

ANVIL RANGE MINING CORPORATION

1995 ANNUAL REPORT FOR
WATER LICENSE IN89-001 - FARO

SUBMITTED SEPTEMBER 30, 1996

SUMMARY

Water quality monitoring was performed during 1995 in accordance with Water License IN89-001. This report is the required annual report and is submitted in conjunction with the previously submitted report prepared by Golder Associates titled 1995 Annual Geotechnical Performance Evaluation and Instrument Data Report (March 14, 1996).

The year 1995 was the first year of operation of the Faro concentrator plant and tailings facilities by Anvil Range Mining Corporation. The concentrator plant commenced operation in August 1995 processing ores mined from the Grum and Vangorda Open Pits. Tailings and process water were deposited in the mined out Faro Main Pit with the exception of infrequent and short duration upset conditions when tailings were deposited in the Down Valley Intermediate Pond. The backfilled Faro Zone II Pit was dewatered into the Faro Main Pit in order to prevent metal rich groundwater seepage from entering the North Fork of Rose Creek.

Water quality at the two effluent discharge locations (Cross Valley Pond outflow and Cross Valley Dam seepage) was in compliance with the exception of infrequent minor and isolated exceedances. The overall compliance rating was in excess of 98%.

No influences on the water quality in Anvil Creek (approximately 26 km downstream) resulting from 1995 mining activities were observed during 1995.

One warning letter was received from Environment Canada regarding an elevated concentration of total suspended solids at the outflow from the Cross Valley (Polishing) Pond.

Seepage and groundwater monitoring programs per the existing Schedule 'D' were performed during 1995. The application for license amendment currently under review includes an updated and revised Schedule 'D'.

A comprehensive site water balance including detailed hydrogeological interpretations associated with the Main and Zone II Pits is being developed as part of the Integrated Comprehensive Abandonment Plan scheduled for submission by November 30, 1996.

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1. INTRODUCTION

Pursuant to section 15 of the regulations and Part A, Section 8 of license IN 89-001, Anvil Range Mining Corporation has prepared this annual report detailing water quantities used during the year and an interpretation of trends and variations in the water quality data.

This report presents results of samples collected under schedules A, B, and D. The biological monitoring under schedule B was not required during 1995. Schedule D of license IN89-001 is out of date and much of the work originally contemplated has been completed. A proposed revision to schedule D has been submitted to the Water Board but no decision has been made on it's inclusion in the license. A portion of the reporting requirements have been previously submitted as a detailed report on geotechnical investigations required under schedule C (Golder Associates, March 14, 1996).

During 1995, open pit mining operations were carried out on the Vangorda Plateau in the Grum and Vangorda pits but there was no mining on the Faro site. The mill commenced operations on August 12, 1995 drawing water from the Rose Creek Valley as was the practice during previous operations. Tailings from mill operations were pumped to the mined out Faro Pit. Tailings were discharged to the Down Valley impoundment only during rare upset conditions in the mill as allowed by license IN 89-001.

Surface drainage is the only discharge from the Faro site which is a significant change from previous years when tailings decant entered Rose Creek below the mine.

Prior to mill startup, the mill was being renovated and water for domestic use, fire suppression and water treatment, was also drawn from Rose Creek. Water recycle from the Faro Pit is anticipated to begin in 1997 when the water level in the pit will have reached sufficient elevation. Site surface drainage was directed through the Down Valley impoundment of the Rose Creek Tailings Facility where water, prior to discharge, was treated by addition of a lime slurry in the Intermediate Dam spillway followed by settling in the Cross Valley Pond. The Zone II well operated as required during the year to lower the water level in the backfilled Zone II pit. Table 1.1 and Figure 1.1 show site layout and sample locations.

2. WATER USE

2.1 FRESH WATER SUPPLY SYSTEM

The water supply system was unchanged from previous years. Water is supplied from the Pumphouse Pond located near the confluence of the South and North Forks of Rose Creek. The pond is supplied from three sources:

1. Water stored in the fresh water reservoir which is recharged from the South Fork of Rose Creek. Some control of the reservoir was exercised with the use of stoplogs across the overflow spillway. Withdrawal of reservoir storage water is through control valves and a conduit, located at the base of the reservoir dam (riparian outlet).
2. Partial diversion of the North Fork of Rose Creek from November through April, depending on necessity. This diversion actually returns flow to its natural course into the Pumphouse Pond. The North Fork is diverted around the Pumphouse Pond for the remainder of the year.
3. Two groundwater wells, PW3 and PW6, located in the Rose Creek valley near the Pumphouse Pond.

2.2 FRESH WATER USE

The fresh water reservoir is the main source of recharge for the Pumphouse Pond. During the winter months when water demand exceeds supply from this source, supplementary water is obtained from the diversion of the North Fork of Rose Creek and the two water supply wells, PW3 and PW6. During the first part of November 1995, water from the North Fork of Rose Creek was diverted to the pumphouse pond. Flow at that time was estimated to be from 0.1 to 0.2 m³/s. Water supply well PW3 was started on November 15 and PW6 was started on November 18 for an additional combined supply of 0.12 m³/s. With these supplementary sources combined with water from the reservoir, overflow from the pumphouse pond to the Rose Creek Diversion Canal was maintained above the minimum allowable flow of 0.076 m³/s for most of the year.

Table 2.1 summarizes the fresh water consumption for 1995. The primary water use in the mill is for grinding and flotation. Daily water consumption varies with ore feed tonnage.

During 1995, the average rate of fresh water use for the period of January 1 to August 12, prior to mill start up, was 0.157 m³/s. Until May, an average of 0.032 m³/s was used for domestic purposes only. In May water treatment began in the Down Valley tailings area which increased the average use by 0.038 m³/s. Water in excess of use, an average of 0.125 m³/s and 0.119 m³/s respectively for the above two periods was released, unaltered, via the North Wall interceptor ditch to return to the environment below the Cross Valley Dam combined with the Cross Valley Pond decant (X5). The average rate of fresh water use after the mill start up date of August 12 was 0.370 m³/s. Flows are determined from calculations of pump curves and hours of operation of pumps at the fresh water pumphouse.

Water License IN89-001 limits annual water consumption to 1.538×10^7 m³ per year and 4.29×10^4 m³ per day. The total water consumption for 1995 was 7.3×10^6 m³. Both annual and daily consumption were below license limits.

TABLE 2.1
1995 FRESH WATER CONSUMPTION

MONTH	MONTHLY AVG. (m ³)
January	420,508
February	379,841
March	420,508
April	406,944
May	420,508
June	406,944
July	420,508
August	538,472
September	919,572
October	965,785
November	935,642
December	1,075,175
YEAR TOTAL	7,310,407

2.3 EFFLUENT DISCHARGE

Water used in mill and other surface operations is pumped to the mined out Faro Pit along with mill tailings. There is no surface discharge and no appreciable groundwater discharge from the Faro Pit. Hydrogeological investigations have shown that the largest groundwater flow from the Faro Pit is into the backfilled Zone II Pit. The Zone II Pit is dewatered back to the Faro Pit. A detailed interpretation of the hydrogeology and groundwater flow regime associated with the Main and Zone II Pits is being developed as part of the ICAP (Integrated Comprehensive Abandonment Plan) scheduled for submission by November 30, 1996.

Surface water discharge to the Down Valley Tailings area during 1995 included seepage from the main waste dumps via location X23 and the occasional short duration discharge of mill tailings due to technical problems with the tailings pump facility. Discharge from mill tailings was estimated at 3,770 m³ and discharge from X23 was estimated at 51,934 m³, for a total of 55,700 m³ entering the Down Valley Tailings area from these sources. An additional source of water to the Rose Creek Tailings area is water used to carry lime as slurry to the Intermediate Dam spillway for water treatment; this flow was 0.038 m³/sec for the period May through October. Unquantified additional sources of water to the Tailings area are seepage from the Rose Creek Diversion, flow in Guardhouse Creek, seepage from the North Wall Interceptor, rainfall and snowmelt.

There are two effluent discharge streams from the tailings impoundment area. Site X5, the decant from the Cross Valley Pond and site X13, the seepage from the Cross Valley Dam. The decant consists of siphon pipes as well as a spillway for surface water. From January through to the end of April there was no discharge from site X5. During May through to August 23 the total discharge through the spillway was

estimated at 1,413,416 m³. After this period a siphon was installed for decanting, and in October an additional siphon was installed which was utilized until mid November. This was done to increase the storage capacity of the Cross Valley Pond such that discharge could be stopped under upset conditions. Water quality remained in compliance and one siphon continued to run through December. The total estimated flow through siphons during this period was 1,383,264 m³. The total discharge for site X5 during 1995 was estimated at 3,860,265 m³.

Seepage flows at site X13 remained generally constant throughout the year with an average of .051 m³/sec. Total seepage from this site as determined from the monthly averages is 1,617,894 m³.

The total discharge from the tailings impoundment during 1996 (combined X5 and X13) was 5,478,159 m³. Flow from upper Guardhouse Creek via the North Wall interceptor ditch is not included in this total.

2.4 FARO MAIN AND ZONE II PITS

Nearly all tailings from mill discharge during 1995 were discharged into the Faro Pit. The total estimated water contained in the tailings slurry was 3,841,540 m³. This was calculated from mill feed tonnage minus moisture loss due to evaporation in the drying process and moisture in the final concentrate shipped.

Water is pumped from the Zone II Pit into the Faro Pit. The total volume pumped was estimated at 139,000 m³ from an average pumping rate of 0.24 m³/s from April 20 to June 27.

The total estimated volume of water entering the Faro Pit during 1995 from these sources was 3,980,540 m³.

This quantity was checked against the rise in water level in the Faro Pit. This rise is attributable to the addition of tailings and tailings water as well as precipitation, runoff and seepage from Faro Valley and the Faro Creek interceptor less evaporation and seepage from the pit. The rise in water level from August 12 to December 31 implies 4.26 million m³ were added to the pit from all sources. The sources other than tailings water and the Zone II Pit are not quantified but can be approximated from the slope of the curves for water elevation versus time which shows water was added approximately 8 times faster after tailings deposition began than before. This is based on a rise in water level from 3683.4 ft. (mine datum) on August 22, 1995 to 3729.9 ft. on December 29, 1995 (during tailings addition) for an average rise of 0.360 ft. per day (during which the volume addition was 30,227 m³ per day based on the height capacity data) compared to a rise from 3666.5 ft. on October 15, 1994 to 3677.0 ft. on August 9, 1995 (before tailings deposition) for an average rise of 0.044 ft. per day or a water level rise 8 times faster after deposition started (implying 3,695 m³ / day was being added before tailings deposition started).

The net inflow from tailings should be (30,227-3,695)=26,532 m³/day or 3.74 million m³ in 141 days. This is in reasonable agreement with the operating estimate of 3.84 million m³.

2.5 SITE WATER BALANCE / ROSE CREEK AT X14

A comprehensive site water balance is being developed as part of the ICAP submission scheduled for November 30, 1996. For this reason, a comprehensive site water balance is not presented here.

The water level at location X14 in Rose Creek downstream of the mine discharges at X5 and X13 was monitored during 1995 using a pressure transducer and datalogger. Readings of the water level were taken at 15 minute intervals. These readings were downloaded from the datalogger and then converted to equivalent discharge rates using a rating curve first developed in 1992. The rating curve was based on a total of 22 current meterings made during the period September 1989 to March 1992.

Figure 2.1 presents the daily discharge record for location X14, as reconstructed from the datalogger information. Two gaps exist in the stream flow record; one spanning the period February 12 to March 18 and the other covering the period October 27 to December 31. The water level for the first period were lost because the memory of the datalogger (64K) had been exceeded. These missing data can be "patched" using a correlation with one of the regional streamflow records monitored by Environment Canada a Water Survey. This task is being performed as part of the ICAP water balance which is scheduled for completion November 30, 1996. The second gap exists because the water levels for this period were not available from the datalogger at the time of writing.

The streamflow record shown on Figure 2.1 is preliminary since the rating curve has not been updated since 1992. The channel section at X14 may have changed slightly over time. This is considered possible due to the relatively high water flows observed during 1992 and 1993. Any change in the channel cross section would cause a corresponding change in the rating curve.

Further current meterings will be used to evaluate the suitability of the current rating curve.

3. WATER QUALITY MONITORING PER SCHEDULE 'A'

3.1 OVERVIEW OF WATER QUALITY MONITORING PROGRAM

Schedule A requires the collection of samples from various sites around the mine, mill and tailings areas. These sites are listed in Table 1.1 and illustrated on Figure 1.1. The first half of 1995 was considered a continuation of temporary closure begun in 1993 and, therefore, samples were collected with lower frequency than during normal operations according to Schedule A Part II of license IN 89-001. After the mill resumed operation in August, samples were collected according to the requirements for normal operations as outlined in Schedule A Part III of license IN 89-001.

All samples collected were grab samples. Analyses for the first half of 1995 were carried out by Zenon in Burnaby B.C. and for the second half of 1995 by Cavendish Laboratory Ltd. in Vancouver B.C.

The two surface discharge points from the Faro mine site are X5 and X13, the Cross Valley Pond decant and collected seepage from beneath the Cross Valley Dam respectively. Surface drainage from the minesite passes through the Down Valley Tailings facility to be discharged at one of the two sites noted above. The largest regularly monitored input to the tailings facility is X23 in the old Faro Creek channel below the main rock dump. All inflows are not monitored individually but collect behind the Intermediate Dam. Site X4 is the decant from the Intermediate Dam and provides information on the quality of surface water in the Down Valley system.

The 1995 water quality data is listed in Appendix 1. The data is listed as raw data and as monthly averages. Flows are listed on the monthly compilations. Graphs of the water quality data are included in Appendix 2.

Groundwater Wells PW4 and PW5 are located immediately upstream of the tailings impoundment and were intended to be utilized as a supplemental water supply to the pumphouse pond. These wells were not used during 1995 and, therefore, no water quality information was collected.

3.2 FARO PITS AND ROCK DUMPS (X23, X26, BH1, BH2, BH4)

Water quality in the lower section of the Zone II Pit is monitored at location X26, which is water pumped from the Zone II Pit into the main Faro Pit. The water quality was analysed once during 1995. The results showed elevated metals at neutral pH. Total zinc, iron and manganese were 43.5, 29.7 and 7.6 mg/L, respectively, on June 07, at a pH of 6.4. This type of water quality is typical of buffered acid rock drainage.

On a preliminary basis, it appears that the water quality in the Zone II Pit has been improving since sampling began in 1991. This topic will be addressed in detail in the ICAP (Integrated Comprehensive Abandonment Plan) submission scheduled for November 30, 1996.

Shallow groundwater seepage between the Zone II Pit and the North Fork of Rose Creek is monitored at piezometers BH1, BH2 and BH4. Piezometer BH3 was damaged at some time in the past and is no longer operable. The static water levels in these piezometers are below the level of Rose Creek.

The water quality in BH1 and BH2 are very similar and show slightly elevated metals in a pH range which is slightly acidic to neutral. During 1995, dissolved zinc concentrations in BH1 and BH2 ranged from 4.57 mg/L in a pH range from 5.1 to 6.8. Water quality in BH4 is markedly different from BH1 and BH2 with greater metal concentrations and lower pH. During 1995, the concentration of dissolved zinc in BH4 ranged from 8.9 to 60.4 mg/L in a pH range of 2.5 to 4.8.

The reasons for the difference in water quality between BH1/BH2 and BH4 are not well understood at this time. BH4 is located closest to Rose Creek and farthest from the Zone II Pit. It is possible that contaminated seepage from a past overflow from the Zone II Pit is continuing to migrate and that the institution of the drawdown pumping system in 1991 has resulted in improvements in water quality in the nearer piezometers. This issue will be addressed in detail in the ICAP submission scheduled for November 30, 1996.

Surface run off from the rock dumps is sampled at X23. This water is passed into the Intermediate Impoundment and receives treatment prior to discharge if required. Water quality is typical of buffered acid rock drainage with elevated metals at neutral pH. The pH at X23 ranged from 6.8 to 7.2 with a range in total zinc concentration from 23.2 to 54.1 mg/L. The buffering is evident in the neutral pH as well as in the calcium and magnesium concentrations which ranged from 478 to 800 mg/L and from 261 to 442 mg/L, respectively.

3.3 INTERMEDIATE POND (X4)

Since tailings deposition ceased in the Down Valley Tailings facility there has been an increase in zinc in water flowing through the facility. This is due to the decrease in alkalinity previously added to the tailings pond with the tailings. To reduce zinc to acceptable levels a program of water treatment was started in 1992. Initially, lime slurry was trucked to the facility and added to the Intermediate Dam spillway or the syphon decant. During 1994 sodium hydroxide was added for a short time. In 1995, a new method of delivering lime slurry was successfully adopted. The slurry was mixed in the mill and piped to the Intermediate Dam spillway in a 3 inch plastic pipe. Treatment commenced in early May and was discontinued in late October when the 3 inch line froze. This method of treatment was quite effective and efficiently delivered lime on a regular basis. The increased pH causes metals to precipitate as metal hydroxides and settle out in the Cross Valley Pond. Zinc and pH at X4 is illustrated on Figure 3.1.

There are no major sources of suspended solids to the Intermediate Pond. Water at X23 (Old Faro Creek) is generally clear with 10 mg/L or less suspended solids although there was a high of 54 mg/L in April. Surface water within the impoundment(s) is likely a larger generator of suspended solids than the monitored inflows. During mill upsets, additional suspended solids enter the impoundment via the X23 ditch as allowed in the license. This ditch flows to the north east corner of the Intermediate Impoundment and is often cloudy. During heavy precipitation, sheetflow off the stripped areas adjacent to the Down Valley impoundments represents an additional short lived source of suspended solids. The suspended solids load entering the Intermediate Pond is clarified prior to being discharged to the Cross Valley pond as shown by the low concentrations of NFR at X4 (range from 1 to 7 mg/L in 1995).

There are no monitored sources of low pH water to the tailings impoundment. Location X23 shows a near neutral pH. Precipitation on the tailings surface likely adds considerable acidity as puddles on the surface have very low pH. Despite the potential for low pH to develop in the impoundment this is not apparent at X4 (range during 1995 from 7.6 to 9.1). This is thought to be due partly to the alkalinity of runoff water in the area, the transport of alkalinity into the impoundment with occasional tailings discharges since August and the leaching of stored alkalinity in the tailings behind the Intermediate Dam which have not yet become strongly acidic at the surface.

