incana*), and Bearded Wheatgrass (*Agropyron subsecundum*).

#### **Corner of ER and Main Haul Road**

This area was seeded in the spring of 2006 and again in 2007 with the new Brewery Creek Blend.

The vegetative cover on this area is still very variable, ranging from 5 to 90%.

The vegetative cover includes Ticklegrass, Violet Wheatgrass, Glauous Bluegrass and Alfalfa, along with the unseeded Tufted Hairgrass.

Colonizing species include Balsam Poplar (*Populus balsamifera*), Alaskan Birch (*Betula neoalsaskanum*), Willow (*Salix* spp.), Annual Hawk's-beard (*Crepis tectorum*), Fireweed (*Epilobium angustifolium*) and Arctic Lupine (*Lupinus arcticus*).

### **3.3 Revegetation Progress Assessment**

An aggressive revegetation program has been ongoing at the Brewery Creek Mine since 2003, although some areas had been seeded as early as 1997. More than 130 ha have now been seeded with grasses and legumes. Most areas of the mine have now been

reclaimed. Areas with the least vegetation continue to be the steep, but stable, backwalls of some of the former open pits.

This assessment of the current status of revegetation at the Brewery Creek Mine takes into account the objectives set out in the 2004 Amendment to the Quartz Mining License. The General Standards set out in Schedule C, Section D, include:

1. Vegetation is self sustaining and comprises native seed mixes.
2. The vegetative cover is capable of self-regeneration without continued dependence on fertilizer or reseeded.
3. The establishment of a vegetative cover with sufficient density and species diversity to stabilize the surface against the effects of long term erosion.
4. The successive vegetation must be similar to naturally occurring habitats in the surrounding area.

Although most of the grasses seeded since 2003 are species naturally occurring in the Yukon, the seeds were acquired from suppliers in southern Canada, as Yukon-produced seeds were not available in the quantity required at the time of seeding. The non-native exceptions are Kentucky Bluegrass and Red Fescue. These sod-forming species were used in the Leach Pad Mix to help form a tighter cover. The Leach Pad Mix, although originally intended only for the leach pad cover, was also applied to a few other areas including the Blue Zone WRSA and the main haul road. Non-native legumes, white clover and alfalfa, were also used at Brewery Creek as the seeds of native species of legumes were not commercially available in large quantity at the time of seeding.

The vegetative cover appears to be self-regenerating. The seeded species were mostly in flower or seed at the time of the 2007 survey. Self-sustainability of these species, however, can only be confirmed through further monitoring, particularly on those more recently seeded areas (seeded in 2006 and 2007). It should be noted that the long-term sustainability of the seeded species is not desirable, as these species should eventually give way to later successional species.

If observed closely, many native plant species can already be seen colonizing most areas of the reclaimed mine, as documented in Section 3.2. Table 4 shows the tree species observed on the reclaimed surfaces in 2007. It is anticipated that the vegetative succession to a climax forest similar to surrounding areas (the mature forest not disturbed by recent fires) will naturally occur, albeit slowly, if the area is left alone (*i.e.* if vehicle access is restricted).

Natural revegetation at this latitude, particularly on the relatively dry upland slopes such as those at Brewery Creek, is a slow process (several decades will pass before the area returns to a climax forest). Further seeding with grasses will do little to hasten this process, and may even hinder it. Further disturbance to the soil could delay the revegetation process, and the resulting formation of a too dense ground cover may inhibit the colonizing of the area by indigenous species. The addition of more fertilizer or the



further seeding of nitrogen-fixing legumes may help to improve soil nutrients; however the naturally occurring native species colonizing the area are already adapted to these nutrient-poor soil conditions.

**Table 4 Tree Species Colonizing the Brewery Creek Mine in 2007**

Revegetation Zone	White Spruce	Black Spruce	Alaska Birch	Balsam Poplar	Alder	Trembling Aspen	Willows
Pacific Pit		+	+	+		+	
Moosehead		+ *	+ *	+			
Can. Waste Rock	+	+	+		+	+ *	+ *
Can. Stockpile			+	+	+		+
Upper Foster			+ *				+ *
Northern Golden				+ *			+ *
Lucky		+	+				+ *
Pipe Laydown							+
Pond By Pass Rd			+			+	+
ARD bldg							+
Corner of ER and Haul Rd.			+	+			+

+ \* indicates that it was also documented in 2006.

The current vegetative cover now found on the reclaimed mine surfaces is obviously quite variable (from sparse to very dense). This unevenness reflects the local variations in terrain (roughness, slope, aspect, drainage patterns, etc), climate and soil conditions. It is also indicative of the challenges faced in obtaining a uniform application rate of seed and fertilizer in such terrain.

The best indication of how the reseeded areas of the Brewery Creek Mine will revegetate in the near future may be to look at the Canadian Knoll and Waste Rock Storage Area, the site of the first revegetation efforts at the mine in 1997. Ten years after seeding, the vegetative cover on these slopes consists of a few of the seeded grass and legume species, but more significantly, an array of colonizing tree seedlings, shrubs and forbs (see Section 3.2). Although this area is still at an early successional stage, it is a demonstration how natural revegetation will slowly occur if it is left alone.

There may be areas of the reclaimed mine where soil erosion is occurring (these sites were not documented during this revegetation survey). Once such areas have been identified, they may have to be stabilized and reseeded. Further erosion control efforts should focus on significant erosion gullies and areas where the physical stability of slopes is obviously compromised and where further deterioration is anticipated. Minimizing the disturbance footprint during the reworking of these erosion sites will be essential. The many small short-term erosion gullies and rills that are common throughout newly reclaimed surfaces will most likely stabilize without further intervention.

## **4.0 RECOMMENDATIONS**

- An inventory of sites with obvious erosional or slope stability problems should take place during the summer of 2008. When (if) such sites are identified, recontouring and reseeding should be carried out in the late summer or early fall. Additional seed and fertilizer may have to be acquired. The transplanting of locally occurring shrubs, or the staking of willow cuttings, may be beneficial at the more unstable sites.
- Vehicle access to the reclaimed surfaces of the former mine should remain restricted.