Ammonia input to the tailings impoundment at X23 has been relatively constant at about 0.5 mg/L. A slight trend towards higher values from July to October was not continued into November and December and is likely not significant. Other than un-monitored runoff to the tailings area it is not likely that there are other significant sources of ammonia to the impoundment. Breakdown of cyanide in the impoundment could be an additional source of ammonia. Ammonia would also be added to the tailings area by occasional discharges from the mill since it resumed operations in August. Ammonia levels at X4 are lower than the monitored

input at X23 but it is unclear if this is due to degradation of ammonia or dilution. The range in ammonia concentrations at X4 during 1995 was from 0.050 to 0.410 mg/L.

3.4 FINAL EFFLUENT (X5 AND X13)

The analytical results received for samples at X5 and X13 show that these discharges were within the maximum allowable concentrations with only rare excursions which did not result in an observable response in Rose Creek. The overall compliance ratings for these two discharge locations for 1995 are 99.5% for X5 and 97.6% for X13. The combined compliance rating is 98.5%. The compliance rating is calculated from all the parameters listed in Part B Sections 2(b) and 2(f) except colour and turbidity. There were 25 samples from X5 analysed during 1995 including one split sample with DIAND. There were 29 samples analysed from X13 during 1995.

All bioassays performed during 1995 for locations X5 and X13 were passed including bioassays performed by DIAND in May. Of the 3 bioassays performed for X5 and the four bioassays performed for X13, all were non-lethal (no mortalities) except for one which had a result of >100%. The bioassays were 96 hour LC50 tests using rainbow trout.

The quality of water at X5 shows the effectiveness of the lime treatment process. Figure 3.1 shows the monthly average pH and concentration of zinc.

The elevated zinc concentration listed for X5 on April 17 (0.75 mg/L) does not represent an exceedance of the license limit since there was no discharge at that time. This sample was collected for in-house purposes prior to the start of lime treatment and is included in the database for reference only.

The concentration of total arsenic at X5 was slightly greater than the maximum allowable concentration of dissolved arsenic (0.05 mg/L) on two occasions in 1995. The levels were 0.09 and 0.10 mg/L on September 12 and 18, respectively. Analyses were performed for total rather than dissolved arsenic in order to maintain analytical consistency with other parameters. These elevated concentrations did not persist and no further investigation was required. The average concentration of total arsenic at X5 for the year was 0.03 mg/L.

The concentration of NFR (non filterable residue) at X13 was slightly greater than the maximum allowable concentration (15 mg/L) on two isolated occasions in 1995. The NFR analyses were 16 mg/L on February 24 and October 25. These isolated events did not persist and the annual average concentration of NFR at X13 was 7 mg/L.

The concentration of ammonia at X13 was greater than the maximum allowable concentration (1.0 mg/L) on six occasions during 1995. The greatest of these occasions was a concentration of 1.23 mg/L on October 25. Ammonia concentrations at X13 appear to cycle seasonally with the higher levels occurring during winter when surface ponds are ice covered and water temperature is at or near freezing. The annual average ammonia concentration at X13 was 0.785 mg/L. Ammonia at X4 and X5 are very close to each other suggesting that there is not much degradation in the Cross Valley pond. The concentration of ammonia at X13, however, is higher than at either X4 or X5. This may be due to the lower potential for degradation in the subsurface regime or to the lack of dilution by surface runoff entering the impoundment.

The concentration of total arsenic at X13 was slightly greater than the maximum allowable concentration of dissolved arsenic (0.05 mg/L) on three isolated occasions in 1995. The analyses were 0.14, 0.13 and 0.07 mg/L on August 23, October 16 and November 09, respectively. Analyses were performed for total rather than dissolved arsenic in order to maintain analytical consistency with other parameters. These elevated concentrations did not persist and no further investigation was required. The average concentration of total arsenic at X13 for the year was 0.04 mg/L.

3.5 ROSE AND ANVIL CREEKS

3.5.1 North Fork of Rose Creek (R7, R8, R9, R10, X2)

The potential for surface water impact from seepage from the Zone II Pit is monitored at locations R7 through R10 in the North Fork of Rose Creek. The water quality results for these locations show no observable presence of seepage from the Zone II Pit with the exception of a slight decline in pH from R7 through R9 and a recovery in pH at R10. As illustrated on Fig. 3.2, the annual average pH declines from 7.8 at R7 to 7.6 at R8 to 7.5 at R9 and then recovers to 7.8 at R10. These pH's are the annual averages for each location. Sulphate concentrations at R7 through R10 show no trends. The widest variation in sulphate concentration during 1995 was at the upstream location (R7) where the range was from 9 to 52 mg/L.

The North Fork of Rose Creek is monitored at X2 prior to joining with the South Fork. The only additional impact at X2 which may not be present at R10 is surface run off from the eastern portion of the main rock dump. Also, the North Fork passes through the rock drain in the Vangorda Haul Road between locations R10 and X2. The water quality at X2 during 1995 was similar to R10 indicating that neither run off from the main rock dump nor the rock drain had an observable impact on water quality.

3.5.2 South Fork of Rose Creek (X3)

The south Fork of Rose Creek is monitored at location X3 which is in the pumphouse pond downstream of the fresh water reservoir. This location also includes the North Fork during winter months when the North Fork is required as a supplemental water source for plant operations. This location shows no impact from mining operations with metal concentrations at or near detection limits and pH in the neutral to slightly alkaline range.

3.5.3 Rose Creek Near Mine Discharges (X10, X14)

Rose Creek upstream of mine discharge (X5 and X13) is monitored at location X10 which is near the bottom of the Rose Creek Diversion Canal. The canal diverts Rose Creek along the southern perimeter of the tailings impoundments via a constructed channel. Sulphate concentrations at X10 during 1995 were greater than at the upstream stations (X2 and X3). This may be due to a small amount of lateral seepage from the tailings impoundments or due to unmeasured sulphate inflows from tributary streams. The range in sulphate concentrations at X10 during 1995 was from 7 to 273 mg/L. (The 273 mg/L analysis may be anomalous since it was not supported by a corresponding increase in total sulphur.) All other parameters including pH and metals indicate that Rose Creek at location X10 has not been impacted by mine activities.

Rose Creek immediately downstream of the confluence with mine discharges (X5 and X13) is monitored at X14. Water quality at X14 shows the presence of mine discharge through elevated sulphate concentrations and slightly elevated concentrations of ammonia and total zinc. Sulphate concentrations at X14 during 1995 ranged from 40 to 408 mg/L with an average annual concentration of 162 mg/L. The average annual and peak monthly concentrations of zinc were 0.07 and 0.17 mg/L, respectively.

The average annual and peak monthly concentrations of ammonia at X14 were 0.217 and 0.580 mg/L, respectively. These levels of total ammonia are well within the U.S. EPA recommended levels of total ammonia for protection of freshwater life which is the basis of the Canadian guideline. The guideline table is reproduced in Table 3.1. The U.S. EPA limits take into consideration the effects of temperature and pH on the toxicity and proportion of ammonia species.

TABLE 3.1
RECOMMENDED GUIDELINES FOR TOTAL AMMONIA (NH₃) IN mg/L

pH	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C
6.50	2.5	2.4	2.2	2.2	1.49	1.04	0.73
6.75	2.5	2.4	2.2	2.2	1.49	1.04	0.73
7.00	2.5	2.4	2.2	2.2	1.49	1.04	0.74
7.25	2.5	2.4	2.2	2.2	1.50	1.04	0.74
7.50	2.5	2.4	2.2	2.2	1.50	1.05	0.74
7.75	2.3	2.2	2.1	2.0	1.40	0.99	0.71
8.00	1.53	1.44	1.37	1.33	0.93	0.66	0.47
8.25	0.87	0.82	0.78	0.76	0.54	0.39	0.28
8.50	0.49	0.47	0.45	0.44	0.32	0.23	0.17
8.75	0.28	0.27	0.26	0.27	0.19	0.16	0.11
9.00	0.16	0.16	0.16	0.16	0.13	0.10	0.08

Source: Canadian Water Quality Guidelines

Concentrations of total cyanide at X14 were all less than 0.005 mg/L which is the Canadian guideline for the protection of freshwater aquatic life.

3.5.4 Rose Creek at Anvil Creek / Anvil Creek

The final downstream monitoring locations are at the confluence of Rose and Anvil Creeks approximately 26 km downstream of the Down Valley Tailings facility. The sampling locations are Rose Creek just above Anvil Creek (R4), Anvil Creek just above Rose Creek (R6) and Anvil Creek just below Rose Creek (R5). The three locations were each sampled once during 1995.

Water quality at R4, R5 and R6 did not indicate an influence from mine activities with the possible exception of slightly elevated concentrations of sulphate and total iron at R4. Of the three locations, sulphate was highest at R4 at 48 mg/L as compared to sulphate concentrations of 29 mg/L and 24 mg/L at R5 and R6, respectively. The concentration of total iron was also highest at R4 at 0.18 mg/L as compared to concentrations of 0.11 mg/L and 0.13 mg/L at R5 and R6, respectively.

Concentrations of total zinc, total ammonia and total cyanide at all three locations were at or below detection limits (0.01 mg/L for zinc, 0.005 mg/L for ammonia and 0.001 mg/L for cyanide).

3.6 LONG TERM WATER QUALITY TRENDS AT SELECTED LOCATIONS

Water quality data from 1988 to 1995 and corresponding graphs for these selected locations are contained in Appendix 3.

3.6.1 Main and Intermediate Rock Dumps (X23)

There has been an observable decrease in total zinc and total manganese concentrations at X23 since 1993/4 after a preceding increasing trend from 1988 to 1993/4. If this trend continues through 1996, it may indicate that the peak releases of zinc and manganese have been passed. There are, however, other possible explanations to the apparent decreasing trend.

There was an increase in arsenic concentrations from the detection limit of 0.05 mg/L prior to 1995 to an annual average of 0.14 mg/L in 1995. The concentration of total copper showed a wider range in values during 1995 than in previous years although no increase in the average concentration is obvious. The concentration of total iron does not show any increasing or decreasing trend although the magnitude of individual spikes has improved to less than 0.50 mg/L during 1994 and 1995.

These trends in water quality will be examined in detail as part of the ICAP (Integrated Comprehensive Abandonment Plan) scheduled for submission by November 30, 1996.

3.6.2 Intermediate Pond (X4)

There has been an observable increase in the concentrations of total zinc and total manganese since 1992. This corresponds to the time at which tailings deposition into the Intermediate Pond by ceased. It is suspected that the absence of the alkalinity contained in the high pH (~10) tailings slurry has allowed increased quantities of zinc and manganese to be released from the tailings.

There have been no clear long term trends for total copper, total iron or total cyanide although the peak concentration of total iron was lower in 1995 than all previous years (back to 1988). The concentration of total arsenic has remained at the detection limit (<0.06 mg/L) from 1988 to 1995. No clear trend is apparent for pH although there was a small decrease in 1990 from slightly higher levels in 1988 and 1989.

3.6.3 Final Effluent (X5)

There have been no observable trends in concentrations of total iron or total zinc. This is as expected given that the pond is treated with lime in order to maintain the concentration of zinc below 0.5 mg/L.

There has been an increasing trend in the concentration of total manganese since 1992. This corresponds to the increasing trend in the Intermediate Pond outflow (X4). The lime treatment process likely does not precipitate manganese to a large degree since the pH is likely not increased high enough to precipitate manganese.

The concentrations of total arsenic and total cyanide show no increasing trends with only rare and isolated spikes.

3.6.4 Rose Creek Below Mine Discharges (X14)

There are no apparent trends in the concentrations of total zinc, total iron or total manganese. This indicates that freshwater dilution is sufficient to mask the observed increase in total manganese in the Final Effluent (X5).

Concentrations of total arsenic and total cyanide are consistently at or near the detection limits and show no increasing trends.

4. BIOLOGICAL MONITORING PER SCHEDULE 'B'

The biological monitoring program under Schedule 'B' was not required during 1995. Monitoring of benthic organisms and the corresponding sediment and water quality sampling programs will be performed during 1996.

5. GEOTECHNICAL MONITORING PER SCHEDULE 'C'

The geotechnical monitoring program under Schedule 'C' was performed during 1995 by Golder Associates and their report has been previously submitted.

The geotechnical instrumentation installed in and around the Rose Creek Diversion Canal, the Intermediate Dam, the Cross Valley Dam and the Freshwater Dam were measured by Golder and the results were presented and interpreted in their report.

The facilities were observed to be in generally good condition and a schedule was provided for the 1996 monitoring program. A summary of the most important conclusions and recommendation from the Golder report follows:

- reduce the frequency of readings of geotechnical instrumentation due to increased confidence resulting from previous years data collection (schedule provided),
- rehabilitate the crest of the Freshwater Dam if future water levels will rise above the spillway sill,
- clean and upgrade seepage collection weirs below the Cross Valley Pond,
- repair the cascade section of the lower Rose Creek Diversion Canal,
- strength the dyke in two locations along the North Wall Interceptor Ditch,
- restorative work to the Intermediate Pond outflow spillway.

6. MINE CLOSURE MONITORING

6.1 SCHEDULE 'D' AMENDMENT

An amendment to Schedule 'D' has been proposed by Anvil Range Mining Corporation as part of the proposed amendment to License IN89-001 submitted June 08, 1995. The proposed amendment would update the studies to be performed and the reporting requirements for mine closure planning.

6.2 1995 MONITORING

A surface sampling campaign was performed in July 1995 as part of the seep surveys initiated in previous years. The sites included Faro Creek, Faro Creek Diversion, North Fork of Rose Creek, Pit Walls, Upper Guardhouse Creek (sometimes referred to as Next Creek), Guardhouse Creek, and the North Wall Interceptor Ditch.

The sampling campaign was performed by Linda Broughton who is an environmental consultant familiar with the Faro site. The analytical results are included in Appendix 3. In general, the results confirm previous indications that the Faro Creek Diversion is unaffected by mine activities and that Upper Guardhouse Creek and the North Wall Interceptor Ditch are unaffected by run off from the North West rock dump.

Piezometers around the Faro site were monitored during August 1995 by Laberge Environmental Services as part of the seep surveys initiated in previous years. The analytical results are included in the Laberge report in Appendix 4.

This program included the X-series of shallow piezometers, piezometers below the sulphide rock dump and the BH-series piezometers.

The results of each these studies will be interpreted fully as part of the ICAP submission scheduled for November 30, 1996.

7. SITE MAINTENANCE / GLACIATION

There were several occasions during 1995 when glaciation in creeks and ditches became an environmental concern.

Glaciation in the Rose Creek Diversion Canal was monitored on a daily basis early in 1995. In the beginning of February glaciation was causing water flow above the ice. As a preventative measure a channel was cleared with the use of a backhoe. The channel continued to be monitored on a daily basis and no further concerns arose.

On several occasions in December a backhoe was used to clear glaciation in the following creeks:

1. In the channel of the redirected flow of the North Fork of Rose Creek, which is one of the supplementary fresh water supplies to the pumphouse pond .
2. On the South Fork of Rose Creek two glaciated sections were cleared. One section was near the road crossing culvert near the Grum turnoff and the other section was downstream of the reservoir and immediately upstream of the pumphouse pond.
3. Glaciation was cleared from the lower North Wall Interceptor ditch along side Cross Valley Dam spillway.

Several areas of glaciation were also cleared from the seepage ditch along the mine access road.

8. SUMMARY OF SPILLS

8.1 GASOLINE

The following spill of gasoline was documented during 1995.

Date / Time: October 2nd, 1995 at 18:10

Amount: Approximately 200 liters

Place: Bulk storage tank at the Faro Gate

Details: A bulk fuel truck overflowed the bulk storage tank when delivering the fuel. The spill soaked into the sand and gravel within the bermed area at the base of the tank and the area was treated with fire suppressant as a precautionary measure.

Remedial Action: No recovery of the product was possible due to the amount of the spill and the nature of the material within the contained area. Evaporation dissipated most of the product and steps were taken to review and improve the delivery system to prevent further occurrences.

8.2 PROPANE

The following spill of propane was documented during 1995.

Date / Time: October 4th, 1995 at 06:50

Amount: Approximately 1500 liters

Place: Mill temporary propane tank

Details: Spill was discovered by an on-site contractor who immediately contacted appropriate persons including ICG, and the spill was isolated by 07:00. The spill was found to be at the discharge end of the supply valve that had no plug or cap installed after ICG decommissioned the tank on October 3, the previous day. This would have prevented a spill due to a valve failure. As to the reason the supply valve failed no real determination could be made, however the probable cause was that the valve may have frosted up during the decommissioning of the tank, causing the valve not to seat properly.

ICG estimated the spill amount from the record of 15% propane in the tank before it was decommissioned on October 3rd and the 10% remaining after the spill on October 4 th.

Remedial Action: No recovery was possible due to the nature of the product and contamination was not considered significant. ICG capped the supply lines and the tanks were removed off site as they were no longer required. Steps have been taken to prevent further occurrences.

8.3 COPPER SULPHATE

The following spill of copper sulphate was documented during 1995.

Date / Time: June 28th, 1995

Amount: 45,000 liters of < 1% strength by volume

Place: Down Valley Tailings Pond

Details: In preparation for start up, on site personnel were cleaning residue from four copper sulphate tanks in the area behind the mill. This resulted in an accidental release of copper sulphate into the Down Valley Tailings Impoundments.

Remedial Action: Samples were immediately taken at the site and several locations downstream of the site to determine the concentrations of copper sulphate residue. Daily monitoring of the Down Valley Tailings area revealed no significant changes in copper concentration.

9. SUMMARY OF WARNINGS

A warning letter dated June 27, 1995 was received from Environment Canada regarding an elevated concentration of total suspended solids at the outflow from the Cross Valley (Polishing) Pond. The analysis of a sample collected by Environment Canada on May 2, 1995 was considered to provide reasonable grounds that Anvil Range Mining Corporation was in violation of the Fisheries Act.

The letter was described as the minimum enforcement response to a violation of the Fisheries Act and that this letter would be taken into account in the event of future violations.

The elevated concentration of suspended solids was an isolated event which did not recur over an extended period. The specific cause was not determined.

FIGURES

FIGURE 2.1
Station X14 - 1995 Daily Streamflow Record (Preliminary)

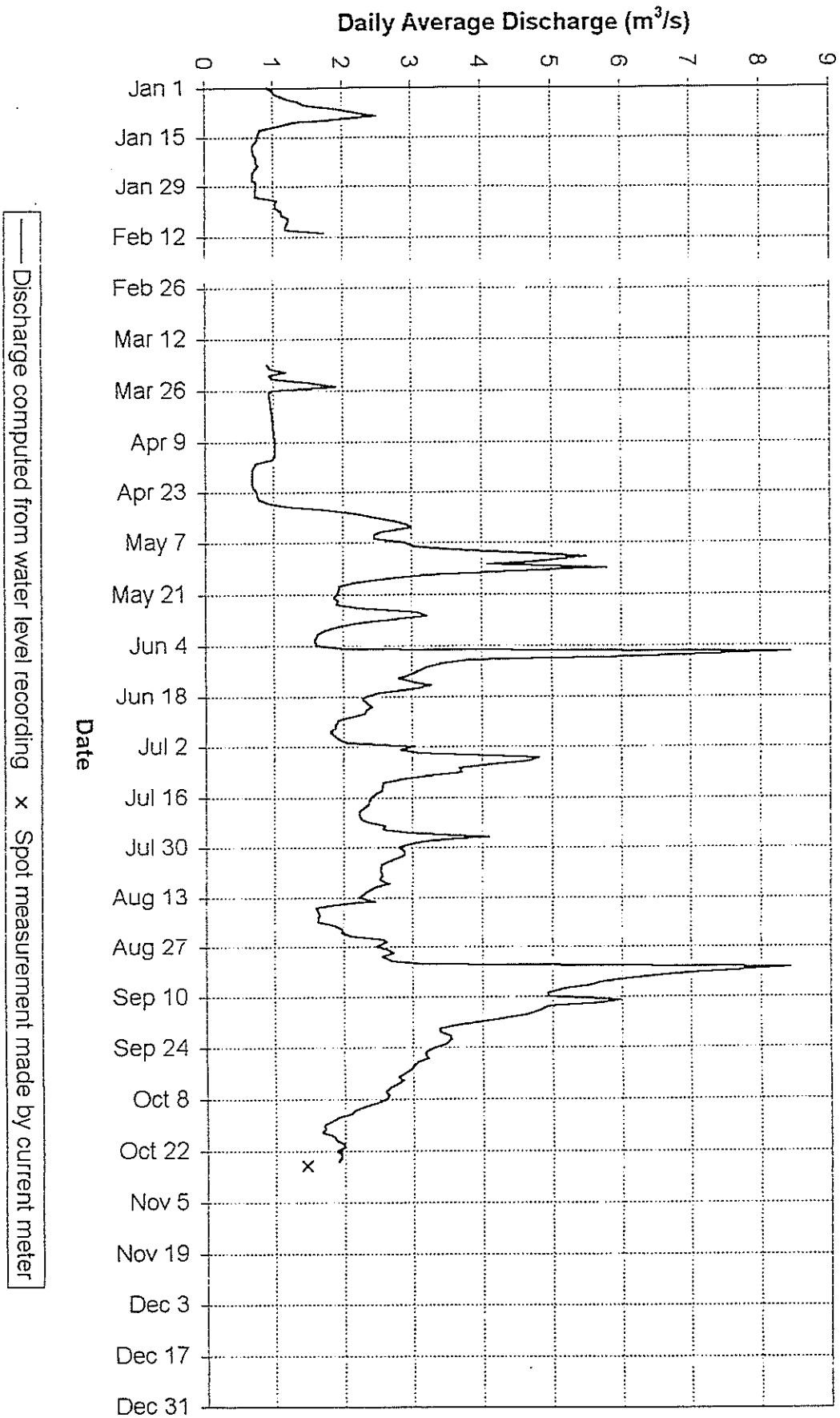
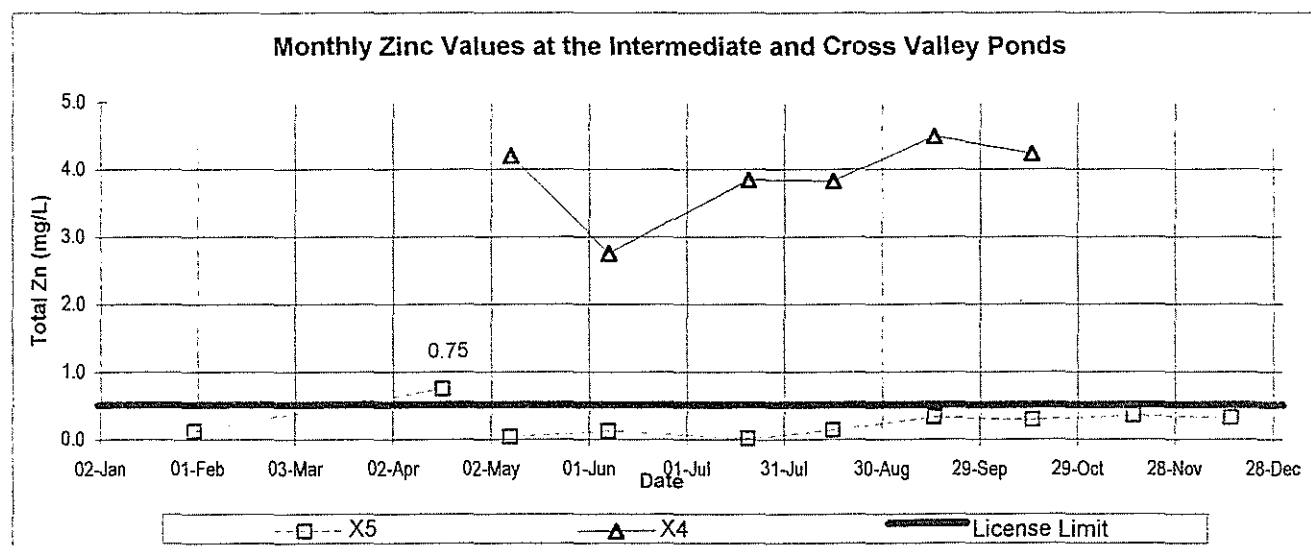
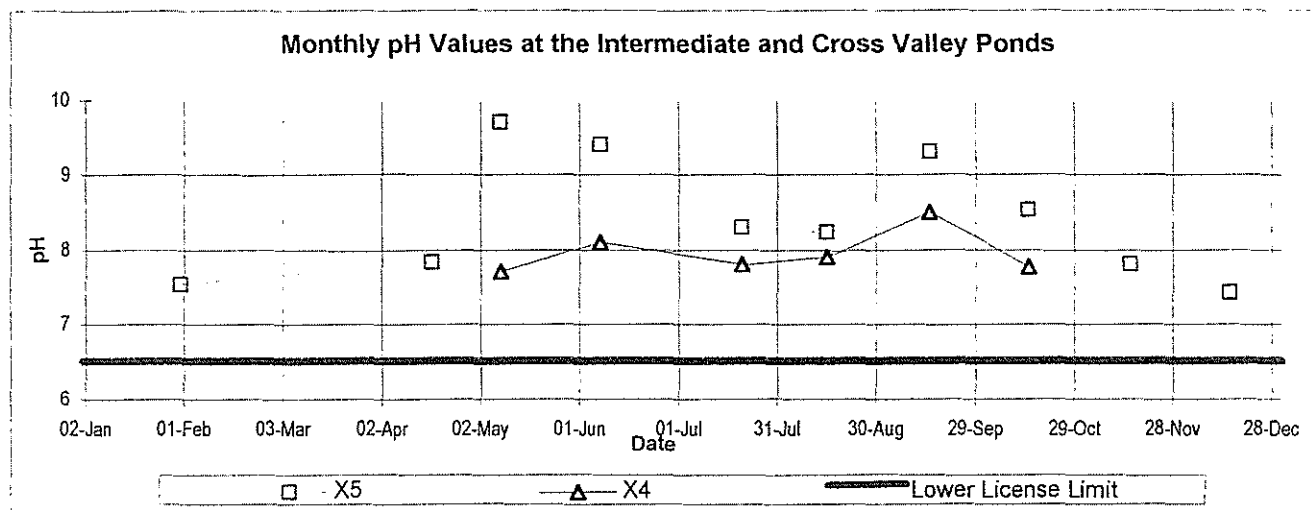


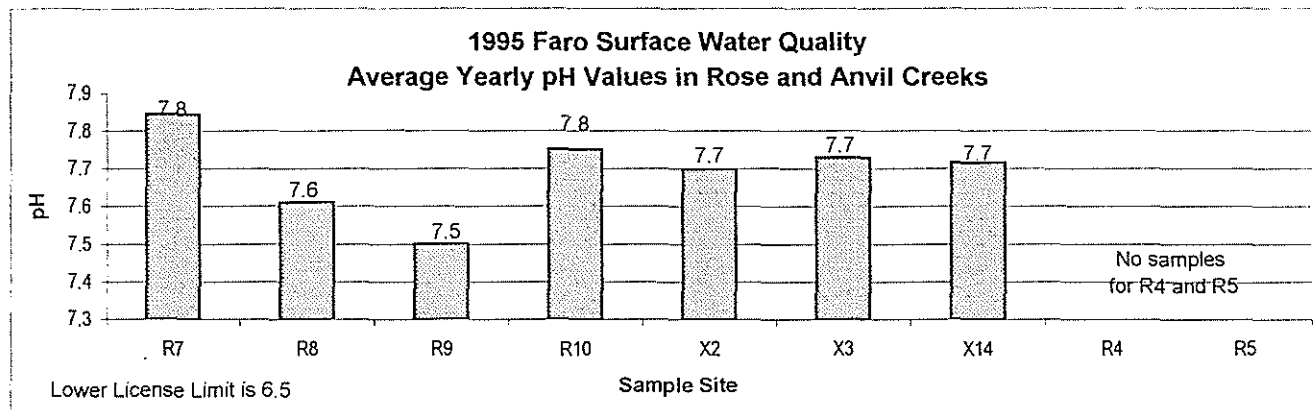
FIGURE 3.1

INTERMEDIATE AND CROSS VALLEY POND DECANTS
1995 MONTHLY AVERAGE PH AND TOTAL ZINC CONCENTRATION



**** Zinc concentration of 0.75 mg/L shown for April 17, 1995 was prior to the start of discharge and, therefore, does not represent an exceedance of license limits.**

FIGURE 3.2 NORTH FORK OF ROSE CREEK 1995 ANNUAL AVERAGE PH



TABLES

TABLE 1.1
WATER QUALITY MONITORING LOCATIONS

#	SAMPLING STATION
X2	North Fork of Rose Creek at road bridge.
X3	Rose Creek at freshwater pumphouse.
X4	Intermediate dam decant.
X5	Cross Valley dam decant.
X9	Tailings Line to Tailings Pond.
X10	Rose Creek diversion canal below weirs.
X11	Seepage from north toe of the Cross Valley dam.
X12	Seepage from south toe of the Cross Valley dam.
X13	Combined seepage flows downstream from the culvert and upstream of confluence with the decant.
X14	Rose Creek after mixing downstream of the diversion canal confluence.
X16a	Groundwater monitor well - K1 at depth of 5m.
X16b	Groundwater monitor well - K1 at depth of 30m.
X17a	Groundwater monitor well - K2 at depth of 5m.
X17b	Groundwater monitor well - K2 at depth of 20m.
X18a	Groundwater monitor well - K3 at depth of 10m.
X18b	Groundwater monitor well - K3 at depth of 20m.
X19a	Groundwater monitor well - K4 at depth of 12m.
X19b	Groundwater monitor well - K4 at depth of 27m.
X20	Groundwater monitor well - K5.
X21a	Groundwater monitor well - K6 at depth of 10m.
X21b	Groundwater monitor well - K6 at depth of 27m.
X22	Discharge from Faro #1 pumps. May be discontinued upon commencement of main pit discharge.
X22b	Main Pit water. This station shall be added upon commencement of tailings deposition into the main pit and may be discontinued upon commencement of discharge from the main pit.
X22c	Main Pit at point of discharge. This sampling station shall be added upon commencement of Main Pit discharge.
X23	Pit drainage at toe of waste dumps.
X24a	Groundwater monitor well Intermediate Dam, North Abutment - shallow.
X24b	Groundwater monitor well Intermediate Dam, North Abutment - deep sample.
X25a	Groundwater monitor well Intermediate Dam, South Abutment - shallow.
X25b	Groundwater monitor well Intermediate Dam, South Abutment - deep sample.
X26	Zone II pit water.
BH-1, BH-2, BH-3, BH-4	Boreholes southeast of Zone II pit, west of North Fork of Rose Creek.
R4	Rose Creek just above Anvil Creek.
R5	Anvil Creek just below the confluence of Rose Creek.
R6	Anvil Creek immediately upstream of Rose Creek.
R7	North Fork of Rose Creek upstream of the confluence with the Faro diversion.
R8	North Fork of Rose Creek, 900 metres downstream of confluence with the Faro Creek diversion.
R9	North Fork of Rose Creek, adjacent to BH-1 and BH-2.
R10	North Fork of Rose Creek, 100 metres upstream from maximum elevation of water impounded behind the North Fork rock drain.

APPENDIX 1

1995 Faro Surface Water Quality

SITE:	X2	(North Fork Rose Creek at road bridge)														
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Jan-95	na	1.9	na	na	<0.001	na	0.006	17	<4	7.4	na	<0.002	0.06	3.5	<0.03	0.05
Feb-95	na	0.9	na	na	<0.001	na	<0.005	24	<4	7.5	<0.04	<0.002	0.10	4.3	<0.03	0.10
Mar-95	na	0.5	163	300	0.001	na	0.029	21	5	7.3	0.03	0.011	0.09	4.2	0.02	0.02
Apr-95	na	2.7	na	na	<0.001	na	<0.005	na	<4	8.2	<0.04	<0.002	0.08	4.0	<0.03	0.07
May-95	na	3.4	33	68	na	37	0.05	4	6	7.3	0.02	0.021	0.04	1.1	0.02	0.02
Jun-95	na	5.4	na	101	<0.001	na	0.011	7	5	8.0	<0.02	0.003	0.04	1.0	<0.02	0.01
Jul-95	na	11.0	na	179	0.002	na	<0.050	20	2	7.8	<0.02	<0.002	0.02	1.0	<0.02	<0.01
Aug-95	na	8.2	na	163	<0.001	na	<0.050	10	<1	8.0	<0.02	0.003	0.02	1.0	<0.02	0.01
Sep-95	na	na	na	166	<0.001	na	0.050	11	<1	na	<0.02	<0.002	0.02	6.0	<0.02	<0.01
Oct-95	na	2.6	na	211	<0.001	na	0.280	17	<1	7.8	<0.02	0.011	0.10	1.0	<0.02	0.04
Nov-95	na	0.9	na	226	<0.001	na	<0.005	20	<5	7.7	<0.02	0.006	0.07	1.0	<0.02	0.02
Dec-95	na	na	na	272	<0.001	na	2.090	32	<5	7.4	<0.02	<0.002	0.06	1.0	<0.02	0.02
Average	na	3.8	98	187	0.001	122	0.219	17	4	7.7	0.02	0.006	0.06	2.4	0.02	0.03
Minimum	na	0.5	33	68	0.001	37	0.005	4	1	7.3	0.02	0.002	0.02	1.0	0.02	0.01
Maximum	na	11.0	163	300	0.002	165	2.090	32	6	8.2	0.04	0.021	0.10	6.0	0.03	0.10

Note: Flow measurements for Jan, Feb, and Apr are suspected to be erroneous, and are therefore not reported.

SITE:	X3	(Rose Creek at freshwater pumphouse)														
Date	Flow (L/s)	Temp °C	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Mar-95	na	0.2	104	230	0.001	na	0.0275	19	5	7.5	0.03	0.010	0.03	2.7	0.02	0.01
Jul-95	na	12.3	na	165	<0.001	na	<0.005	22	<1	8.0	0.02	<0.002	0.02	2.0	<0.02	<0.01
Aug-95	na	8.9	na	179	<0.001	na	<0.050	15	<1	7.8	<0.02	0.015	0.02	1.0	<0.02	0.01
Sep-95	na	7.5	na	174	<0.001	na	0.060	13	<1	8.0	<0.02	0.013	0.02	4.0	0.02	0.05
Oct-95	na	2.9	na	151	<0.001	na	0.140	15	<1	7.8	<0.02	0.003	0.02	0.5	0.02	0.03
Nov-95	na	0.8	na	205	<0.001	na	0.370	21	<5	7.7	<0.02	0.003	0.04	1.0	0.02	0.01
Dec-95	na	na	na	229	<0.001	na	0.100	18	<5	7.8	<0.02	<0.002	<0.01	<1.0	0.03	0.01
Average	na	5.4	104	190	0.001	na	0.114	18	3	7.8	0.02	0.007	0.02	1.6	0.02	0.02
Minimum	na	0.2	104	151	0.001	na	0.028	13	1	7.5	0.02	0.002	0.01	0.0	0.02	0.01
Maximum	na	12.3	104	230	0.001	na	0.370	22	5	8.0	0.03	0.015	0.04	4.0	0.03	0.05

1995 Faro Surface Water Quality

SITE: X4 (Intermediate dam decant)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
08-May-95	na	7.4	54	740	0.005	359	0.15	338	5	7.7	<0.02	0.019	3.34	9.3	0.04	4.20
07-Jun-95	na	14.6	na	1301	0.103	na	0.308	393	7	8.6	<0.02	0.009	3.83	11.0	<0.02	2.99
22-Jun-95	na	na	87	1246	na	na	na	407	na	7.6	<0.02	0.004	4.91	13.0	<0.02	2.58
20-Jul-95	na	15.9	na	953	0.006	na	<0.050	508	5	7.8	0.03	0.016	3.73	14.0	0.04	3.79
08-Aug-95	na	na	na	989	0.047	na	0.349	-	2	na	<0.02	0.016	4.04	12.0	<0.02	4.13
16-Aug-95	na	13.7	na	1022	0.052	na	0.110	491	<1	8.1	<0.02	0.021	4.05	13.0	0.03	3.42
23-Aug-95	na	14.0	na	1001	0.044	na	0.170	535	<1	7.7	0.04	0.019	4.19	13.0	<0.02	3.92
07-Sep-95	na	12.1	na	1052	0.060	na	0.290	542	<1	9.1	<0.02	0.005	4.73	13.0	0.05	4.87
12-Sep-95	na	11.4	na	1080	0.060	na	0.210	529	3	8.8	0.02	0.029	4.66	12.0	0.03	4.87
18-Sep-95	na	11.2	na	1128	0.089	na	0.200	525	<1	7.9	<0.02	0.011	4.52	17.0	<0.02	4.32
28-Sep-95	na	7.6	na	991	0.084	na	0.240	548	<1	7.9	<0.02	<0.002	4.33	14.0	0.02	3.93
03-Oct-95	120.0	7.4	na	1048	0.027	na	0.070	559	<1	7.9	<0.02	0.005	6.00	16.0	<0.02	5.15
10-Oct-95	120.0	5.1	na	1058	0.129	na	0.140	510	<1	na	<0.02	0.006	5.78	14.0	<0.02	4.88
16-Oct-95	120.0	1.7	na	940	0.153	na	0.410	512	6	7.7	0.02	0.004	4.16	15.0	<0.02	3.64
25-Oct-95	na	0.2	na	1068	0.163	na	0.340	479	13	7.7	<0.02	0.011	3.80	12.0	<0.02	3.24
Average	120.0	9.4	70	1010	0.059	359	0.190	468	4	8.0	0.02	0.013	4.17	12.7	0.03	3.89
Minimum	120.0	15.9	54	740	0.005	359	0.005	338	1	7.7	0.02	0.002	3.34	9.3	0.02	2.58
Maximum	120.0	0.2	87	1274	0.118	359	0.308	535	7	8.5	0.04	0.029	6.00	17.0	0.05	5.15