## **5.0 REFERENCES**

Laberge Environmental Services. 2007. Brewery Creek Mine 2006 Revegetation Assessment. Site Assessment Report Prepared for Alexco Resources Corp.

Laberge Environmental Services. 2006. Brewery Creek Mine 2005 Revegetation Assessment. Site Assessment Report Prepared for Alexco Resources Corp.

Viceroy Minerals Corporation. March 2005. Blue Zone Monitoring and Assessment Program. Prepared under the Brewery Creek Mine Decommissioning and Reclamation Plan.

Viceroy Minerals Corporation. March 2005. Heap Leach Pad Cover and Facilities Monitoring Program. Prepared under the Brewery Creek Mine Decommissioning and Reclamation Plan.

**APPENDIX A**

**SITE PHOTOGRAPHS, AUGUST 2007**





**Blue Zone WRSA Plot 1 looking east towards Canadian and Fosters Zones**



**Blue Zone WRSA Plot 2 looking southwest towards Laura Creek**



**Blue Zone WRSA Plot 3 looking downslope**



**Leach Pad Plot 1 looking west**



**Leach Pad Plot 2**



**Leach Pad Plot 3 looking northeast**





**Control Plot 1**



**Control Plot 2**



**Control Plot 3**



**Pacific looking northeast**



**Road to Blue Pit - seeded in spring 2007**



**Moosehead**



**Road to Blue Pit - seeded in spring 2007**



**Moosehead**



**Canadian WRSA looking west towards Blue Zone**



**Canadian WRSA looking southwest towards Laura Creek**



**Canadian Zone looking west over WRSA & stockpile towards Fosters Zone**



**Upper Fosters looking north**



**Kokanee backfilled pit area**



**Main Haul Road looking west near North Golden**



**North Golden**



**Lucky Haul Road - seeded in spring of 2007**





**Lucky WRSA**



**Valve House Road Area**



**Pipe Laydown Area**



**Lysimeter Access and Laura Creek Road**



**Pond Bypass Road**



**ARD and Lab Building Site**



**Treatment Pond Area**



**Shale Hill looking east towards Blue Zone**



**Corner of ER and Main Haul Road looking towards Pacific Zone**



**Revegetated Leach Pad looking east**

**Appendix J**  
**BIO-ASSAY REPORTS**



**DATE:** 22 May 2007

**TO:** Dave Desmarais  
ERDC  
#3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, Yukon  
Y1A 2V3

**REPORT ON: RAINBOW TROUT BIOASSAY RESULTS****SAMPLE DESCRIPTION:**

IRC Sample ID No.:	0705088
<b>Sample Name:</b>	<b>Overflow Pond</b>
Date collected:	17 May 2007
Date, time received:	18 May 2007; 1305 hrs.
Collection Method:	Grab
Amount, Container:	1 x 20L plastic containers
Physical description:	Clear light yellow liquid
Date, time tested:	18 May 2007; 1555 hrs.

**RAINBOW TROUT 96 HR RESULTS:**

The 96 hour (static) LT<sub>50</sub> was greater than 96 hours.

20% trout mortality in undiluted sample

The LT<sub>50</sub> is defined as the median lethal time or the time at which there is 50% fish mortality. Results are calculated using the method described by Stephan (Methods for calculating an LC<sub>50</sub> in: Aquatic Toxicology and Hazard Evaluation, American Society for Testing and Materials, 1977).

The method used for this test was as per the IRC laboratory "Standard Operating Procedure for Rainbow Trout Holding and Testing" RTver5. This procedure follows the "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" EPS 1/RM/13, Second Edition – December 2000. Test volume was 15 litres with 10 fish in each test vessel. Aeration was by forced air, through glass pipettes at a rate of approximately 6.5 ± 1ml/L/min. The sample was not pH adjusted or filtered prior to testing.

The initial dissolved oxygen level was 10.9 mg/L at 10.0°C, the conductivity was 794 µS/cm and the initial pH was 8.6. After pre-aerating the sample for 120 minutes, and warming to 15.0°C, the dissolved oxygen level was 10.4 mg/L. Although the dissolved oxygen level was greater than 100% saturation, the maximum aeration time had been reached and so the test was initiated at this time. The set up technician was RM.

Please call should you have any questions.

IRC Integrated Resource Consultants Inc.

Kori Archer  
Laboratory Biologist  
b129.1  
enclosure



**RAW DATA:**

<b><u>TEST</u></b> <b><u>CONCENTRATION</u></b>	<b>HOURS</b>						
	<b>0</b>	<b>1</b>	<b>24</b>	<b>48</b>	<b>72</b>	<b>96</b>	
<b>100%</b>	Percent Survival	100%	100%	100%	100%	80%	80%
	Dissolved Oxygen (mg/L)	10.5		9.4	9.7	9.5	9.5
	Temperature (°C)	15.0		15.0	15.0	15.0	15.0
	PH	8.4		7.6	7.8	7.6	7.7
	Conductivity (µS/cm)	791					802
	Symptoms	1	1	1	1,2	1	1
	Loading Density (g/L)	0.38	0.38	0.38	0.38	0.30	0.30

<b>CONTROL</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	9.5		9.5	9.8	9.6	9.6
	Temperature (°C)	15.0		15.0	15.0	15.0	15.0
	PH	8.0		7.2	7.4	7.3	7.2
	Conductivity (µS/cm)	46					50
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.38	0.38	0.38	0.38	0.38	0.38

Technician	RM	RM	RM	TM	TM	KA
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**KEY TO SYMPTOMS:**

- 1 = no apparent effect  
 2 = fish showing signs of stress  
 3 = loss of equilibrium