1995 Faro Surface Water Quality

SITE: X5 (Cross Valley Dam decant)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
31-Jan-95	na	2.0	na	na	<0.001	na	0.627	495	4	7.5	na	<0.002	5.67	49.7	<0.03	0.12
17-Apr-95	na	3.2	na	na	<0.001	na	0.458	na	12	7.8	<0.04	0.015	3.07	31.7	<0.03	0.75
06-May-95	na	7.0	14	530	0.015	235	0.208	260	8	9.7	<0.02	0.019	0.17	16.8	<0.01	0.04
07-Jun-95	na	na	na	1256	0.021	na	0.416	386	2	9.4	<0.02	0.006	2.45	27.0	<0.02	0.12
20-Jul-95	na	16.0	na	942	0.017	na	<0.050	435	5	8.3	<0.02	<0.002	1.88	33.0	<0.02	<0.01
08-Aug-95	na	14.7	na	949	0.009	na	0.246	na	3	8.3	0.02	<0.002	2.20	29.0	<0.02	0.12
16-Aug-95	na	13.6	na	986	0.013	na	0.110	431	<1	8.4	<0.02	0.009	2.17	27.0	<0.02	0.13
23-Aug-95	na	13.7	na	953	0.013	na	0.110	504	<1	8.0	0.02	0.006	2.37	29.0	<0.02	0.16
07-Sep-95	na	11.3	na	1064	0.014	na	0.250	447	<1	9.6	<0.02	<0.002	3.00	28.0	<0.02	0.15
12-Sep-95	na	11.0	na	1490	0.002	na	0.420	640	1	9.9	0.09	0.029	8.88	38.0	0.12	0.50
18-Sep-95	na	8.9	na	1164	0.013	na	0.250	482	<1	8.4	0.10	0.005	3.31	32.0	<0.02	0.32
03-Oct-95	200.0	7.3	na	1047	0.014	na	0.070	458	<1	8.5	<0.02	0.003	4.31	33.0	<0.02	0.28
10-Oct-95	200.0	5.9	na	1087	0.014	na	0.140	495	1	8.7	<0.02	0.007	2.89	23.0	<0.02	0.28
16-Oct-95	200.0	3.2	na	972	0.017	na	0.320	616	<1	8.6	0.04	0.005	3.33	37.0	<0.02	0.30
25-Oct-95	200.0	2.5	na	1072	0.017	na	0.390	421	14	8.3	<0.02	0.007	3.29	28.0	<0.02	0.30
02-Nov-95	200.0	2.0	na	1122	0.015	484	0.320	472	<5	7.9	<0.02	0.009	4.05	33.0	<0.02	0.40
09-Nov-95	200.0	1.5	na	1144	0.014	na	0.390	519	<5	8.0	<0.02	0.010	4.43	34.0	<0.02	0.36
14-Nov-95	200.0	2.1	na	1142	0.016	na	<0.005	502	<5	7.8	0.02	0.011	4.83	36.0	<0.02	0.34
21-Nov-95	120.0	2.8	na	1166	0.017	na	0.210	482	<5	7.7	0.02	0.006	4.82	31.0	<0.02	0.31
30-Nov-95	120.0	1.7	na	1193	0.011	na	0.340	540	<5	7.7	<0.02	0.003	5.00	33.0	<0.02	0.33
06-Dec-95	200.0	2.1	na	1198	0.012	na	0.410	500	<5	7.4	<0.02	0.008	5.55	32.0	0.03	0.34
11-Dec-95	200.0	2.3	244	1160	0.015	542	0.350	494	<5	7.5	0.02	0.002	6.05	36.0	<0.02	0.31
20-Dec-95	200.0	2.5	na	1152	0.011	na	0.060	519	<5	7.4	0.02	0.005	6.17	33.0	<0.02	0.31
29-Dec-95	200.0	2.8	na	946	0.008	na	0.447	527	<5	7.4	<0.02	0.009	6.65	34.0	<0.02	0.30
Average	187.7	6.1	129	1030	0.012	420	0.298	453	5	8.4	0.03	0.007	3.47	31.7	0.02	0.24
Minimum	120.0	1.5	14	530	0.001	235	0.005	236	1	7.4	0.02	0.002	0.12	16.7	0.01	0.01
Maximum	200.0	16.0	244	1490	0.024	542	0.627	640	14	10.0	0.10	0.029	8.88	49.7	0.12	0.75

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SITE: X10 (Rose Creek diversion canal below weirs)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
May-95	na	1.1	53	105	0.018	60	0.050	7	23	7.6	<0.02	0.017	0.10	1.2	0.02	0.05
Jul-95	na	14.0	na	196	0.002	na	<0.050	23	7	8.3	<0.02	<0.002	0.04	1.0	<0.02	<0.01
Sep-95	na	6.9	na	216	<0.001	na	0.050	15	<1	8.2	<0.02	<0.002	<0.01	1.0	<0.02	0.01
Oct-95	na	1.2	na	219	<0.001	na	0.140	273	2	8.1	<0.02	<0.002	0.01	<1.0	<0.02	0.01
Nov-95	na	0.5	na	256	<0.001	na	0.900	57	<5	7.6	<0.02	0.007	0.12	1.0	<0.02	0.13
Average	na	4.7	53	198	0.005	60	0.238	75	8	8.0	0.02	0.006	0.06	0.8	0.02	0.04
Minimum	na	0.5	53	105	0.001	60	0.050	7	1	7.6	0.02	0.002	0.01	0.0	0.02	0.01
Maximum	na	14.0	53	256	0.018	60	0.900	273	23	8.3	0.02	0.017	0.12	1.2	0.02	0.13
SITE: X11 (Seepage from north toe of Cross Valley Dam)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Jan-95	21.0	4.4	na	na	<0.001	na	1.080	753	12	7.3	na	<0.002	11.50	55.9	<0.03	0.04
Feb-95	19.5	3.7	na	na	0.001	na	1.100	725	11	7.6	0.05	<0.002	12.30	59.7	<0.03	0.09
Mar-95	10.0	3.6	267	1650	0.003	na	0.931	754	11	7.2	0.03	0.022	12.95	58.1	0.02	0.02
Apr-95	17.0	5.4	na	na	<0.001	na	1.010	na	10	7.4	<0.04	<0.002	12.90	60.9	<0.03	0.01
May-95	8.0	5.0	232	1500	0.003	813	0.927	671	11	7.5	0.03	0.012	11.10	54.7	0.02	0.02
Jun-95	31.4	6.6	na	1997	0.003	na	1.020	584	8	7.3	<0.02	0.005	8.32	38.0	<0.02	0.01
Jul-95	29.0	8.2	na	1530	0.001	na	1.010	716	8	7.2	0.02	0.003	8.20	48.0	<0.02	<0.01
Average	19.4	5.3	250	1669	0.002	849	1.011	701	10	7.4	0.03	0.007	11.04	53.6	0.02	0.03
Minimum	8.0	3.6	232	1500	0.001	813	0.927	584	8	7.2	0.02	0.002	8.20	38.0	0.02	0.01
Maximum	31.4	8.2	267	1997	0.003	885	1.100	754	12	7.6	0.05	0.022	12.95	60.9	0.03	0.09
SITE: X12 (Seepage from south toe of Cross Valley Dam)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Jan-95	6.0	4.5	na	na	<0.001	na	0.811	491	4	7.3	na	<0.002	6.63	48.4	<0.03	0.04
Feb-95	5.9	2.7	na	na	<0.001	na	0.773	372	<4	7.8	0.05	<0.002	6.37	51.8	<0.03	0.04
Mar-95	1.0	1.4	181	860	0.003	na	0.061	288	5	7.3	0.03	0.019	0.76	43.6	0.02	0.01
Apr-95	6.8	4.5	na	na	<0.001	na	0.635	na	<4	7.4	<0.04	0.003	6.63	46.9	<0.03	<0.01
May-95	1.3	3.5	174	870	0.011	388	0.055	276	5	7.7	0.03	0.012	0.49	41.9	0.02	0.09
Jun-95	7.7	7.3	na	1623	0.004	na	0.694	492	4	7.3	<0.02	0.002	5.67	36.0	<0.02	<0.01
Jul-95	8.0	7.5	na	1212	<0.001	na	0.540	486	6	7.2	0.03	0.002	5.16	39.0	0.03	<0.01
Average	5.2	4.5	178	1141	0.003	389	0.510	401	4	7.4	0.03	0.006	4.53	43.9	0.03	0.03
Minimum	1.0	1.4	174	860	0.001	388	0.055	276	4	7.2	0.02	0.002	0.49	36.0	0.02	0.01
Maximum	8.0	7.5	181	1623	0.011	389	0.811	492	6	7.8	0.05	0.019	6.63	51.8	0.03	0.09

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SITE: X13 (Combined seepage flows downstream from culvert & upstream of confluence with decant)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cu-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
31-Jan-95	44.0	3.3	na	na	<0.001	na	1.030	1220	8	7.5	na	<0.002	9.16	54.1	<0.03	0.03
24-Feb-95	43.8	2.6	na	na	<0.001	na	0.948	350	16	7.8	<0.04	<0.002	7.66	53.1	<0.03	0.09
06-Mar-95	na	na	na	na	<0.001	na	0.806	547	12	7.1	<0.04	<0.002	8.54	54.2	<0.03	0.02
08-Mar-95	51.0	2.6	257	1400	<0.005	na	0.880	530	8	7.7	<0.02	0.038	8.73	49.9	<0.01	<0.005
17-Apr-95	na	5.6	na	na	<0.001	na	0.784	na	<4	7.5	<0.04	<0.002	8.46	52.4	<0.03	0.05
08-May-95	na	na	na	na	<0.001	na	0.798	540	8	7.3	<0.04	<0.002	8.09	51.2	<0.03	0.05
08-May-95	63.0	5.5	213	1300	<0.005	693	0.780	547	6	7.6	<0.02	0.014	8.53	51.9	<0.01	0.03
07-Jun-95	63.4	8.6	na	1772	<0.001	na	0.788	395	9	7.3	<0.02	<0.002	6.42	38.0	<0.02	0.01
20-Jul-95	53.0	8.0	na	1309	0.001	na	<0.050	582	10	7.3	0.04	<0.002	5.90	44.0	<0.02	<0.01
08-Aug-95	53.5	9.6	na	1250	0.001	na	0.843	na	6	7.2	0.04	0.004	6.69	39.0	<0.02	0.01
16-Aug-95	51.9	8.1	8	1303	0.001	na	0.610	536	2	7.5	0.02	0.007	6.75	40.0	<0.02	0.02
23-Aug-95	61.9	7.2	na	1296	<0.001	na	0.680	656	4	7.4	0.14	0.012	6.72	38.0	<0.02	0.01
07-Sep-95	53.0	7.6	na	1337	<0.001	na	0.880	545	6	8.0	0.03	<0.002	7.84	40.0	<0.02	<0.01
12-Sep-95	51.0	7.5	na	1382	<0.001	na	0.990	530	5	7.8	0.03	0.003	6.94	36.0	0.03	0.01
18-Sep-95	53.0	5.8	na	1446	<0.001	na	0.850	541	<1	7.2	<0.02	0.008	7.06	38.0	<0.02	<0.01
28-Sep-95	63.0	5.3	na	1341	<0.001	na	0.980	607	<1	7.3	0.03	0.002	7.29	44.0	0.05	0.01
03-Oct-95	58.3	6.5	na	1441	0.001	na	0.770	615	3	7.3	0.02	0.006	9.31	47.0	<0.02	0.01
10-Oct-95	48.5	4.8	na	1307	0.001	na	0.630	551	3	7.5	0.04	0.007	8.89	41.0	<0.02	0.01
16-Oct-95	48.5	3.8	na	1203	<0.001	na	0.920	501	9	7.2	0.13	0.003	6.70	47.0	<0.02	0.01
25-Oct-95	43.8	3.6	na	1370	<0.001	na	1.230	512	16	7.0	0.05	0.008	6.30	38.0	<0.02	0.01
02-Nov-95	44.0	3.6	na	1324	<0.001	650	1.080	555	8	7.0	0.05	0.007	7.97	45.0	<0.02	0.01
09-Nov-95	39.0	1.8	na	1373	<0.001	na	1.160	601	7	7.3	0.07	0.005	7.40	44.0	0.02	0.01
14-Nov-95	39.0	2.2	na	1220	<0.001	na	0.160	584	5	7.3	0.04	0.011	8.41	48.0	<0.02	0.01
21-Nov-95	39.0	2.9	na	1376	0.003	na	0.820	595	5	7.3	0.04	0.006	8.32	45.0	<0.02	<0.01
30-Nov-95	31.0	1.5	na	1335	<0.001	na	0.970	578	<5	7.3	0.04	0.002	7.25	40.0	<0.02	0.01
06-Dec-95	35.0	na	na	1331	<0.001	na	1.070	578	6	7.4	<0.02	0.005	7.78	39.0	<0.02	0.01
11-Dec-95	35.0	na	309	1355	0.002	581	1.060	608	8	7.3	0.03	<0.002	7.20	39.0	<0.02	<0.01
20-Dec-95	31.0	2.5	na	1319	<0.001	na	0.240	497	5	7.4	0.04	0.004	6.77	37.0	<0.02	0.01
29-Dec-95	31.0	2.4	na	1345	<0.001	na	0.866	551	8	7.4	0.03	0.006	7.53	37.0	<0.02	0.01
Average	47.3	4.9	158	1382	0.001	616	0.785	586	7	7.4	0.04	0.006	10.09	45.8	0.02	0.02
Minimum	31.0	1.5	8	1203	0.001	581	0.050	350	1	7.0	0.02	0.002	5.90	36.0	0.01	0.01
Maximum	63.4	9.6	309	1772	0.003	693	1.230	1220	16	8.0	0.14	0.038	9.31	54.2	0.05	0.09

Note: Flow measurement for Apr is suspect, and therefore is not reported.

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SITE: X14 (Rose Creek after mixing downstream of diversion canal confluence)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Mar-95	489.0	0.6	143	490	0.005	na	0.108	111	5	7.6	0.03	0.014	1.34	12.3	0.02	0.02
May-95	3069.0	2.8	49	190	0.003	172	0.044	41	22	7.7	0.03	0.010	0.35	3.9	0.02	0.06
Jul-95	na	12.4	na	345	0.002	na	<0.050	70	7	8.0	0.06	<0.002	0.50	5.0	<0.02	<0.01
Aug-95	na	9.0	na	380	<0.001	na	<0.050	93	<1	7.8	<0.02	<0.002	0.68	5.0	<0.02	0.05
Oct-95	na	0.9	na	408	<0.001	na	0.180	165	<1	8.1	<0.02	<0.002	0.90	10.0	<0.02	0.08
Nov-95	na	0.2	na	627	0.004	na	0.580	246	<5	7.7	<0.02	0.010	2.00	16.0	<0.02	0.17
Dec-95	na	na	na	1122	0.005	na	0.510	408	<5	7.5	<0.02	<0.002	4.41	29.0	<0.02	0.14
Average	1779.0	4.3	96	509	0.003	209	0.217	162	7	7.8	0.03	0.006	1.45	11.6	0.02	0.07
Minimum	489.0	0.2	49	190	0.001	172	0.044	41	1	7.5	0.02	0.002	0.35	3.9	0.02	0.01
Maximum	3069.0	12.4	143	1122	0.005	246	0.580	408	22	8.1	0.06	0.014	4.41	29.0	0.02	0.17
SITE: X23 (Pit drainage at toe of waste dumps)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Jan-95	1.1	2.0	na	na	na	na	0.515	2810	10	7.0	na	0.005	20.90	Na	<0.03	40.60
Feb-95	1.1	2.8	na	na	<0.001	na	0.465	2560	11	7.2	0.12	0.007	22.30	51.9	<0.03	41.20
Mar-95	1.7	1.4	524	4400	0.001	na	0.415	2950	6	7.0	0.12	0.029	27.10	58.7	0.03	48.40
Apr-95	2.2	2.0	na	na	<0.001	na	0.606	na	54	6.8	0.16	0.008	19.70	50.4	0.03	35.50
May-95	1.6	1.0	484	2300	0.001	3220	0.557	2750	8	7.1	0.08	0.017	22.25	54.3	0.05	37.20
Jun-95	2.3	11.0	na	7327	0.006	na	0.438	2587	10	7.0	0.15	0.015	17.84	54.0	0.03	29.24
Jul-95	2.0	10.5	na	4250	0.001	na	0.600	2536	10	7.0	0.10	0.015	15.72	54.0	0.22	31.75
Aug-95	1.7	7.1	na	4160	0.003	na	0.680	2891	2	7.1	0.24	0.025	16.46	46.0	0.08	29.30
Sep-95	2.0	6.8	na	4540	<0.001	na	0.800	2574	<1	6.8	0.20	0.024	17.33	46.0	0.07	32.78
Oct-95	1.1	2.9	na	3650	<0.001	na	0.920	2541	<1	6.9	0.24	0.020	15.00	53.0	0.03	25.84
Nov-95	0.1	0.3	na	4800	0.003	na	<0.005	2561	7	7.0	0.22	0.036	17.48	51.0	0.10	28.03
Dec-95	1.7	na	na	4740	0.002	na	0.470	2611	5	7.0	0.33	0.071	16.10	41.0	0.13	23.22
Average	1.5	4.3	504	4463	0.002	1804	0.539	2670	10	7.0	0.18	0.023	19.02	50.9	0.07	33.59
Minimum	0.1	0.3	484	2300	0.001	387	0.005	2536	1	6.8	0.08	0.005	15.00	41.0	0.03	23.22
Maximum	2.3	11.0	524	7327	0.006	3220	0.920	2950	54	7.2	0.33	0.071	27.10	58.7	0.22	48.40