**TEST FISH STOCK INFORMATION**

Date received:	26 April 2007	
Source:	Sun Valley Trout Farm	
Species:	<i>Oncorhynchus mykiss</i> (Rainbow Trout)	
Fork Length:	Mean:	4.02 cm $\pm$ 0.42 cm
	Range:	3.40 cm – 4.90 cm
Wet weight:	Mean:	0.56 g $\pm$ 0.13 g
	Range:	0.33 g – 0.78 g
Condition Factor (100xWt/length <sup>3</sup> cm):	0.87	

**Acclimation History**

Acclimation temperature:	14.5 to 15.0°C CELSIUS
Treatments:	None
Water:	Dechlorinated tap water
Feeding:	Nutra 2000 fry feed
Mortality:	< 2%

**RAINBOW TROUT REFERENCE TOXICANT DATA**

Stock Arrival Date (y/m/d)	Test Date (y/m/d)	Toxicant	Log LC <sub>50</sub> (mg/L)	95% Confidence Interval
06.05.10	06.06.08	Phenol	1.02	0.97 to 1.07
06.05.10	06.06.26	“	0.99	0.93 to 1.05
06.06.28	06.07.06	“	1.07	0.99 to 1.15
06.06.28	06.07.26	“	1.04	0.97 to 1.11
06.06.28	06.08.10	“	0.99	0.90 to 1.08
06.07.17	06.08.10	“	0.95	0.87 to 1.03
06.07.17	06.08.29	“	0.93	0.86 to 1.00
06.08.15	06.09.18	“	1.00	0.95 to 1.05
06.09.29	06.10.12	“	0.99	0.94 to 1.05
06.09.14	06.10.26	“	0.91	0.82 to 0.99
06.10.11	06.10.26	“	0.96	0.87 to 1.03
06.11.06	06.11.21	“	1.11	1.04 to 1.19
06.11.06	06.12.05	“	1.07	0.99 to 1.14
06.11.21	06.12.16	“	1.14	1.08 to 1.20
06.12.14	07.01.08	“	1.01	0.93 to 1.09
07.01.04	07.01.20	“	0.99	0.90 to 1.08
07.01.04	07.02.03	“	0.89	0.84 to 0.94
07.01.23	07.02.08	“	1.09	1.01 to 1.16
07.01.23	07.02.22	“	1.03	0.95 to 1.11
07.02.14	07.03.08	“	1.06	0.99 to 1.13
07.02.14	07.03.22	“	1.06	0.99 to 1.13
07.02.20	07.04.02	“	0.90	0.79 to 0.99
07.02.20	07.04.17	“	1.00	0.96 to 1.04
07.03.29	07.04.12	“	1.02	0.98 to 1.07
07.03.29	07.05.02	“	1.00	0.96 to 1.04
07.04.26	07.05.08	“	1.00	0.95 to 1.09
<b>LAB GEOMETRIC MEAN (LOG) <math>\pm</math> 2 standard deviations:</b>				1.01 mg/L $\pm$ 0.12
<b>Warning Limits (Log Values):</b>				0.89 mg/L to 1.13 mg/L

**CONTROL/DILUTION WATER QUALITY:**

Hardness: 14 mg/L  
Total Residual Chlorine: 10  $\mu$ g/L

**DATE:** 22 May 2007

**TO:** Dave Desmarais  
ERDC  
#3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, Yukon  
Y1A 2V3

**REPORT ON: RAINBOW TROUT BIOASSAY RESULTS****SAMPLE DESCRIPTION:**

IRC Sample ID No.:	0705087
<b>Sample Name:</b>	<b>Preg Pond</b>
Date collected:	17 May 2007
Date, time received:	18 May 2007; 1305 hrs.
Collection Method:	Grab
Amount, Container:	1 x 20L plastic containers
Physical description:	Opaque yellow liquid
Date, time tested:	18 May 2007; 1530 hrs.

**RAINBOW TROUT 96 HR RESULTS:**

The 96 hour (static) LT<sub>50</sub> was greater than 96 hours.

0% trout mortality in undiluted sample

The LT<sub>50</sub> is defined as the median lethal time or the time at which there is 50% fish mortality. Results are calculated using the method described by Stephan (Methods for calculating an LC<sub>50</sub> in: Aquatic Toxicology and Hazard Evaluation, American Society for Testing and Materials, 1977).

The method used for this test was as per the IRC laboratory "Standard Operating Procedure for Rainbow Trout Holding and Testing" RTver5. This procedure follows the "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" EPS 1/RM/13, Second Edition – December 2000. Test volume was 15 litres with 10 fish in each test vessel. Aeration was by forced air, through glass pipettes at a rate of approximately 6.5 ± 1ml/L/min. The sample was not pH adjusted or filtered prior to testing.

The initial dissolved oxygen level was 11.1 mg/L at 8.0°C, the conductivity was 654 µS/cm and the initial pH was 8.4. After pre-aerating the sample for 120 minutes, and warming to 14.5°C, the dissolved oxygen level was 10.5 mg/L. Although the dissolved oxygen level was greater than 100% saturation, the maximum aeration time had been reached and so the test was initiated at this time. The set up technician was RM.

Please call should you have any questions.

IRC Integrated Resource Consultants Inc.