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SITES: X7 (Seepage below mill)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Oct-95	na	na	na	4480	0.133	na	0.460	4045	236	na	0.14	0.092	25.05	61.0	0.13	97.09
Nov-95	na	na	na	5090	0.100	na	0.480	4057	156	na	0.13	0.101	30.16	59.0	0.09	110.70
SITES: X9 (Tailings line to tailings pond)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Sep-95	X9F	na	na	304	4.230	na	0.260	76	1980	na	78.70	31.410	87.10	24.0	125.50	363.40
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Nov-95	X9A	na	na	209	0.724	na	0.420	53	na	na	<0.02	0.038	0.25	7.00	0.03	0.11
SITE: X26 (Zone II Pit water)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total Pb mg/L	Total Zn mg/L
Jun-95	na	5.8	na	4393	<0.001	na	0.572	1166	16	6.4	0.21	0.006	7.57	21.0	0.05	43.53

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SITE: R4 (Rose Creek, just above Anvil Creek)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
02-Aug-95	na	na	na	na	<.001	na	<.005	48	1	na	<0.02	<0.002	0.13	3.00	<0.02	0.01
SITE: R5 (Anvil Creek, just below confluence of Rose Creek)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
02-Aug-95	na	na	na	na	<.001	na	<.005	29	<1	na	<0.02	<0.002	0.02	1.00	<0.02	<0.01
SITE: R6 (Anvil Creek, immediately upstream of Rose Creek)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
02-Aug-95	na	na	na	na	<.001	na	<.005	24	2	na	<0.02	<0.002	0.01	1.00	<0.02	<0.01
SITE: R7 (North Fork Rose Creek, upstream of confluence with Faro Diversion)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
Mar-95	na	0.6	na	na	na	na	na	11	na	7.6	<0.04	<0.002	0.02	3.80	<0.03	<0.01
Jul-95	na	7.6	93	150	na	na	na	9	na	8.3	<0.02	0.004	0.01	1.00	<0.02	<0.01
Aug-95	na	7.0	89	147	na	na	<.05	10	<1	8.4	<0.02	0.012	0.02	1.00	<0.02	<0.01
Sep-95	na	7.0	89	174	na	na	0.050	13	<1	8.4	<0.02	0.002	0.02	3.00	<0.02	<0.01
Oct-95	na	na	115	188	0.001	na	0.090	52	na	7.8	<0.02	0.008	0.06	1.00	0.03	0.14
Nov-95	na	0.4	na	180	na	na	<.005	26	<5	7.4	<0.02	0.010	<0.01	1.00	<0.02	<0.01
Dec-95	na	na	166	249	na	na	<.005	20	<5	7.5	<0.02	<0.002	0.02	2.00	<0.02	<0.01
Average	na	4.5	110	181	0.001	na	0.04	20	3	7.9	0.02	0.006	0.02	1.83	0.02	0.03
Minimum	na	0.4	89	147	0.001	na	0.01	9	1	7.4	0.02	0.002	0.01	1.00	0.02	0.01
Maximum	na	7.6	166	249	0.001	na	0.09	52	5	8.4	0.04	0.012	0.06	3.80	0.03	0.14

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SITE: R8 (North Fork Rose Creek, 900 metres downstream of confluence with creek Diversion)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
Mar-95	na	3.1	149	296	na	na	na	15	na	7.6	<0.04	0.002	0.01	3.70	<0.03	0.02
Apr-95	na	na	139	273	na	na	na	13	na	7.6	<0.04	<0.002	0.01	3.60	<0.03	0.02
Jun-95	na	na	47	104	na	na	na	17	na	7.1	<0.02	0.004	0.01	1.00	<0.02	<0.01
Jul-95	na	9.3	99	157	na	na	na	13	na	7.9	<0.02	<0.002	0.01	1.00	<0.02	<0.01
Aug-95	na	7.9	90	148	na	na	na	9	na	8.0	<0.02	<0.002	<0.01	1.00	<0.02	0.01
Oct-95	na	1.3	111	190	na	na	na	11	na	8.0	<0.02	0.003	0.03	1.00	<0.02	0.01
Nov-95	na	0.6	na	218	na	na	0.050	14	<5	7.4	<0.02	0.008	0.03	1.00	0.02	0.01
Dec-95	na	na	251	247	na	na	<0.005	12	<5	7.3	<0.02	<0.002	0.02	2.00	<0.02	<0.01
Average	na	4.4	127	204	na	na	0.028	13	5	7.6	0.03	0.003	0.02	1.73	0.02	0.01
Minimum	na	0.6	47	104	na	na	0.005	9	5	7.1	0.02	0.002	0.01	1.00	0.02	0.01
Maximum	na	9.3	251	296	na	na	0.050	17	5	8.0	0.04	0.006	0.03	3.70	0.03	0.02
SITE: R9 (North Fork Rose Creek, adjacent to BH1 & BH2)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
Mar-95	na	1.6	149	275	na	na	na	15	na	7.6	<0.04	<0.002	0.02	3.60	<0.03	<0.01
Apr-95	na	na	140	275	na	na	na	13	na	7.4	<0.04	<0.002	0.02	3.80	<0.03	0.03
Jun-95	na	8.7	53	104	na	na	na	39	na	7.6	<0.02	<0.002	<0.01	1.00	<0.02	0.02
Jun-95			70	150	na	na	na	12	na	7.7						
Jul-95	na	9.4	99	162	na	na	na	16	na	7.5	<0.02	<0.002	0.01	1.00	<0.02	<0.01
Aug-95	na	8.3	75	139	na	na	na	10	na	7.8	<0.02	<0.002	<0.01	1.00	<0.02	0.01
Oct-95	na	0.5	111	188	na	na	na	14	na	7.2	<0.02	<0.002	0.03	1.00	<0.02	0.02
Nov-95	na	0.6	na	221	na	na	<0.005	12	<5	7.3	<0.02	<0.002	0.03	1.00	<0.02	0.01
Dec-95	na	na	160	319	na	na	<0.005	18	<5	7.2	<0.02	<0.002	0.02	1.00	<0.02	<0.01
Average	na	4.9	107	204	na	na	0.005	17	5	7.5	0.03	0.002	0.02	1.68	0.02	0.02
Minimum	na	0.5	53	104	na	na	0.005	10	5	7.2	0.02	0.002	0.01	1.00	0.02	0.01
Maximum	na	9.4	160	319	na	na	0.005	39	5	7.8	0.04	0.002	0.03	3.80	0.03	0.03

1995 Faro Surface Water Quality

SITE: R10 (North Fork Rose Creek, upstream from rock drain)																
Date	Flow (L/s)	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total As mg/L	Total Cu mg/L	Total Mn mg/L	Total Na mg/L	Total PB mg/L	Total Zn mg/L
Mar-95	na	2.1	149	276	na	na	na	15	na	8.0	<0.04	0.005	0.02	3.90	<0.03	0.04
Apr-95	na	na	140	278	na	na	na	13	na	7.4	<0.04	<0.002	0.02	3.60	<0.03	0.02
Jun-95	na	8.9	45	99	na	na	na	38	na	7.9	<0.02	<0.002	<0.01	1.00	<0.02	0.02
Jul-95	na	9.4	97	161	na	na	na	13	na	8.5	<0.02	<0.002	0.01	1.00	<0.02	<0.01
Aug-95	na	8.8	92	148	na	na	<.005	11	<1	7.9	<0.02	<0.002	<0.01	1.00	<0.02	0.01
Oct-95	na	0.5	125	186	0.001	na	0.090	14	na	7.1	<0.02	<0.002	0.03	1.00	<0.02	0.02
Nov-95	na	0.6	na	225	na	na	<.005	13	<5	7.3	<0.02	0.003	0.03	1.00	<0.02	0.01
Dec-95	na	na	158	278	na	na	<.005	19	<5	7.1	<0.02	<0.002	0.02	2.00	<0.02	<0.01
Average	na	5.1	115	206	0.001	na	0.03	17	4	7.6	0.03	0.003	0.02	1.81	0.02	0.02
Minimum	na	0.5	45	99	0.001	na	0.01	11	1	7.1	0.02	0.002	0.01	1.00	0.02	0.01
Maximum	na	9.4	158	278	0.001	na	0.09	38	5	8.5	0.04	0.005	0.03	3.90	0.03	0.04

1995 Faro Surface Water Quality

Boreholes southeast of Zone II Pit, west of North Fork Rose Creek

SITE: BII1																	
Date	S.W.L m.	Depth m.	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Apr-95	na	na	na	145	na	<.001	na	0.097	31	na	6.2	0.04	0.007	0.11	4.69	<.03	0.35
Jun-95	na	na	6.8	70	na	<.001	na	0.085	36	na	6.5	<.02	0.013	0.13	4.00	<.02	0.38
Aug-95	3.35	5.18	3.0	151	327	na	na	na	23	3940	6.2	<.02	0.007	0.44	5.00	<.02	0.58
Sep-95	3.25	5.18	6.6	173	495	<.001	na	<.005	100	na	6.4	<.02	0.005	0.21	5.00	<.02	0.63
Oct-95	3.23	5.29	1.0	147	na	0.001	na	0.140	35	na	5.1	<.02	0.008	0.20	4.00	<.02	0.33
Nov-95	4.11	5.29	0.1	na	na	0.001	na	0.110	48	na	6.7	<.02	0.014	1.23	5.00	<.02	0.66
Average	3.49	5.24	3.50	137	411	0.001	na	0.087	46	3940	6.2	0.02	0.009	0.39	4.62	0.02	0.49
Minimum	3.23	5.18	0.10	70	327	0.001	na	0.005	23	3940	5.1	0.02	0.005	0.11	4.00	0.02	0.33
Maximum	4.11	5.29	6.80	173	495	0.001	na	0.140	100	3940	6.7	0.04	0.014	1.23	5.00	0.03	0.66
SITE: BII2																	
Date	S.W.L m.	Depth m.	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Apr-95	na	na	na	99	na	<.001	na	0.009	30	na	6.5	<.04	0.002	0.01	4.04	<.03	1.67
Aug-95	4.78	5.55	4.1	116	412	na	na	na	89	110	6.5	<.02	0.005	0.01	5.00	<.02	2.92
Sep-95	4.76	5.55	7.1	140	562	<.001	na	<.005	161	na	6.3	<.02	0.006	<.01	3.00	<.02	3.58
Oct-95	4.82	5.66	2.0	130	na	0.001	na	0.090	114	na	5.2	<.02	0.009	<.01	5.00	<.02	3.51
Nov-95	4.76	5.66	1.6	na	na	<.001	na	0.050	173	na	6.5	<.02	0.017	0.01	7.00	<.02	4.57
Dec-95	5.50	5.66	na	na	353	0.002	na	0.120	62	na	6.8	<.02	<.002	0.01	5.00	<.02	0.97
Average	4.92	5.62	3.70	121	442	0.001	na	0.055	105	110	6.3	0.02	0.008	0.01	5.01	0.02	2.89
Minimum	4.76	5.55	1.60	99	353	0.001	na	0.005	30	110	5.2	0.02	0.002	0.01	3.00	0.02	0.97
Maximum	5.50	5.66	7.10	140	562	0.002	na	0.120	173	110	6.8	0.04	0.017	0.01	7.00	0.03	4.57
SITE: BII4																	
Date	S.W.L m.	Depth m.	Temp (Deg C)	Alkalinity mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Apr-95	na	na	na	<.5	na	<.001	na	0.425	302	na	4.8	0.04	0.075	1.16	5.00	<.03	8.90
Jun-95	na	na	11.1	<.1	na	<.001	na	3.370	2586	na	3.2	<.02	0.946	5.52	11.00	<.02	43.19
Aug-95	2.43	3.20	6.6	<.1	3000	na	na	na	1915	134	3.2	0.10	0.975	5.28	11.00	0.06	48.76
Sep-95	2.48	3.20	10.2	na	na	na	na	na	na	na	3.3	0.05	0.853	7.68	9.00	0.23	60.44
Oct-95	2.40	3.27	0.5	<.1	na	0.002	na	3.080	1659	na	2.5	0.16	0.641	5.12	12.00	0.04	41.35
Nov-95	2.51	3.27	0.5	na	na	<.001	na	2.490	1409	na	3.5	0.09	0.389	4.39	9.00	0.02	33.95
Dec-95	2.54	3.27	0.5	na	741	0.002	na	0.530	405	na	2.5	<.02	0.061	1.26	6.00	<.02	11.53
Average	2.47	3.24	4.90	0.7	1871	0.001	na	1.979	1379	134	3.3	0.06	0.608	4.48	9.13	0.06	36.26
Minimum	2.40	3.20	0.50	0.1	741	0.001	na	0.425	302	134	2.5	0.02	0.061	1.16	5.00	0.02	8.90
Maximum	2.54	3.27	11.10	1.0	3000	0.002	na	3.370	2586	134	4.8	0.16	0.975	7.68	12.00	0.23	60.44

1995 Faro Surface Water Quality

Groundwater Monitor Wells

SITE: X16A (K-1 at depth of 5m)															
Date	S.W.L m.	Depth m.	Temp (Deg C)	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total Cu mg/L	Total Zn mg/L	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Aug-95	3.66	5.37	8.2	<.005	28	97	9.4	0.010	0.06	<0.02	<0.002	<0.01	2.00	<0.02	<0.01
SITE: X16B (K-1 at depth of 30m)															
Date	S.W.L m.	Depth m.	Temp (Deg C)	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total Cu mg/L	Total Zn mg/L	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Aug-95	3.96	28.99	4.8	<.005	25	279	7.9	0.021	0.02	<0.02	0.002	<0.01	2.00	<0.02	0.02
SITE: X17A (K-2 at depth of 5m)															
Date	S.W.L m.	Depth m.	Temp (Deg C)	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total Cu mg/L	Total Zn mg/L	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Aug-95	2.16	6.06	4.2	0.036	26	751	8.4	0.025	0.06	<0.02	0.004	<0.01	3.00	<0.02	0.01
SITE: X17b (K-2 at depth of 20m)															
Date	S.W.L m.	Depth m.	Temp (Deg C)	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total Cu mg/L	Total Zn mg/L	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Aug-95	2.74	24.80	3.5	0.056	26	126	8.7	0.017	0.02	<0.02	<0.002	0.16	6.00	<0.02	0.02
SITE: X18A (K-3 at depth of 10m)															
Date	S.W.L m.	Depth m.	Temp (Deg C)	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total Cu mg/L	Total Zn mg/L	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Aug-95	4.11	9.29	4.2	0.090	397	105	7.2	0.014	0.01	<0.02	0.002	0.15	38.00	<0.02	<0.01
SITE: X18B (K-3 at depth of 20m)															
Date	S.W.L m.	Depth m.	Temp (Deg C)	NH3 mg/L	SO4 mg/L	NFR mg/L	pH	Total Cu mg/L	Total Zn mg/L	Dis. As mg/L	Dis. Cu mg/L	Dis. Mn mg/L	Dis. Na mg/L	Dis. Pb mg/L	Dis. Zn mg/L
Aug-95	3.75	10.70	3.6	0.410	392	760	6.9	0.084	0.16	<0.02	0.002	1.63	33.00	<0.02	<0.01

1995 Faro Water Quality - ABS Results

SAMPLE SITE	Date	Alkalinity mg/L	Cl- mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	Acidity mg/L CaCo3		SO4 mg/L	NFR mg/L	pH	TURB FTU
								pH4.5	pH8.3				
X2	31/01/95	na	na	na	<0.001	na	0.006	na	na	17	<4	7.4	na
X2	24/02/95	na	na	na	<0.001	na	<0.005	na	na	24	<4	7.5	na
X2 - DIAND	06/03/95	163	<1	300	na	163	<0.050	na	na	21	<5	7.3	<1
X2	08/03/95	na	na	na	<0.001	na	0.008	na	na	21	<4	7.2	na
X2	17/04/95	na	na	na	<0.001	165	<0.005	na	na	na	<4	8.2	na
X2 - DIAND	09/05/95	33	<0.3	68	na	37	<0.050	na	na	4	6	7.3	7
X2	07/06/95	na	na	101	<0.001	na	0.011	na	na	7	5	8.0	na
X2	20/07/95	na	na	179	0.002	na	<0.050	na	na	20	2	7.8	na
X2	23/08/95	na	na	163	<0.001	na	<0.050	na	na	10	<1	8.0	na
X2	18/09/95	na	na	166	<0.001	na	0.050	na	na	11	<1	na	na
X2	16/10/95	na	na	211	<0.001	na	0.280	na	na	17	<1	7.8	na
X2	14/11/95	na	na	226	<0.001	na	<0.005	na	na	20	<5	7.7	na
X2	06/12/95	na	na	272	<0.001	na	2.090	na	na	32	<5	7.4	na
X3 - DIAND	06/03/95	104	1	230	na	118	<0.050	na	na	20	<5	7.7	<1
X3	08/03/95	na	na	na	<0.001	na	<0.005	na	na	19	<4	7.3	na
X3	20/07/95	na	na	165	<0.001	na	<0.050	na	na	22	<1	8.0	na
X3	23/08/95	na	na	179	<0.001	na	<0.050	na	na	15	<1	7.8	na
X3	18/09/95	na	na	174	<0.001	na	0.060	na	na	13	<1	8.0	na
X3	16/10/95	na	na	151	<0.001	na	0.140	na	na	15	<1	7.8	na
X3	14/11/95	na	na	205	<0.001	na	0.370	na	na	21	<5	7.7	na
X3	06/12/95	na	na	229	<0.001	na	0.100	na	na	18	<5	7.8	na
X4 - DIAND	08/05/95	54	<3	740	<0.005	359	0.150	na	na	338	<5	7.7	5
X4	07/06/95	na	na	1301	0.103	na	0.308	na	na	393	7	8.6	na
X4	22/06/95	87	na	1246	na	na	na	<0.5	1.2	407	na	7.6	na
X4	20/07/95	na	na	953	0.006	na	<0.050	na	na	508	5	7.8	na
X4	08/08/95	na	na	989	0.047	na	0.349	na	na	na	2	na	na
X4	16/08/95	na	na	1022	0.052	na	0.110	na	na	491	<1	8.1	na
X4	23/08/95	na	na	1001	0.044	na	0.170	na	na	535	<1	7.7	na
X4	07/09/95	na	na	1052	0.060	na	0.290	na	na	542	<1	9.1	na
X4	12/09/95	na	na	1080	0.060	na	0.210	na	na	529	3	8.8	na
X4	18/09/95	na	na	1128	0.089	na	0.200	na	na	525	<1	7.9	na
X4	28/09/95	na	na	991	0.084	na	0.240	na	na	548	<1	7.9	na
X4	03/10/95	na	na	1048	0.027	na	0.070	na	na	559	<1	7.9	na
X4	10/10/95	na	na	1058	0.129	na	0.140	na	na	510	<1	na	na
X4	16/10/95	na	na	940	0.153	na	0.410	na	na	512	6	7.7	na
X4	25/10/95	na	na	1068	0.163	na	0.340	na	na	479	na	7.7	na
X5	31/01/95	na	na	na	<0.001	na	0.627	na	na	495	4	7.5	na