Kori Archer  
Laboratory Biologist  
b129.1  
enclosure

**RAW DATA:**

<b><u>TEST</u></b> <b><u>CONCENTRATION</u></b>	<b>HOURS</b>						
	<b>0</b>	<b>1</b>	<b>24</b>	<b>48</b>	<b>72</b>	<b>96</b>	
<b>100%</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	10.5		9.5	9.6	9.6	9.4
	Temperature (°C)	14.5		15.0	15.0	15.0	15.0
	PH	8.2		7.7	7.8	7.7	7.6
	Conductivity (µScm)	652					664
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.45	0.45	0.45	0.45	0.45	0.45

<b>CONTROL</b>	Percent Survival	100%	100%	100%	100%	100%	90%
	Dissolved Oxygen (mg/L)	9.6		9.3	9.3	8.2	8.4
	Temperature (°C)	15.0		15.0	15.0	15.0	15.0
	PH	7.9		7.2	7.3	7.2	7.1
	Conductivity (µS/cm)	46					50
	Symptoms	1	1	1	1	1,3	1
	Loading Density (g/L)	0.45	0.45	0.45	0.45	0.45	0.41

Technician	RM	RM	RM	TM	TM	KA
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**KEY TO SYMPTOMS:**

- 1 = no apparent effect  
 2 = fish showing signs of stress  
 3 = loss of equilibrium

**TEST FISH STOCK INFORMATION**

Date received:	26 April 2007	
Source:	Sun Valley Trout Farm	
Species:	<i>Oncorhynchus mykiss</i> (Rainbow Trout)	
Fork Length:	Mean:	4.10 cm $\pm$ 0.23 cm
	Range:	3.80 cm – 4.50 cm
Wet weight:	Mean:	0.68 g $\pm$ 0.13 g
	Range:	0.56 g – 0.92 g
Condition Factor (100xWt/length <sup>3</sup> cm):	0.98	

**Acclimation History**

Acclimation temperature:	14.5 to 15.0°C CELSIUS
Treatments:	None
Water:	Dechlorinated tap water
Feeding:	Nutra 2000 fry feed
Mortality:	< 2%

**RAINBOW TROUT REFERENCE TOXICANT DATA**

Stock Arrival Date (y/m/d)	Test Date (y/m/d)	Toxicant	Log LC <sub>50</sub> (mg/L)	95% Confidence Interval
06.05.10	06.06.08	Phenol	1.02	0.97 to 1.07
06.05.10	06.06.26	“	0.99	0.93 to 1.05
06.06.28	06.07.06	“	1.07	0.99 to 1.15
06.06.28	06.07.26	“	1.04	0.97 to 1.11
06.06.28	06.08.10	“	0.99	0.90 to 1.08
06.07.17	06.08.10	“	0.95	0.87 to 1.03
06.07.17	06.08.29	“	0.93	0.86 to 1.00
06.08.15	06.09.18	“	1.00	0.95 to 1.05
06.09.29	06.10.12	“	0.99	0.94 to 1.05
06.09.14	06.10.26	“	0.91	0.82 to 0.99
06.10.11	06.10.26	“	0.96	0.87 to 1.03
06.11.06	06.11.21	“	1.11	1.04 to 1.19
06.11.06	06.12.05	“	1.07	0.99 to 1.14
06.11.21	06.12.16	“	1.14	1.08 to 1.20
06.12.14	07.01.08	“	1.01	0.93 to 1.09
07.01.04	07.01.20	“	0.99	0.90 to 1.08
07.01.04	07.02.03	“	0.89	0.84 to 0.94
07.01.23	07.02.08	“	1.09	1.01 to 1.16
07.01.23	07.02.22	“	1.03	0.95 to 1.11
07.02.14	07.03.08	“	1.06	0.99 to 1.13
07.02.14	07.03.22	“	1.06	0.99 to 1.13
07.02.20	07.04.02	“	0.90	0.79 to 0.99
07.02.20	07.04.17	“	1.00	0.96 to 1.04
07.03.29	07.04.12	“	1.02	0.98 to 1.07
07.03.29	07.05.02	“	1.00	0.96 to 1.04
07.04.26	07.05.08	“	1.00	0.95 to 1.09
<b>LAB GEOMETRIC MEAN (LOG) <math>\pm</math> 2 standard deviations:</b>				1.01 mg/L $\pm$ 0.12
<b>Warning Limits (Log Values):</b>				0.89 mg/L to 1.13 mg/L

**CONTROL/DILUTION WATER QUALITY:**

Hardness: 14 mg/L  
Total Residual Chlorine: 10  $\mu$ g/L

**DATE:** 29 September 2007

**REPORT TO:** Mr. Dave Desmarais  
ALEXCO  
#3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, Yukon Y1A 2V3

**REPORT ON: RAINBOW TROUT BIOASSAY RESULTS**

**SAMPLE DESCRIPTION:**

IRC Sample ID No.:	0709125
<b>Sample Name:</b>	<b>BC28a Bioassay</b>
Date collected:	24 September 2007
Date, time received:	25 September 2007; 1230 hrs.
Collection Method:	Grab
Amount, Container:	1 x 20 L plastic container
Physical description:	Clear light green liquid
Date, time tested:	25 September 2007; 1640 hrs.

**RAINBOW TROUT 96 HR RESULTS:**

The 96 hour (static)  $LT_{50}$  was greater than 96 hours (v/v sample).

10% trout mortality in undiluted sample

The  $LT_{50}$  is defined as the median lethal time or the time at which there is 50% fish mortality. Results are calculated using the method described by Stephan (Methods for calculating an  $LC_{50}$  in: Aquatic Toxicology and Hazard Evaluation, American Society for Testing and Materials, 1977).

The method used for this test was as per the IRC laboratory "Standard Operating Procedure for Rainbow Trout Holding and Testing" RTver5. This procedure follows the "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" EPS 1/RM/13, Second Edition – December 2000. The test volume was 15 litres with 10 fish exposed per test vessel. Aeration was by forced air through airstones at a rate of approximately  $6.5 \pm 1$  ml/L/min. The sample was not pH adjusted or filtered prior to testing.

**Note: The Environment Canada protocol requirements for holding time were not met; the stock fish were held for 5 days before testing rather than the required 14 days.**

The initial dissolved oxygen level was 11.2 mg/L at 11.0°C, the conductivity was 3520  $\mu$ S/cm and the initial pH was 7.6. After pre-aerating the sample for 120 minutes, and warming to 14.0°C, the dissolved oxygen level was 10.6 mg/L. Although the dissolved oxygen level was greater than 100% saturation the maximum aeration time had been reached and so the test was initiated at this time. The test set up technicians were RM and JC.

Please call should you have any questions.

IRC Integrated Resource Consultants Inc.

Kori Archer  
Laboratory Biologist  
b262.1  
enclosure

**RAW DATA:**

<b><u>TEST</u></b> <b><u>CONCENTRATION</u></b>		<b>HOURS</b>					
		<b>0</b>	<b>0.25</b>	<b>24</b>	<b>48</b>	<b>72</b>	<b>96</b>
<b>100%</b>	Percent Survival	100%	100%	100%	100%	90%	900%
	Dissolved Oxygen (mg/L)	10.6		9.9	9.8	9.7	9.8
	Temperature (°C)	14.0		15.0	15.0	15.0	15.0
	pH	7.7		8.1	8.2	8.2	8.2
	Conductivity (µS/cm)	3530					3560
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.47	0.47	0.47	0.47	0.43	0.43
<b>CONTROL</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	9.9		9.4	9.1	9.2	9.4
	Temperature (°C)	15.0		15.0	15.0	15.0	15.0
	pH	7.5		7.3	7.5	7.6	7.6
	Conductivity (µS/cm)	52					55
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.47	0.47	0.47	0.47	0.47	0.47
Technician		RM/JC	RM/JC	RM	KA	KA	TM

**KEY TO SYMPTOMS:**

- 1 = no apparent effect
- 2 = fish showing signs of stress
- 3 = loss of equilibrium

**TEST FISH STOCK INFORMATION**

Date received:	21 September 2007	
Source:	Sun Valley Trout Farm	
Species:	<i>Oncorhynchus mykiss</i> (Rainbow Trout)	
Fork Length:	Mean:	4.08 cm $\pm$ 0.36 cm
	Range:	3.50 cm – 4.50 cm
Wet weight:	Mean:	0.71 g $\pm$ 0.18 g
	Range:	0.41 g – 1.05 g
Condition Factor (100xWt/length <sup>3</sup> cm):	1.05	

<b>Acclimation History</b>	
Acclimation temperature:	15.0 to 16.0 °CELSIUS
Treatments:	None
Water:	Dechlorinated tap water
Feeding:	Nutra 2000 fry feed
Mortality:	< 2%

**RAINBOW TROUT REFERENCE TOXICANT DATA**

Stock Arrival Date (y/m/d)	Test Date (y/m/d)	Toxicant	Log LC <sub>50</sub> (mg/L)	95% Confidence Interval
06.10.11	06.10.40	Phenol	0.96	0.87 to 1.03
06.11.06	06.11.21	“	1.11	1.04 to 1.19
06.11.06	06.12.05	“	1.07	0.99 to 1.14
06.11.21	06.12.16	“	1.14	1.08 to 1.20
06.12.14	07.01.08	“	1.01	0.93 to 1.09
07.01.04	07.01.20	“	0.99	0.90 to 1.08
07.01.04	07.02.03	“	0.89	0.84 to 0.94
07.01.23	07.02.08	“	1.09	1.01 to 1.16
07.01.23	07.02.22	“	1.03	0.95 to 1.11
07.02.14	07.03.08	“	1.06	0.99 to 1.13
07.02.14	07.03.22	“	1.06	0.99 to 1.13
07.02.20	07.04.02	“	0.90	0.79 to 0.99
07.03.29	07.04.12	“	1.02	0.98 to 1.07
07.02.20	07.04.17	“	1.00	0.96 to 1.04
07.03.29	07.05.02	“	1.00	0.96 to 1.04
07.04.26	07.05.08	“	1.00	0.95 to 1.09
07.04.26	07.05.23	“	0.94	0.86 to 0.99
07.05.15	07.06.12	“	1.01	0.91 to 1.11
07.05.30	07.06.13	“	1.10	1.05 to 1.19
07.05.15	07.06.26	“	0.97	0.90 to 1.08
07.05.30	07.07.05	“	1.04	0.97 to 1.12
07.07.13	07.07.24	“	1.08	0.90 to 1.26
07.07.13	07.08.09	“	1.01	0.93 to 1.08
07.07.27	07.09.10	“	1.02	0.90 to 1.08
07.09.21	07.09.25	“	1.10	1.02 to 1.18
<b>LAB GEOMETRIC MEAN (LOG) <math>\pm</math> 2 standard deviations:</b>				1.00 mg/L $\pm$ 0.15
<b>Warning Limits (Log Values):</b>				0.86 mg/L to 1.15 mg/L

**CONTROL/DILUTION WATER QUALITY:**

Hardness: 22 mg/L  
Total Residual Chlorine: 11  $\mu$ g/L



**DATE:** 8 November 2007

**TO:** Dave Desmarais  
Alexco Resource Corp.  
#3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, Yukon  
Y1A 2V3

**REPORT ON: RAINBOW TROUT BIOASSAY RESULTS****SAMPLE DESCRIPTION:**

IRC Sample ID No.:	0711006
<b>Sample Name:</b>	<b>BC28a Bioassay</b>
Date collected:	1 November 2007
Date, time received:	3 November 2007; 1340 hrs
Collection Method:	Grab
Amount, Container:	1 x 20L plastic container
Physical description:	Clear colourless liquid
Date, time tested:	3 November 2007; 1600 hrs.

**RAINBOW TROUT 96 HR RESULTS:**

The 96 hour (static)  $LT_{50}$  was greater than 96 hours (v/v sample).  
0% trout mortality in undiluted sample

The  $LT_{50}$  is defined as the median lethal time or the time at which there is 50% fish mortality. Results are calculated using the method described by Stephan (Methods for calculating an  $LC_{50}$  in: Aquatic Toxicology and Hazard Evaluation, American Society for Testing and Materials, 1977).