1995 Faro Water Quality - ABS Results

SAMPLE SITE	Date	Alkalinity mg/L	Cl- mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	Acidity mg/L CaCo3		SO4 mg/L	NFR mg/L	pH	TURB FTU
								pH4.5	pH8.3				
X5	17/04/95	na	na	na	<0.001	na	0.458	na	na	na	12	7.8	na
X5 - DIAND	08/05/95	14	<3	530	0.005	235	0.200	na	na	284	8	9.4	6
X5	08/05/95	na	na	na	0.024	na	0.216	na	na	236	9	10.0	na
X5	07/06/95	na	na	1256	0.021	na	0.416	na	na	386	2	9.4	na
X5	20/07/95	na	na	942	0.017	na	<0.050	na	na	435	5	8.3	na
X5	08/08/95	na	na	949	0.009	na	0.246	na	na	na	3	8.3	na
X5	16/08/95	na	na	986	0.013	na	0.110	na	na	431	<1	8.4	na
X5	23/08/95	na	na	953	0.013	na	0.110	na	na	504	<1	8.0	na
X5	07/09/95	na	na	1064	0.014	na	0.250	na	na	447	1	9.6	na
X5	12/09/95	na	na	1490	0.002	na	0.420	na	na	640	1	9.9	na
X5	18/09/95	na	na	1164	0.013	na	0.250	na	na	482	<1	8.4	na
X5	03/10/95	na	na	1047	0.014	na	0.070	na	na	458	<1	8.5	na
X5	10/10/95	na	na	1087	0.014	na	0.140	na	na	495	1	8.7	na
X5	16/10/95	na	na	972	0.017	na	0.320	na	na	616	<1	8.6	na
X5	25/10/95	na	na	1072	0.017	na	0.390	na	na	421	na	8.3	na
X5	02/11/95	na	na	1122	0.015	484	0.320	na	na	472	<5	7.9	na
X5	09/11/95	na	na	1144	0.014	na	0.390	na	na	519	<5	8.0	na
X5	14/11/95	na	na	1142	0.016	na	<0.005	na	na	502	<5	7.8	na
X5	21/11/95	na	na	1166	0.017	na	0.210	na	na	482	<5	7.7	na
X5	30/11/95	na	na	1193	0.011	na	0.340	na	na	540	<5	7.7	na
X5	06/12/95	na	na	1198	0.012	na	0.410	na	na	500	<5	7.4	na
X5	11/12/95	244	na	1160	0.015	542	0.350	na	na	494	<5	7.5	na
X5	20/12/95	na	na	1152	0.011	na	0.060	na	na	519	<5	7.4	na
X5	29/12/95	na	na	946	0.008	na	0.447	na	na	527	<5	7.4	na
X5	04/01/96	na	na	1229	0.007	na	0.300	na	na	530	<5	na	na
X7	16/10/95	na	na	4480	0.133	na	0.460	na	na	4045	236	na	na
X7	14/11/95	na	na	5090	0.100	na	0.480	na	na	4057	156	na	na
X9A	14/11/95	na	na	209	0.724	na	0.420	na	na	53	na	na	na
X9F	12/09/95	na	na	304	4.230	na	0.260	na	na	76	1980	na	na
X10 - DIAND	08/05/95	53	1	107	0.018	60	<0.050	na	na	7	23	7.6	14
X10	20/07/95	na	na	196	0.002	na	<0.050	na	na	23	7	8.3	na
X10	18/09/95	na	na	216	<0.001	na	0.050	na	na	15	<1	8.2	na
X10	16/10/95	na	na	219	<0.001	na	0.140	na	na	273	2	8.1	na
X10	14/11/95	na	na	256	<0.001	na	0.900	na	na	57	<5	7.6	na
X11	31/01/95	na	na	na	<0.001	na	1.080	na	na	753	12	7.3	na
X11	24/02/95	na	na	na	0.001	na	1.100	na	na	725	11	7.6	na
X11 - DIAND	06/03/95	267	<5	1650	<0.005	885	1.000	na	na	753	10	7.3	40

1995 Faro Water Quality - ABS Results

SAMPLE SITE	Date	Alkalinity mg/L	Cl- mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	Acidity mg/L CaCo3		SO4 mg/L	NFR mg/L	pH	TURB FTU
								pH4.5	pH8.3				
X11	08/03/95	na	na	na	<0.001	na	0.861	na	na	755	12	7.1	na
X11	17/04/95	na	na	na	<0.001	na	1.010	na	na	na	10	7.4	na
X11 - DIAND	08/05/95	232	<5	1500	0.005	813	0.940	na	na	683	10	7.7	40
X11	08/05/95	na	na	na	<0.001	na	0.914	na	na	659	12	7.2	na
X11	07/06/95	na	na	1997	0.003	na	1.020	na	na	584	8	7.3	na
X11	20/07/95	na	na	1530	0.001	na	1.010	na	na	716	8	7.2	na
X12	31/01/95	na	na	na	<0.001	na	0.811	na	na	491	4	7.3	na
X12	24/02/95	na	na	na	<0.001	na	0.773	na	na	372	<4	7.8	na
X12 - DIAND	06/03/95	181	<3	860	<0.005	389	0.060	na	na	276	<5	7.4	1
X12	08/03/95	na	na	na	<0.001	na	0.061	na	na	299	<4	7.1	na
X12	17/04/95	na	na	na	<0.001	na	0.635	na	na	na	<4	7.4	na
X12 - DIAND	08/05/95	174	3	870	<0.005	388	0.060	na	na	284	<5	7.9	1
X12	08/05/95	na	na	na	0.016	na	0.050	na	na	268	<4	7.5	na
X12	07/06/95	na	na	1623	0.004	na	0.694	na	na	492	4	7.3	na
X12	20/07/95	na	na	1212	<0.001	na	0.540	na	na	486	6	7.2	na
X13	31/01/95	na	na	na	<0.001	na	1.030	na	na	1220	8	7.5	na
X13	24/02/95	na	na	na	<0.001	na	0.948	na	na	350	16	7.8	na
X13 - DIAND	06/03/95	257	<5	1400	<0.005	684	0.880	na	na	530	8	7.7	29
X13	08/03/95	na	na	na	<0.001	na	0.806	na	na	547	12	7.1	na
X13	17/04/95	na	na	na	<0.001	na	0.784	na	na	na	<4	7.5	na
X13 - DIAND	08/05/95	213	<5	1300	<0.005	693	0.780	na	na	547	6	7.6	24
X13	08/05/95	na	na	na	<0.001	na	0.798	na	na	540	8	7.3	na
X13	07/06/95	na	na	1772	<0.001	na	0.788	na	na	395	9	7.3	na
X13	20/07/95	na	na	1309	0.001	na	<0.050	na	na	582	10	7.3	na
X13	08/08/95	na	na	1250	0.001	na	0.843	na	na	na	6	7.2	na
X13	16/08/95	8	na	1303	0.001	na	0.610	na	na	536	2	na	na
X13	16/08/95	na	na	1303	0.001	na	0.610	na	na	536	2	7.5	na
X13	23/08/95	na	na	1296	<0.001	na	0.680	na	na	656	4	7.4	na
X13	07/09/95	na	na	1337	<0.001	na	0.880	na	na	545	6	9.9	na
X13	12/09/95	na	na	1382	<0.001	na	0.990	na	na	530	5	7.8	na
X13	18/09/95	na	na	1446	<0.001	na	0.850	na	na	541	<1	7.2	na
X13	28/09/95	na	na	1341	<0.001	na	0.980	na	na	607	<1	7.3	na
X13	03/10/95	na	na	1441	0.001	na	0.770	na	na	615	3	7.3	na
X13	10/10/95	na	na	1307	0.001	na	0.630	na	na	551	3	7.5	na
X13	16/10/95	na	na	1203	<0.001	na	0.920	na	na	501	9	7.2	na
X13	25/10/95	na	na	1370	<0.001	na	1.230	na	na	512	na	7.0	na
X13	02/11/95	na	na	1324	<0.001	650	1.080	na	na	555	8	7.0	na

1995 Faro Water Quality - ABS Results

SAMPLE SITE	Date	Alkalinity mg/L	Cl- mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	Acidity mg/L CaCo3		SO4 mg/L	NFR mg/L	pH	TURB FTU
								pH4.5	pH8.3				
X13	09/11/95	na	na	1373	<0.001	na	1.160	na	na	601	7	7.3	na
X13	14/11/95	na	na	1220	<0.001	na	0.160	na	na	584	5	7.3	na
X13	21/11/95	na	na	1376	0.003	na	0.820	na	na	595	5	7.3	na
X13	30/11/95	na	na	1335	<0.001	na	0.970	na	na	578	<5	7.3	na
X13	06/12/95	na	na	1331	<0.001	na	1.070	na	na	578	6	7.4	na
X13	11/12/95	309	na	1355	0.002	581	1.060	na	na	608	8	7.3	na
X13	20/12/95	na	na	1319	<0.001	na	0.240	na	na	497	5	7.4	na
X13	29/12/95	na	na	1345	<0.001	na	0.866	na	na	551	8	7.4	na
X14 - DIAND	06/03/95	143	1	490	0.008	246	0.130	na	na	113	<5	7.8	2
X14 - DIAND	06/03/95	133	1	500	0.005	250	0.130	na	na	114	<5	7.8	2
X14	08/03/95	na	na	na	<0.001	na	0.086	na	na	109	<4	7.3	na
X14 - DIAND	08/05/95	49	<1	45	<0.005	93	<0.050	na	na	40	22	7.4	11
X14	08/05/95	na	na	na	<0.001	na	0.038	na	na	42	na	7.9	na
X14	20/07/95	na	na	345	0.002	na	<0.050	na	na	70	7	8.0	na
X14	23/08/95	na	na	380	<0.001	na	<0.050	na	na	93	<1	7.8	na
X14	16/10/95	na	na	408	<0.001	na	0.180	na	na	165	<1	8.1	na
X14	14/11/95	na	na	627	0.004	na	0.580	na	na	246	<5	7.7	na
X14	06/12/95	na	na	1122	0.005	na	0.510	na	na	408	<5	7.5	na
X16A	01/08/95	na	na	na	na	na	<0.005	na	na	28	97	9.4	na
X16B	01/08/95	na	na	na	na	na	<0.005	na	na	25	279	7.9	na
X17A	01/08/95	na	na	na	na	na	0.036	na	na	26	751	8.4	na
X17B	01/08/95	na	na	na	na	na	0.056	na	na	26	126	8.7	na
X18A	01/08/95	na	na	na	na	na	0.090	na	na	397	105	7.2	na
X18B	01/08/95	na	na	na	na	na	0.410	na	na	392	760	6.9	na
X23	31/01/95	na	na	na	na	na	0.515	na	na	2810	10	7.0	na
X23	24/02/95	na	na	na	<0.001	na	0.465	na	na	2560	11	7.2	na
X23 - DIAND	06/03/95	524	19	4400	na	3870	0.380	na	na	3200	<5	7.1	1
X23	08/03/95	na	na	na	<0.001	na	0.450	na	na	2700	7	6.8	na
X23	17/04/95	na	na	na	<0.001	na	0.606	na	na	na	54	6.8	na
X23 - DIAND	08/05/95	484	20	na	na	3220	0.480	na	na	2850	<5	7.2	2
X23	08/05/95	na	na	4520	<0.001	na	0.634	na	na	2650	10	6.9	na
X23	07/06/95	na	na	7327	0.006	na	0.438	na	na	2587	10	7.0	na
X23	20/07/95	na	na	4250	0.001	na	0.600	na	na	2536	10	7.0	na
X23	23/08/95	na	na	4160	0.003	na	0.680	na	na	2891	2	7.1	na
X23	18/09/95	na	na	4540	<0.001	na	0.800	na	na	2574	<1	6.8	na
X23	16/10/95	na	na	3650	<0.001	na	0.920	na	na	2541	<1	6.9	na
X23	14/11/95	na	na	4800	0.003	na	<0.005	na	na	2561	7	7.0	na

1995 Faro Water Quality - ABS Results

SAMPLE SITE	Date	Alkalinity mg/L	Cl- mg/L	Conductivity uS/cm	Cu-tot mg/L	Hardness mg/L	NH3 mg/L	Acidity mg/L CaCo3		SO4 mg/L	NFR mg/L	pH	TURB FTU
								pH4.5	pH8.3				
X23	11/12/95	na	na	4740	0.002	na	0.470	na	na	2611	5	7.0	na
X26	07/06/95	na	na	4393	<0.001	na	0.572	na	na	1166	16	6.4	na
R4	02/08/95	na	na	na	<0.001	na	<0.005	na	na	48	1	na	na
R5	02/08/95	na	na	na	<0.001	na	<0.005	na	na	29	<1	na	na
R6	02/08/95	na	na	na	<0.001	na	<0.005	na	na	24	2	na	na
R7	27/03/95	na	na	na	na	na	na	na	na	11	na	7.6	na
R7	20/07/95	93	4	150	na	na	na	<0.1	1.6	9	na	8.3	na
R7	23/08/95	89	4	147	na	na	<0.050	<0.1	0.8	10	<1	8.4	na
R7	18/09/95	na	na	174	na	na	0.050	na	na	13	<1	8.4	na
R7	16/10/95	115	4	188	0.001	na	0.090	<0.1	<0.1	52	na	7.8	na
R7	14/11/95	na	3	180	na	na	<0.005	<0.1	21.8	26	<5	7.4	na
R7	11/12/95	166	4	249	na	na	<0.005	<0.1	4	20	<5	7.5	na
R8	27/03/95	149	<0.05	296	na	na	na	<0.5	2.5	15	na	7.6	na
R8	18/04/95	139	<0.05	273	na	na	na	<0.5	8.4	13	na	7.6	na
R8	07/06/95	47	0	104	na	na	na	<0.1	6	17	na	7.1	na
R8	20/07/95	99	4	157	na	na	na	<0.1	1.2	13	na	7.9	na
R8	23/08/95	90	4	148	na	na	na	<0.1	<0.1	9	na	8.0	na
R8	16/10/95	111	4	190	na	na	na	<0.1	<0.1	11	na	8.0	na
R8	14/11/95	na	3	218	na	na	0.050	<0.1	<0.1	14	<5	7.4	na
R8	11/12/95	251	5	247	na	na	<0.005	<0.1	18	12	<5	7.3	na
R9	27/03/95	149	<0.05	275	na	na	na	<0.5	2.7	15	na	7.6	na
R9	18/04/95	140	1	275	na	na	na	<0.5	2.1	13	na	7.4	na
R9	07/06/95	53	0	104	na	na	na	<0.1	7	39	na	7.6	na
R9	22/06/95	70	na	150	na	na	na	<0.5	6.8	12	na	7.7	na
R9	20/07/95	99	4	162	na	na	na	<0.1	0.8	16	na	7.5	na
R9	23/08/95	75	4	139	na	na	na	<0.1	0.8	10	na	7.8	na
R9	16/10/95	111	4	188	na	na	na	<0.1	40	14	na	7.2	na
R9	14/11/95	na	4	221	na	na	<0.005	<0.1	140	12	<5	7.3	na
R9	11/12/95	160	4	319	na	na	<0.005	<0.1	38	18	<5	7.2	na
R10	27/03/95	149	<0.05	276	na	na	na	<0.5	2.1	15	na	8.0	na
R10	18/04/95	140	1	278	na	na	na	<0.5	2.8	13	na	7.4	na
R10	07/06/95	45	1	99	na	na	na	<0.1	7	38	na	7.9	na
R10	20/07/95	97	4	161	na	na	na	<0.1	0.8	13	na	8.5	na
R10	23/08/95	92	4	148	na	na	<0.005	<0.1	1.2	11	<1	7.9	na
R10	16/10/95	125	4	186	0.001	na	0.090	<0.1	48	14	na	7.1	na
R10	14/11/95	na	4	225	na	na	<0.005	<0.1	2	13	<5	7.3	na