The method used for this test was as per the IRC laboratory "Standard Operating Procedure for Rainbow Trout Holding and Testing" RTver5. This procedure follows the "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" EPS 1/RM/13, Second Edition – December 2000. Test volume was 15 litres with 10 fish in each test vessel. Aeration was by forced air, through airstones at a rate of approximately  $6.5 \pm 1$  ml/L/min. The sample was not pH adjusted or filtered prior to testing.

The initial dissolved oxygen level was 12.6 mg/L at 1.0°C, the conductivity was 4020  $\mu$ S/cm and the initial pH was 8.0. After pre-aerating the sample for 120 minutes, and warming to 14.5°C, the dissolved oxygen level was 11.5 mg/L. Although the dissolved oxygen level was greater than 100% saturation, the maximum aeration time had been reached and so the test was initiated at this time. The set up technician was RM.

Please call should you have any questions.

IRC Integrated Resource Consultants Inc.

Kori Archer  
Laboratory Biologist  
b129.1  
enclosure

**RAW DATA**

<b><u>TEST</u></b> <b><u>CONCENTRATION</u></b>	<b>HOURS</b>						
	<b>0</b>	<b>0.25</b>	<b>24</b>	<b>48</b>	<b>72</b>	<b>96</b>	
<b>100%</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	11.5		10.1	9.9	9.6	9.6
	Temperature (°C)	14.5		15.0	15.0	15.0	15.0
	PH	7.9		8.3	8.3	8.1	8.1
	Conductivity (µS/cm)	3930					3960
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.24	0.24	0.24	0.24	0.24	0.24

<b>CONTROL</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	9.9		9.4	9.3	9.3	10.0
	Temperature (°C)	15.5		15.0	15.0	15.0	15.0
	PH	7.5		8.0	7.8	7.4	7.4
	Conductivity (µS/cm)	57					61
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.24	0.24	0.24	0.24	0.24	0.24

Technician	RM	RM	JC	NL	RM	RM
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**KEY TO SYMPTOMS:**

- 1 = no apparent effect  
 2 = fish showing signs of stress  
 3 = loss of equilibrium

**TEST FISH STOCK INFORMATION**

Date received:	9 October 2007	
Source:	Sun Valley Trout Farm	
Species:	<i>Oncorhynchus mykiss</i> (Rainbow Trout)	
Fork Length:	Mean:	3.47 cm $\pm$ 0.33 cm
	Range:	2.90 cm – 4.00 cm
Wet weight:	Mean:	0.37 g $\pm$ 0.10 g
	Range:	0.26 g – 0.54 g
Condition Factor (100xWt/length <sup>3</sup> cm):	0.87	

**Acclimation History**

Acclimation temperature:	14.0 to 15.0°C CELSIUS
Treatments:	None
Water:	Dechlorinated tap water
Feeding:	Nutra 2000 fry feed
Mortality:	< 2%

**RAINBOW TROUT REFERENCE TOXICANT DATA**

Stock Arrival Date (y/m/d)	Test Date (y/m/d)	Toxicant	Log LC <sub>50</sub> (mg/L)	95% Confidence Interval
06.11.06	06.12.05	Phenol	1.07	0.99 to 1.14
06.11.21	06.12.16	“	1.14	1.08 to 1.20
06.12.14	07.01.08	“	1.01	0.93 to 1.09
07.01.04	07.01.20	“	0.99	0.90 to 1.08
07.01.04	07.02.03	“	0.89	0.84 to 0.94
07.01.23	07.02.08	“	1.09	1.01 to 1.16
07.01.23	07.02.22	“	1.03	0.95 to 1.11
07.02.14	07.03.08	“	1.06	0.99 to 1.13
07.02.14	07.03.22	“	1.06	0.99 to 1.13
07.02.20	07.04.02	“	0.90	0.79 to 0.99
07.03.29	07.04.12	“	1.02	0.98 to 1.07
07.02.20	07.04.17	“	1.00	0.96 to 1.04
07.03.29	07.05.02	“	1.00	0.96 to 1.04
07.04.26	07.05.08	“	1.00	0.95 to 1.09
07.04.26	07.05.23	“	0.94	0.86 to 0.99
07.05.15	07.06.12	“	1.01	0.91 to 1.11
07.05.30	07.06.13	“	1.10	1.05 to 1.19
07.05.15	07.06.26	“	0.97	0.90 to 1.08
07.05.30	07.07.05	“	1.04	0.97 to 1.12
07.07.13	07.07.24	“	1.08	0.90 to 1.26
07.07.13	07.08.09	“	1.01	0.93 to 1.08
07.07.27	07.09.10	“	1.02	0.90 to 1.08
07.09.21	07.09.25	“	1.10	1.02 to 1.18
07.09.21	07.10.11	“	0.99	0.93 to 1.05
07.10.09	07.10.26	“	1.10	1.03 to 1/17
<b>LAB GEOMETRIC MEAN (LOG) <math>\pm</math> 2 standard deviations:</b>				1.01 mg/L $\pm$ 0.15
<b>Warning Limits (Log Values):</b>				0.86 mg/L to 1.16 mg/L

**CONTROL/DILUTION WATER QUALITY:**

Hardness: 13 g/L  
Total Residual Chlorine: 15  $\mu$ g/L

**DATE:** 7 December 2007

**TO:** Dave Desmarais  
ERDC  
#3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, Yukon  
Y1A 2V3

**REPORT ON: RAINBOW TROUT BIOASSAY RESULTS****SAMPLE DESCRIPTION:**

IRC Sample ID No.:	0712001
<b>Sample Name:</b>	<b>BC28a Bioassay</b>
Date collected:	28 November 2007
Date, time received:	1 December 2007; 1300 hrs
Collection Method:	Grab
Amount, Container:	1 x 20L plastic container
Physical description:	Clear colourless liquid
Date, time tested:	2 December 2007; 1600 hrs.

**RAINBOW TROUT 96 HR RESULTS:**

The 96 hour (static) LT <sub>50</sub> was greater than 96 hours (v/v sample).
0% trout mortality in undiluted sample

The LT<sub>50</sub> is defined as the median lethal time or the time at which there is 50% fish mortality. Results are calculated using the method described by Stephan (Methods for calculating an LC<sub>50</sub> in: Aquatic Toxicology and Hazard Evaluation, American Society for Testing and Materials, 1977).

The method used for this test was as per the IRC laboratory "Standard Operating Procedure for Rainbow Trout Holding and Testing" RTver5. This procedure follows the "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" EPS 1/RM/13, Second Edition – December 2000. Test volume was 15 litres with 10 fish in each test vessel. Aeration was by forced air, through airstones at a rate of approximately 6.5 ± 1ml/L/min. The sample was not pH adjusted or filtered prior to testing.

The initial dissolved oxygen level was 10.9 mg/L at 13.0°C, the conductivity was 4000 µS/cm and the initial pH was 8.0. After pre-aerating the sample for 30 minutes, and warming to 14.0°C, the dissolved oxygen level was 10.2 mg/L. As the dissolved oxygen level was greater than 70% saturation and less than 100% saturation, the test was initiated at this time. The set up technician was JC.

Please call should you have any questions.

IRC Integrated Resource Consultants Inc.

Kori Archer  
Laboratory Biologist  
b129.1  
enclosure

**RAW DATA**

<b><u>TEST</u></b> <b><u>CONCENTRATION</u></b>	<b>HOURS</b>						
	<b>0</b>	<b>0.5</b>	<b>24</b>	<b>48</b>	<b>72</b>	<b>96</b>	
<b>100%</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	10.2		9.7	9.9	9.9	9.8
	Temperature (°C)	14.0		14.5	15.0	15.0	15.0
	PH	8.1		8.1	8.1	8.1	8.0
	Conductivity (µS/cm)	3970					4030
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.26	0.26	0.26	0.26	0.26	0.26

<b>CONTROL</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	9.6		9.3	9.3	9.0	6.4
	Temperature (°C)	15.0		14.5	15.0	15.0	15.0
	PH	7.9		7.8	7.5	7.4	6.9
	Conductivity (µS/cm)	60					62
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.26	0.26	0.26	0.26	0.26	0.26

Technician	JC	JC	NL	RM	RM	RM
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**KEY TO SYMPTOMS:**

- 1 = no apparent effect
- 2 = fish showing signs of stress
- 3 = loss of equilibrium

**TEST FISH STOCK INFORMATION**

Date received:	25 October 2007	
Source:	Sun Valley Trout Farm	
Species:	<i>Oncorhynchus mykiss</i> (Rainbow Trout)	
Fork Length:	Mean:	3.60 cm $\pm$ 0.17 cm
	Range:	3.40 cm – 3.90 cm
Wet weight:	Mean:	0.39 g $\pm$ 0.06 g
	Range:	0.26 g – 0.47 g
Condition Factor (100xWt/length <sup>3</sup> cm):	0.84	

**Acclimation History**

Acclimation temperature:	14.5 to 16.0°C CELSIUS
Treatments:	None
Water:	Dechlorinated tap water
Feeding:	Nutra 2000 fry feed
Mortality:	< 2%

**RAINBOW TROUT REFERENCE TOXICANT DATA**

Stock Arrival Date (y/m/d)	Test Date (y/m/d)	Toxicant	Log LC <sub>50</sub> (mg/L)	95% Confidence Interval
07.01.04	07.01.20	Phenol	0.99	0.90 to 1.08
07.01.04	07.02.03	“	0.89	0.84 to 0.94
07.01.23	07.02.08	“	1.09	1.01 to 1.16
07.01.23	07.02.22	“	1.03	0.95 to 1.11
07.02.14	07.03.08	“	1.06	0.99 to 1.13
07.02.14	07.03.22	“	1.06	0.99 to 1.13
07.02.20	07.04.02	“	0.90	0.79 to 0.99
07.03.29	07.04.12	“	1.02	0.98 to 1.07
07.02.20	07.04.17	“	1.00	0.96 to 1.04
07.03.29	07.05.02	“	1.00	0.96 to 1.04
07.04.26	07.05.08	“	1.00	0.95 to 1.09
07.04.26	07.05.23	“	0.94	0.86 to 0.99
07.05.15	07.06.12	“	1.01	0.91 to 1.11
07.05.30	07.06.13	“	1.10	1.05 to 1.19
07.05.15	07.06.26	“	0.97	0.90 to 1.08
07.05.30	07.07.05	“	1.04	0.97 to 1.12
07.07.13	07.07.24	“	1.08	0.90 to 1.26
07.07.13	07.08.09	“	1.01	0.93 to 1.08
07.07.27	07.09.10	“	1.02	0.90 to 1.08
07.09.21	07.09.25	“	1.10	1.02 to 1.18
07.09.21	07.10.11	“	0.99	0.93 to 1.05
07.09.21	07.10.26	“	0.97	0.90 to 1.08
07.10.09	07.10.26	“	1.10	1.03 to 1.17
07.10.25	07.11.09	“	1.05	0.98 to 1.13
07.10.25	07.11.28	“	1.13	1.06 to 1.20
<b>LAB GEOMETRIC MEAN (LOG) <math>\pm</math> 2 standard deviations:</b>				1.01 mg/L $\pm$ 0.15
<b>Warning Limits (Log Values):</b>				0.86 mg/L to 1.16 mg/L

**CONTROL/DILUTION WATER QUALITY:**

Hardness: 18 g/L  
Total Residual Chlorine: 19  $\mu$ g/L

**DATE:** 26 December 2007

**REPORT TO:** Mr. Dave Desmarais  
ALEXCO  
#3 Calcite Business Centre  
151 Industrial Road  
Whitehorse, Yukon Y1A 2V3

**REPORT ON: RAINBOW TROUT BIOASSAY RESULTS**

**SAMPLE DESCRIPTION:**

IRC Sample ID No.:	0712088
<b>Sample Name:</b>	<b>BC28a Bioassay</b> <b>Project ID: ALEX-07-BCM-01</b> <b>Project Name: Brewery Creek Mine</b>
Date collected:	18 December 2007
Date, time received:	20 December 2007; 1310 hrs.
Collection Method:	Grab
Amount, Container:	2 x 10 L plastic container
Physical description:	Clear pale yellow liquid
Date, time tested:	20 December 2007; 1515 hrs.