1995 Faro Water Quality - ABS Results

SAMPLE SITE	Date	Alkalinity mg/L	Cl- mg/L	Conductivity uS/cm	Cn-tot mg/L	Hardness mg/L	NH3 mg/L	Acidity mg/L CaCo3		SO4 mg/L	NFR mg/L	pH	TURB FTU
								pH4.5	pH8.3				
R10	11/12/95	158	4	278	na	na	<0.005	<0.1	6	19	<5	7.1	na
BH1	18/04/95	145	na	na	<0.001	na	0.097	na	na	31	na	6.2	na
BH1	07/06/95	70	na	na	<0.001	na	0.085	<0.1	60	36	na	6.5	na
BH1	02/08/95	151	na	327	na	na	na	na	na	23	3940	6.2	na
BH1	18/09/95	173	na	495	<0.001	na	<0.005	<0.10	12	100	na	6.4	na
BH1	16/10/95	147	na	na	0.001	na	0.140	<0.1	74	35	na	5.1	na
BH1	14/11/95	na	na	na	0.001	na	0.110	<0.1	2.1	48	na	6.7	na
BH2	18/04/95	99	na	na	<0.001	na	0.009	na	na	30	na	6.5	na
BH2	02/08/95	116	na	412	na	na	na	na	na	89	110	6.5	na
BH2	18/09/95	140	na	562	<0.001	na	<0.005	<0.10	<0.10	161	na	6.3	na
BH2	16/10/95	130	na	na	0.001	na	0.090	<0.1	32	114	na	5.2	na
BH2	14/11/95	na	na	na	<0.001	na	0.050	<0.1	16.8	173	na	6.5	na
BH2	11/12/95	na	na	353	0.002	na	0.120	20	200	62	na	6.8	na
BH4	18/04/95	<0.5	na	na	<0.001	na	0.425	na	na	302	na	4.8	na
BH4	07/06/95	<1	na	na	<0.001	na	3.370	702	1383	2586	na	3.2	na
BH4	02/08/95	<1	na	3000	na	na	na	578	1858	1915	134	3.2	na
BH4	18/09/95	na	na	na	na	na	na	na	na	na	na	3.3	na
BH4	16/10/95	<0.1	na	na	0.002	na	3.080	424	550	1659	na	2.5	na
BH4	14/11/95	na	na	na	<0.001	na	2.490	108	1282	1409	na	3.5	na
BH4	11/12/95	na	na	741	0.002	na	0.530	20	200	405	na	2.5	na
BH5	02/08/95	149	na	675	na	na	na	na	na	254	5700	5.9	na
BH6	02/08/95	69	na	461	na	na	na	na	na	167	4550	6.1	na
BH7A	07/06/95	123	na	na	<0.001	na	0.021	<0.1	17	45	na	6.8	na
BH7A	02/08/95	122	na	345	na	na	na	na	na	56	5910	6.4	na
BH7B	07/06/95	110	na	na	<0.001	na	0.018	<0.1	35	45	na	6.7	na
BH7B	02/08/95	120	na	277	na	na	na	na	na	25	7770	6.5	na
BH9	02/08/95	7	na	993	na	na	na	na	na	570	4990	na	na
BH10A	02/08/95	145	na	455	na	na	na	na	na	98	1210	6.5	na
BH10B	02/08/95	410	na	1090	na	na	na	na	na	253	1680	5.8	na
BH11	02/08/95	na	na	na	na	na	na	na	na	377	na	na	na
BH12A	02/08/95	167	na	1280	na	na	na	na	na	558	123	7.0	na
BH12B	02/08/95	200	na	1240	na	na	na	na	na	496	127	7.4	na
BH14A	02/08/95	354	na	2670	na	na	na	na	na	973	619	7.4	na
BH14B	02/08/95	324	na	2400	na	na	na	na	na	906	209	7.5	na

1995 Faro Water Quality - ICP Results

SAMPLE SITE	Type	Date	Ag mg/L	Al mg/L	As mg/L	Au mg/L	Ba mg/L	Be mg/L	Bi mg/L	Ca mg/L	Cd mg/L	Cu mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Hg mg/L	La mg/L	Mg mg/L	Mn mg/L	Mo mg/L	Na mg/L	Ni mg/L	P mg/L	Ph mg/L	S mg/L	Sb mg/L	Si mg/L	Sr mg/L	Ti mg/L	V mg/L	W mg/L	Zn mg/L
N2	TOT	31 01 95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	3.5	na	na	0.03	na	na	na	na	na	na	na	0.050
N2	TOT	24 02 95	0.050	0.06	0.04	na	0.081	0.001	0.02	52.7	0.002	0.004	0.002	0.002	0.20	na	na	9.78	0.095	0.004	4.3	0.110	0.04	0.03	7.5	0.02	5.80	0.217	0.003	0.003	na	0.160
N2 - DIAND	TOT	06 03 95	0.001	0.01	0.02	na	0.094	0.0002	0.02	49.6	0.0005	0.001	0.001	0.020	0.16	na	na	9.54	0.089	0.005	4.2	0.001	0.06	0.01	7.0	0.02	7.38	0.240	0.003	0.003	na	0.005
N2	TOT	08 03 95	0.030	0.06	0.04	na	0.084	0.001	0.02	51.2	0.002	0.004	0.006	0.002	0.15	na	na	10.30	0.086	0.004	4.2	0.010	0.04	0.03	7.2	0.02	6.30	0.225	0.003	0.003	na	0.040
N2	TOT	17 04 95	0.050	0.06	0.04	na	0.079	0.001	0.02	49.9	0.002	0.004	0.002	0.002	0.24	na	na	9.89	0.079	0.004	4.0	0.010	0.04	0.03	7.1	0.02	6.40	0.207	0.003	0.003	na	0.070
N2 - DIAND	TOT	09 05 95	0.001	0.52	0.02	na	0.032	0.0002	0.02	10.3	0.0005	0.001	0.001	0.021	0.71	na	na	1.92	0.076	0.005	1.1	0.002	0.06	0.02	1.3	0.02	3.60	0.050	0.011	0.002	na	0.018
N2	TOT	07 06 95	0.003	0.18	0.02	0.01	0.029	0.001	0.04	13.9	0.002	0.005	0.005	0.003	0.32	-0.03	0.005	4.10	0.040	0.002	1.0	0.005	0.04	0.02	na	0.02	2.45	0.055	0.005	0.072	0.02	0.010
N2	TOT	20 07 95	0.003	0.08	-0.02	-0.01	0.014	0.001	0.04	21.2	0.002	0.005	0.005	0.002	0.22	0.03	0.005	4.60	0.020	0.002	1.0	0.005	0.04	-0.02	3.2	0.02	0.68	0.111	0.005	0.005	0.02	0.010
N2	TOT	23 08 95	0.003	0.22	0.02	0.01	0.044	0.001	0.04	20.5	0.002	0.005	0.005	0.002	0.22	0.03	0.005	4.10	0.020	0.002	1.0	0.005	0.04	0.02	2.9	0.02	1.63	0.092	0.005	0.005	0.02	0.010
N2	TOT	23 08 95	0.003	0.22	-0.02	0.01	0.039	0.001	0.04	20.7	0.002	0.005	0.005	0.003	0.23	0.03	0.005	4.10	0.020	0.002	1.0	0.005	0.04	0.02	2.3	0.02	1.65	0.091	0.005	0.005	0.02	0.010
N2	TOT	18 09 95	0.003	1.00	-0.02	-0.01	0.044	0.001	0.04	18.3	-0.002	0.005	-0.005	0.002	0.82	0.03	0.005	4.00	0.020	0.002	6.0	0.005	0.04	0.02	7.0	0.02	9.02	0.092	0.057	0.005	0.02	0.010
N2	TOT	16 10 95	0.003	0.31	-0.02	0.01	0.051	0.001	0.04	29.8	0.002	0.005	0.023	0.011	0.70	-0.03	0.005	6.50	0.100	0.002	1.0	0.021	0.04	0.02	8.0	0.02	1.27	0.137	0.005	0.016	0.02	0.040
N2	TOT	14 11 95	0.003	0.18	-0.02	0.01	0.073	0.001	0.04	35.7	0.002	0.005	0.005	0.006	0.92	0.03	0.005	7.20	0.070	0.003	1.0	0.005	0.04	0.02	10.0	0.02	2.57	0.137	0.005	0.005	0.02	0.020
N2	TOT	06 12 95	0.003	0.17	-0.02	0.01	0.076	-0.001	0.04	40.8	-0.002	0.005	0.005	-0.002	0.19	-0.03	0.005	7.90	0.060	0.002	1.0	0.005	0.04	0.02	8.0	0.02	3.12	0.148	0.005	0.005	0.02	0.020
N3 - DIAND	TOT	06 03 95	0.001	0.01	0.02	na	0.055	-0.002	0.02	36.8	0.0005	0.001	0.001	0.018	0.27	na	na	6.38	0.029	0.005	2.5	0.001	0.06	0.01	5.7	0.02	5.20	0.190	0.002	0.002	na	0.005
N3	TOT	08 03 95	0.030	0.06	-0.04	na	0.051	-0.001	0.02	38.5	0.002	0.004	0.002	0.002	0.09	na	na	7.09	0.024	0.004	2.9	0.010	0.04	0.03	6.4	0.02	4.70	0.185	0.003	0.003	na	0.010
N3	TOT	20 07 95	0.003	0.14	0.02	0.01	0.033	-0.001	0.04	20.4	0.002	0.005	0.005	0.002	0.21	-0.03	0.005	4.80	0.020	0.002	2.0	0.005	0.04	0.02	8.8	0.02	1.13	0.116	0.005	0.005	0.02	0.010
N3	TOT	23 08 95	0.003	0.27	-0.02	0.01	0.048	-0.001	0.04	23.3	-0.002	0.005	0.005	0.015	0.22	0.03	0.005	4.60	0.020	0.002	1.0	0.005	0.04	-0.02	3.8	0.02	1.67	0.107	0.005	0.005	0.02	0.010
N3	TOT	18 09 95	0.003	0.66	0.02	0.01	0.047	-0.001	0.04	25.9	-0.002	0.005	0.005	0.014	0.27	0.03	0.005	4.40	0.020	0.007	6.0	0.005	0.04	-0.02	6.0	-0.02	7.03	0.112	0.012	0.005	0.02	0.040
N3	TOT	18 09 95	0.003	0.51	-0.02	0.01	0.046	0.001	0.04	19.6	-0.002	0.005	0.005	0.011	0.36	-0.03	0.005	4.20	0.020	0.002	2.0	0.005	0.04	0.02	9.0	0.02	6.41	0.110	0.010	0.005	0.02	0.060
N3	TOT	16 10 95	0.003	0.26	0.02	0.01	0.030	-0.001	0.04	22.1	-0.002	0.005	-0.005	-0.002	0.24	-0.03	0.005	4.40	0.030	0.002	1.0	0.005	0.04	0.02	13.0	0.02	0.81	0.112	0.005	0.005	0.02	0.010
N3	TOT	16 10 95	0.003	0.23	-0.02	0.01	0.038	-0.001	0.04	22.9	-0.002	0.005	0.005	0.003	0.37	-0.03	0.005	4.40	0.010	0.002	1.0	0.006	0.04	-0.02	7.0	-0.02	0.89	0.093	0.005	0.005	0.02	0.040
N3	TOT	14 11 95	0.003	0.10	-0.02	0.01	0.049	-0.001	0.04	31.3	-0.002	0.005	0.005	0.002	0.27	0.03	0.005	6.40	0.030	0.002	1.0	0.005	0.04	0.02	1.0	0.03	2.11	0.130	0.005	0.005	0.02	0.010
N3	TOT	14 11 95	0.003	0.11	0.02	0.01	0.055	0.001	0.04	32.3	0.002	0.005	0.005	0.003	0.22	0.03	0.005	6.70	0.040	0.002	1.0	0.005	0.04	-0.02	10.0	0.02	2.09	0.138	0.005	0.005	0.02	0.010
N3	TOT	06 12 95	0.003	0.09	-0.02	0.01	0.073	-0.001	0.04	35.5	-0.002	0.005	-0.005	-0.002	0.12	-0.03	0.005	5.10	0.010	0.002	1.0	0.005	0.04	0.03	5.0	0.02	2.10	0.128	0.005	0.005	0.02	0.010
N3 - DIAND	TOT	08 05 95	0.001	0.02	0.02	na	0.075	0.0002	-0.02	106.0	0.003	0.013	0.001	0.019	0.64	na	na	21.00	3.340	0.005	9.3	0.021	0.06	0.04	100.0	-0.02	2.01	0.350	0.003	0.004	na	4.200
N4	TOT	07 06 95	0.003	0.88	0.02	0.03	0.122	-0.001	0.04	134.6	0.002	0.005	0.005	0.009	0.41	-0.03	0.005	29.90	3.830	0.002	11.0	0.005	0.30	-0.02	na	0.02	2.02	0.427	0.005	0.050	0.02	2.980
N4	TOT	07 06 95	0.003	0.81	-0.02	0.01	0.116	-0.001	0.04	129.7	-0.002	0.005	0.005	0.008	0.66	-0.03	0.005	26.80	3.600	0.002	10.0	0.005	0.21	-0.02	na	0.02	1.82	0.399	0.005	0.015	0.02	2.840
N4	TOT	22 06 95	0.003	1.00	0.02	0.005	0.079	-0.001	0.05	142.9	0.009	0.007	0.005	0.004	0.10	-0.02	0.005	29.50	4.910	0.002	13.0	0.016	0.05	-0.02	na	0.02	2.10	0.519	-0.005	0.009	0.02	2.580
N4	TOT	20 07 95	0.003	0.90	0.03	0.01	0.024	0.003	0.04	129.9	0.007	0.011	0.005	0.016	0.14	0.03	0.005	29.30	3.730	0.002	14.0	0.020	0.31	0.04	144.0	-0.02	0.52	0.490	0.005	0.005	0.02	3.790
N4	TOT	20 07 95	0.003	0.88	0.04	0.01	0.027	0.002	0.04	134.6	0.008	0.013	0.005	0.018	0.15	0.03	0.005	29.10	3.820	0.005	14.0	0.022	0.28	0.04	150.6	0.02	0.60	0.494	0.005	0.005	0.02	3.890
N4	TOT	08 08 95	0.003	1.09	-0.02	0.01	0.047	0.002	-0.04	124.3	0.006	0.020	0.005	0.016	-0.13	-0.03	0.005	25.00	4.040	0.002	12.0	0.008	0.04	-0.02	149.6	0.02	1.61	0.426	0.005	0.005	0.02	4.130
N4	TOT	16 08 95	0.003	1.12	-0.02	0.01	0.038	0.002	-0.04	125.8	0.005	0.005	-0.005	0.021	0.09	-0.03	0.005	25.70	4.050	0.002	13.0	0.006	0.04	0.03	177.6	-0.02	1.37	0.441	0.005	0.005	0.02	3.420
N4	TOT	23 08 95	0.003	1.24	0.04	0.01	0.038	0.002	-0.04	143.5	0.003	0.005	0.005	0.019	0.08	0.03	0.005	27.20	4.190	0.002	13.0	0.005	0.07	0.02	188.7	0.02	1.37	0.472	0.005	0.005	0.02	3.920
N4	TOT	07 09 95	0.003	1.03	0.02	0.01	0.031	0.003	-0.04	142.3	0.005	0.011	0.005	0.005	0.20	0.03	0.005	26.70	4.730	0.002	13.0	0.014	0.35	0.05	174.9	0.02	1.61	0.461	0.005	0.005	0.02	4.870
N4	TOT	12 09 95	0.003	1.07	0.02	0.01	0.087	0.002	-0.04	131.0	0.004	0.005	0.005	0.029	2.09	-0.03	0.005	26.40	4.660	0.002	12.0	0.022	-0.04	0.03	167.0	-0.02	1.74	0.468	0.005	0.005	0.02	4.870
N4	TOT	18 09 95	0.003	1.27	0.02	0.01	0.056	0.001	-0.04	126.6	0.006	0.009	0.005	0.011	0.52	-0.03	0.005	25.80	4.520	0.003	17.0	0.018	0.09	0.02	183.0	-0.02	7.39	0.458	0.021	0.005	0.02	4.320
N4	TOT	28 09 95	0.003	1.25	-0.02	0.01	0.023	0.001	-0.04	122.7	0.002	0.005	0.005	-0.002	0.09	-0.03	0.005	27.50	4.330	0.002	14.0	0.017	0.04	0.02	172.0	0.02	1.40	0.412	0.005	0.005	0.02	3.930
N4	TOT	28 09 95	0.003	1.15	0.02	0.01	0.019	0.001	0.04	117.1	0.003	0.005	0.005	0.003	0.11	0.03	0.005	26.60	4.150	0.002	14.0	0.016	0.04	0.02	175.0	0.02	1.47	0.402				