**RAINBOW TROUT 96 HR RESULTS:**

The 96 hour (static)  $LT_{50}$  was greater than 96 hours (v/v sample).  
0% trout mortality in undiluted sample

The  $LT_{50}$  is defined as the median lethal time or the time at which there is 50% fish mortality. Results are calculated using the method described by Stephan (Methods for calculating an  $LC_{50}$  in: Aquatic Toxicology and Hazard Evaluation, American Society for Testing and Materials, 1977).

The method used for this test was as per the IRC laboratory "Standard Operating Procedure for Rainbow Trout Holding and Testing" RTver5. This procedure follows the "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" EPS 1/RM/13, Second Edition – December 2000. The test volume was 15 litres with 10 fish exposed per test vessel. Aeration was by forced air through airstones at a rate of approximately  $6.5 \pm 1$  ml/L/min. The sample was not pH adjusted or filtered prior to testing.

The initial dissolved oxygen level was 12.9 mg/L at 4.0°C, the conductivity was 4050  $\mu$ S/cm and the initial pH was 8.0. After pre-aerating the sample for 90 minutes, and warming to 15.5°C, the dissolved oxygen level was 11.5 mg/L. As the dissolved oxygen level was greater than 70% saturation and less than 100% saturation, the test was initiated at this time. The test set up technician was KA.

Please call should you have any questions.

IRC Integrated Resource Consultants Inc.

Kori Archer  
Laboratory Biologist  
b262.1  
enclosure

**RAW DATA:**

<b><u>TEST</u></b> <b><u>CONCENTRATION</u></b>		<b>HOURS</b>					
		<b>0</b>	<b>1</b>	<b>24</b>	<b>48</b>	<b>72</b>	<b>96</b>
<b>100%</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	11.0		10.0	9.9	10.0	10.3
	Temperature (°C)	15.0		15.0	15.0	14.5	14.5
	pH	8.0		8.1	8.1	8.1	8.2
	Conductivity (µS/cm)	4030					4110
	Symptoms	1	2	2	1	1	1
	Loading Density (g/L)	0.22	0.22	0.22	0.22	0.22	0.22
<b>CONTROL</b>	Percent Survival	100%	100%	100%	100%	100%	100%
	Dissolved Oxygen (mg/L)	9.9		9.8	9.8	9.8	10.1
	Temperature (°C)	15.0		15.0	15.0	15.0	15.0
	pH	7.6		7.4	7.5	7.7	7.7
	Conductivity (µS/cm)	57					61
	Symptoms	1	1	1	1	1	1
	Loading Density (g/L)	0.22	0.22	0.22	0.22	0.22	0.22
Technician		RM	NL	NL	RM	JC	KA

**KEY TO SYMPTOMS:**

- 1 = no apparent effect
- 2 = fish showing signs of stress
- 3 = loss of equilibrium



**TEST FISH STOCK INFORMATION**

Date received:	21 November 2007	
Source:	Sun Valley Trout Farm	
Species:	<i>Oncorhynchus mykiss</i> (Rainbow Trout)	
Fork Length:	Mean:	3.40 cm $\pm$ 0.19 cm
	Range:	3.10 cm – 3.70 cm
Wet weight:	Mean:	0.33 g $\pm$ 0.04 g
	Range:	0.28 g – 0.42 g
Condition Factor (100xWt/length <sup>3</sup> cm):	0.85	

<b>Acclimation History</b>	
Acclimation temperature:	14.0 to 15.0 °CELSIUS
Treatments:	None
Water:	Dechlorinated tap water
Feeding:	Nutra 2000 fry feed
Mortality:	< 2%

**RAINBOW TROUT REFERENCE TOXICANT DATA**

Stock Arrival Date (y/m/d)	Test Date (y/m/d)	Toxicant	Log LC <sub>50</sub> (mg/L)	95% Confidence Interval
07.04.26	07.05.08	Phenol	1.00	0.95 to 1.09
07.04.26	07.05.23	“	0.94	0.86 to 0.99
07.05.15	07.06.12	“	1.01	0.91 to 1.11
07.05.30	07.06.13	“	1.10	1.05 to 1.19
07.05.15	07.06.26	“	0.97	0.90 to 1.08
07.05.30	07.07.05	“	1.04	0.97 to 1.12
07.07.13	07.07.24	“	1.08	0.90 to 1.26
07.07.13	07.08.09	“	1.01	0.93 to 1.08
07.07.27	07.09.10	“	1.02	0.90 to 1.08
07.09.21	07.09.25	“	1.10	1.02 to 1.18
07.09.21	07.10.11	“	0.99	0.93 to 1.05
07.09.21	07.10.26	“	0.97	0.90 to 1.08
07.10.09	07.10.26	“	1.10	1.03 to 1.17
07.10.25	07.11.09	“	1.05	0.98 to 1.13
07.10.25	07.11.28	“	1.13	1.06 to 1.20
07.11.21	07.12.10	“	1.12	1.08 to 1.26
<b>LAB GEOMETRIC MEAN (LOG) <math>\pm</math> 2 standard deviations:</b>				1.01 mg/L $\pm$ 0.15
<b>Warning Limits (Log Values):</b>				0.86 mg/L to 1.17 mg/L

**CONTROL/DILUTION WATER QUALITY:**

Hardness: 16 mg/L  
 Total Residual Chlorine: 4  $\mu$ g/L