SAMPLE SITE	Type	Date	Ng	Al	As	Au	Ba	Be	Bi	Cu	Ca	Cd	Co	Cr	Cu	Fe	Hg	Ia	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Si	Sr	Ti	V	W	Zn
N3	TOT	02-11-95	0.003	0.77	0.02	-0.01	0.033	0.002	-0.04	148.4	0.002	-0.002	0.005	0.005	0.009	1.05	0.03	0.005	26.80	4.050	0.004	33.0	0.011	0.09	0.02	134.0	0.02	2.20	0.419	0.015	0.005	0.02	0.400
N3	TOT	09-11-95	0.003	0.67	0.02	-0.01	0.050	0.002	0.04	158.3	0.002	0.002	0.005	0.005	0.010	0.27	0.03	0.005	28.10	4.530	0.002	34.0	0.006	0.04	0.02	127.0	0.02	2.15	0.429	0.005	0.005	0.02	0.360
N5	TOT	09-11-95	0.003	0.67	0.02	-0.01	0.039	0.002	0.04	163.5	0.002	0.002	0.005	0.005	0.009	0.31	0.03	0.005	29.20	4.550	0.002	35.0	0.005	0.04	0.02	139.0	0.02	2.24	0.437	0.005	0.005	0.02	0.370
N5	TOT	14-11-95	0.003	0.78	0.02	-0.01	0.048	0.003	-0.04	164.5	0.002	-0.002	0.005	0.005	0.011	0.42	-0.03	0.005	29.50	4.830	0.002	36.0	0.005	0.11	-0.02	144.0	0.02	2.34	0.446	-0.005	0.005	0.02	0.340
N5	TOT	21-11-95	0.003	0.56	0.02	-0.01	0.055	0.001	0.04	149.4	0.002	0.002	0.005	0.005	0.006	0.53	-0.03	0.005	27.60	4.820	0.002	31.0	0.005	-0.04	0.02	136.0	0.02	2.40	0.410	0.005	0.005	0.02	0.310
N5	TOT	30-11-95	0.003	0.53	0.02	-0.01	0.040	0.001	0.04	155.9	0.002	0.002	0.005	0.005	0.008	0.36	-0.02	0.005	27.60	5.000	0.002	33.0	0.005	0.08	0.02	183.0	0.02	2.82	0.395	0.005	0.005	0.02	0.330
N5	TOT	30-11-95	0.003	0.54	0.02	-0.01	0.039	0.001	-0.04	161.1	-0.002	-0.002	0.005	0.005	0.008	0.36	-0.02	0.005	28.10	5.140	0.002	32.0	0.005	0.09	-0.02	190.0	0.02	2.19	0.416	0.005	0.005	0.02	0.340
N5	TOT	06-12-95	0.003	0.68	0.02	-0.01	0.046	0.002	-0.04	170.3	0.002	0.002	0.005	0.005	0.008	0.56	-0.03	0.005	28.40	5.560	0.002	32.0	0.011	0.04	0.03	167.0	0.02	2.73	0.411	0.018	0.005	0.02	0.340
N5	TOT	12-12-95	0.003	0.60	0.02	-0.01	0.041	0.002	0.04	170.3	0.002	0.002	0.005	0.005	0.008	0.46	-0.03	0.005	28.30	6.050	0.002	36.0	0.009	0.07	0.02	136.0	0.02	2.43	0.418	0.005	0.005	0.02	0.310
N5	TOT	20-12-95	0.003	0.67	0.02	-0.01	0.045	0.002	0.04	173.8	0.003	0.003	0.005	0.005	0.005	0.57	-0.03	0.005	31.60	6.170	0.002	33.0	0.005	0.18	-0.02	171.0	0.02	2.58	0.426	0.005	0.005	0.02	0.310
N5	TOT	29-12-95	0.003	0.67	0.02	-0.01	0.048	0.003	0.09	182.9	0.002	0.002	0.005	0.005	0.009	0.77	-0.03	0.005	30.00	6.650	0.002	34.0	0.005	0.04	0.02	163.0	0.02	2.63	0.446	0.005	0.005	0.02	0.300
N7	TOT	16-10-95	0.003	4.32	0.14	-0.01	0.207	0.008	0.04	502.0	0.027	0.226	0.005	0.005	0.092	701.10	-0.03	0.031	203.80	25.050	0.002	61.0	0.122	0.04	0.13	289.0	0.02	4.15	2.260	0.016	0.005	0.04	97.990
N7	TOT	14-11-95	0.003	2.87	0.13	-0.01	0.210	0.010	-0.04	530.9	0.044	0.212	0.005	0.005	0.101	774.10	-0.03	0.031	217.70	30.160	0.002	59.0	0.099	0.36	0.09	135.0	0.08	6.20	2.561	0.010	0.005	0.02	110.760
N9	TOT	12-09-95	0.340	52.80	78.70	-0.01	0.830	0.040	-0.04	488.3	0.530	0.530	2.150	1.080	31.410	4700.00	-0.03	0.050	182.60	87.100	0.070	2.210	17.10	0.02	125.50	na	1.10	26.10	4.010	0.270	0.100	0.02	363.400
N9A	DIS	14-11-95	0.003	0.12	-0.02	-0.01	0.057	0.001	-0.04	434.5	-0.002	-0.002	0.005	0.005	0.038	0.61	-0.03	0.005	7.00	0.250	0.002	7.0	0.016	0.11	0.03	30.0	0.02	1.76	0.348	0.005	0.005	0.02	0.110
N10	TOT	08-05-95	0.001	0.65	-0.02	na	0.045	0.0002	0.02	15.3	0.0005	0.001	0.001	0.004	0.017	1.60	na	na	3.69	0.008	0.005	1.2	0.006	0.06	0.02	2.2	0.02	3.98	0.070	0.019	0.004	na	0.051
N10	TOT	20-07-95	0.003	0.17	0.02	0.01	0.003	0.001	0.04	21.6	0.002	0.002	0.005	0.005	0.002	0.28	0.03	0.005	6.10	0.040	0.002	1.0	0.016	0.10	0.02	14.2	0.02	1.06	0.128	0.005	0.005	0.02	0.010
N10	TOT	18-09-95	0.003	0.04	0.02	-0.01	0.036	0.001	0.04	20.0	0.002	0.002	0.005	0.005	0.002	0.22	0.03	0.005	5.30	0.010	0.002	1.0	0.005	0.04	0.02	5.0	0.02	2.21	0.101	0.005	0.005	0.02	0.010
N10	TOT	16-10-95	0.003	0.29	-0.02	-0.01	0.043	0.001	0.04	27.6	0.002	0.002	0.005	0.005	0.002	1.38	-0.03	0.005	6.50	0.010	0.002	1.0	0.005	0.04	0.02	11.0	0.02	0.94	0.125	-0.005	0.005	0.02	0.010
N10	TOT	14-11-95	0.003	0.19	0.02	-0.01	0.064	0.001	-0.04	40.5	-0.002	-0.002	0.005	0.005	0.007	0.30	-0.03	0.005	9.10	0.120	0.002	1.0	0.005	0.04	0.02	15.0	-0.02	2.19	0.165	0.005	0.005	0.02	0.130
N11	TOT	31-01-95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	11.500	na	na	55.9	na	na	na	na	na	na	na	na	na	na	0.340
N11	TOT	24-02-95	0.030	0.06	0.05	na	0.088	0.001	-0.02	288.0	-0.002	-0.002	0.013	0.006	0.002	4.15	na	na	45.50	12.300	0.004	59.7	0.020	0.04	0.03	238.0	0.02	7.30	0.679	0.003	0.003	na	0.990
N11	TOT	06-03-95	0.001	0.02	0.02	na	0.101	0.0002	-0.02	269.0	0.0005	0.0005	0.014	0.004	0.041	4.12	na	na	23.90	12.900	0.005	53.3	0.022	0.06	0.01	225.0	-0.02	9.46	0.750	0.006	0.005	na	0.005
N11	TOT	08-03-95	0.030	0.06	0.04	na	0.092	0.001	-0.02	286.0	-0.002	-0.002	0.015	0.003	0.002	4.22	na	na	49.00	13.000	0.004	60.8	0.020	0.04	0.03	249.0	0.02	7.80	0.726	0.003	0.003	na	0.040
N11	TOT	17-04-95	0.030	0.06	0.04	na	0.094	0.001	-0.02	305.0	-0.002	-0.002	0.011	0.022	-0.002	4.20	na	na	50.30	12.900	0.004	60.9	0.020	0.04	0.03	238.0	-0.02	8.30	0.735	0.007	0.003	na	0.010
N11	TOT	08-05-95	0.030	0.07	0.04	na	0.077	0.0002	-0.02	264.0	-0.002	-0.002	0.014	0.002	0.012	2.11	na	na	44.50	10.900	0.004	54.8	0.020	-0.04	0.03	225.0	-0.02	7.30	0.644	0.004	0.003	na	0.020
N11	TOT	08-05-95	0.001	0.93	0.02	na	0.079	0.0002	-0.02	247.0	0.0005	0.010	0.005	0.005	0.012	3.42	na	na	44.00	11.300	0.005	54.1	0.019	0.06	0.01	208.0	0.02	8.47	0.600	0.004	0.004	na	0.015
N11	TOT	07-06-95	0.003	1.03	-0.02	-0.01	0.085	0.003	0.04	204.9	0.002	0.002	0.005	0.005	0.005	2.50	-0.03	0.005	38.10	8.320	0.002	38.0	0.005	0.04	0.02	na	0.02	3.13	0.543	0.005	0.005	0.02	0.010
N11	TOT	20-07-95	0.003	1.41	0.02	-0.01	0.086	0.003	-0.04	207.8	-0.002	-0.002	0.011	0.005	0.003	2.86	-0.03	0.005	41.20	8.200	0.002	48.0	0.028	0.05	-0.02	196.4	0.02	2.36	0.645	0.005	0.005	0.02	0.010
N12	TOT	31-01-95	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	6.630	na	na	48.4	na	na	na	na	na	na	na	na	na	na	0.440
N12	TOT	24-02-95	0.030	0.06	0.05	na	0.086	0.001	-0.02	178.0	-0.002	-0.002	0.004	0.002	0.002	1.15	na	na	28.10	6.370	0.004	51.8	0.010	0.04	0.03	134.0	0.02	6.30	0.430	0.003	0.003	na	0.010
N12	TOT	06-03-95	0.001	0.04	0.02	na	0.050	0.0002	-0.02	119.0	0.0005	0.0005	0.001	0.001	0.036	0.21	na	na	23.90	0.665	0.005	43.0	0.003	0.06	0.01	91.6	-0.02	6.19	0.360	0.005	0.010	na	0.005
N12	TOT	08-03-95	0.030	0.06	-0.04	na	0.040	0.001	-0.02	117.0	-0.002	-0.002	0.004	0.003	-0.002	0.08	na	na	24.30	0.853	0.004	44.1	0.010	0.04	0.03	93.3	-0.02	5.20	0.343	0.003	0.003	na	0.010
N12	TOT	17-04-95	0.030	0.06	0.04	na	0.092	0.001	-0.02	182.0	-0.002	-0.002	0.005	0.030	0.003	1.04	na	na	29.60	6.630	0.004	46.9	0.030	0.04	0.03	138.0	0.02	6.90	0.446	0.004	0.003	na	0.010
N12	TOT	08-05-95	0.030	0.09	-0.04	na	0.044	0.001	-0.02	118.0	-0.002	-0.002	0.004	0.002	0.003	0.11	na	na	24.20	4.857	0.004	41.7	0.010	0.04	0.03	89.9	0.02	4.80	0.344	0.007	0.003	na	0.004
N12	TOT	08-05-95	0.001	0.05	-0.02	na	0.047	0.0002	-0.02	115.0	0.0005	0.001	0.002	0.002	0.021	0.15	na	na	24.00	4.908	0.005	42.0	0.004	0.06	0.01	36.0	-0.02	6.12	0.340	0.004	0.004	na	0.077
N12	TOT	07-06-95	0.003	0.78	0.02	-0.01	0.103	0.001	-0.04	163.3	-0.002	-0.002	0.005	0.005	0.002	1.25	-0.03	0.005	29.90	5.670	0.002	36.0	0.005	-0.04	0.02	na	-0.02	3.18	0.437	0.005	0.005	0.02	0.010
N12	TOT	20-07-95	0.003	1.01	0.03	-0.01	0.052	0.003	-0.04	146.1	-0.002	-0.002	0.005	0.005	0.002	1.17	-0.03	0.005	28.40	5.160	0.002	39.0	0.005	0.04	0.03	113.4	0.02	2.11					

SAMPLE SITE	Type	Date	Ag	Al	As	Au	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Pb	Hg	Ia	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Si	Sr	Ti	V	W	Zn
N13	TOT	09/11/95	0.003	0.91	0.07	0.01	0.112	0.003	0.04	198.3	-0.002	0.005	-0.005	0.005	0.005	2.45	-0.03	0.005	36.20	7.400	0.002	44.0	0.005	0.24	0.02	164.0	0.02	2.96	0.509	0.005	0.02	0.010
N13	TOT	14/11/95	0.003	0.81	0.04	0.01	0.103	0.003	0.04	214.7	-0.002	0.005	-0.005	0.005	0.011	3.00	0.03	0.005	39.30	8.410	0.002	48.0	0.005	0.24	0.02	186.0	-0.02	3.32	0.532	0.005	0.02	0.010
N13	TOT	21/11/95	0.003	0.84	0.06	0.01	0.121	0.002	0.04	193.9	-0.002	0.005	-0.005	0.005	0.006	2.30	0.03	0.005	35.90	8.320	0.002	45.0	0.007	0.04	0.02	209.0	0.02	3.16	0.500	0.005	0.02	0.010
N13	TOT	21/11/95	0.003	0.84	0.06	0.01	0.121	0.002	0.04	194.3	-0.002	0.005	-0.005	0.005	0.006	2.37	0.03	0.005	36.00	8.390	0.002	44.0	0.010	0.12	0.02	215.0	0.02	3.25	0.500	0.005	0.02	0.010
N13	TOT	30/11/95	0.003	0.67	0.04	0.01	0.107	0.002	0.04	188.8	-0.004	0.005	-0.005	0.005	0.002	2.46	-0.02	0.005	33.60	7.250	0.002	40.0	0.007	0.09	0.02	211.0	0.02	3.47	0.470	0.005	0.02	0.010
N13	TOT	06/12/95	0.003	0.75	-0.02	0.01	0.114	0.003	0.04	202.7	-0.005	0.005	-0.005	0.005	0.005	2.45	-0.03	0.005	34.30	7.780	0.002	39.0	0.005	0.04	0.02	187.0	0.02	3.63	0.472	0.006	0.02	0.010
N13	TOT	20/12/95	0.003	0.76	0.03	0.01	0.096	0.002	0.09	181.8	-0.002	0.019	-0.005	-0.002	0.004	2.13	-0.03	0.005	30.70	7.200	0.002	39.0	0.011	-0.04	0.02	198.0	-0.02	3.80	0.453	0.005	0.02	0.010
N13	TOT	20/12/95	0.003	0.72	0.04	0.01	0.109	0.002	0.04	181.6	-0.002	0.005	-0.005	0.005	0.004	2.11	-0.03	0.005	33.80	6.770	0.002	37.0	0.005	-0.04	0.02	158.0	0.02	3.05	0.444	0.005	0.02	0.010
N13	TOT	29/12/95	0.003	0.74	0.05	0.01	0.105	0.003	0.04	195.2	-0.002	0.005	-0.005	0.005	0.006	2.34	-0.03	0.005	32.60	7.550	0.002	37.0	0.005	0.25	0.02	174.0	0.02	3.06	0.461	0.005	0.02	0.010
N13	TOT	29/12/95	0.003	0.79	0.05	0.01	0.109	0.003	0.07	199.0	-0.002	0.005	-0.005	0.005	0.006	2.43	-0.03	0.005	33.20	7.690	0.002	38.0	0.005	0.26	0.02	166.0	-0.02	3.14	0.479	0.005	0.02	0.010
N14-DIAND	TOT	06/03/95	0.001	0.02	-0.02	na	0.076	0.0002	0.02	76.2	-0.005	0.001	-0.001	0.001	0.024	0.44	na	na	13.70	1.420	0.005	12.4	0.002	0.06	0.01	34.9	0.02	5.63	0.280	0.006	0.006	0.005
N14-DIAND	TOT	08/03/95	0.001	0.01	0.02	na	0.076	0.0002	0.02	76.1	-0.005	0.001	-0.001	0.001	0.028	0.43	na	na	11.60	1.420	0.005	12.8	0.002	0.06	0.01	37.5	-0.02	5.90	0.280	0.003	0.006	na
N14	TOT	08/03/95	0.030	0.06	-0.01	na	0.064	0.001	0.02	70.2	-0.002	0.004	-0.002	0.002	0.002	0.47	na	na	13.40	1.250	0.004	11.9	0.010	0.04	0.03	36.9	0.02	4.80	0.251	0.003	0.003	na
N14	TOT	08/03/95	0.030	0.51	0.04	na	0.044	0.001	0.02	27.4	-0.002	0.004	-0.002	0.003	0.005	1.41	na	na	5.66	0.345	0.004	3.9	0.010	0.04	0.03	12.8	0.02	3.50	0.097	0.014	0.003	na
N14-DIAND	TOT	08/03/95	0.001	0.59	0.02	na	0.048	0.0002	0.02	26.0	-0.005	0.001	-0.001	0.004	0.014	1.47	na	na	5.26	0.353	0.005	3.8	0.005	0.06	0.01	12.1	0.02	4.10	0.100	0.017	0.004	na
N14	TOT	20/07/95	0.003	0.30	0.02	0.01	0.022	0.001	0.04	39.5	-0.002	0.005	-0.005	0.005	-0.002	0.37	-0.03	0.005	9.20	0.500	0.002	5.0	0.005	0.04	0.02	32.7	0.02	1.17	0.171	0.005	0.005	0.02
N14	TOT	25/08/95	0.003	0.41	0.02	0.01	0.052	0.001	0.04	46.4	-0.002	0.005	-0.005	0.005	-0.002	0.36	-0.03	0.005	9.40	0.680	0.002	5.0	0.005	0.04	0.02	28.2	0.02	1.62	0.166	0.005	0.005	0.02
N14	TOT	10/09/95	0.003	0.49	0.02	0.01	0.051	0.001	0.04	62.4	-0.002	0.005	-0.005	0.005	-0.002	0.47	-0.03	0.005	12.90	0.900	0.002	10.0	0.005	0.04	0.02	45.0	0.02	1.06	0.221	0.005	0.005	0.02
N14	TOT	14/11/95	0.003	0.49	-0.02	0.01	0.071	0.002	0.04	97.6	-0.005	0.005	-0.005	0.005	0.010	0.54	-0.03	0.005	18.70	2.000	0.002	16.0	0.005	0.17	0.02	79.0	0.04	2.31	0.294	0.005	0.005	0.02
N14	TOT	16/12/95	0.003	0.59	0.02	0.01	0.077	0.002	0.04	134.8	-0.002	0.005	-0.005	0.005	-0.002	0.83	-0.03	0.005	26.90	4.410	0.002	29.0	0.005	0.04	0.02	142.0	0.02	3.13	0.373	0.012	0.005	0.02
N16A	TOT	01/08/95	na	na	na	na	na	na	na	na	na	na	na	0.010	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.060
N16A	DIS	01/08/95	0.003	0.46	-0.02	-0.01	0.098	-0.001	-0.04	46.2	-0.002	0.005	-0.005	-0.002	0.021	0.17	-0.03	0.005	11.30	0.010	0.002	2.0	0.005	-0.04	-0.02	8.60	-0.02	2.25	0.152	0.005	0.005	0.02
N16B	TOT	01/08/95	na	na	na	na	na	na	na	na	na	na	na	0.021	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.020
N16B	DIS	01/08/95	0.003	0.30	0.02	0.01	0.153	0.003	-0.04	53.8	-0.002	0.005	-0.005	0.002	0.025	0.27	-0.03	0.005	14.70	0.010	0.002	2.0	0.005	0.04	-0.02	6.90	-0.02	2.13	0.186	0.005	0.005	0.02
N17A	TOT	01/08/95	na	na	na	na	na	na	na	na	na	na	na	0.025	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.060
N17A	DIS	01/08/95	0.003	0.45	-0.02	0.01	0.116	0.001	-0.04	45.6	-0.002	0.005	-0.005	0.005	0.004	0.40	-0.03	0.005	13.60	0.010	0.002	3.0	0.005	-0.04	-0.02	11.10	-0.02	2.12	0.145	0.005	0.005	0.02
N17B	TOT	01/08/95	na	na	na	na	na	na	na	na	na	na	na	0.017	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.020
N17B	DIS	01/08/95	0.003	0.45	0.02	0.01	0.185	-0.001	-0.04	51.4	-0.002	0.005	-0.005	-0.002	0.014	0.76	-0.03	0.005	15.40	0.160	0.002	6.0	0.005	-0.04	-0.02	10.00	-0.02	2.33	0.282	0.005	0.005	0.02
N18A	TOT	01/08/95	na	na	na	na	na	na	na	na	na	na	na	0.014	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.010
N18A	DIS	01/08/95	0.003	1.13	-0.02	0.01	0.238	0.002	0.04	130.6	-0.002	0.005	-0.005	0.002	0.084	2.88	-0.03	0.005	34.10	0.150	0.002	38.0	0.005	0.04	0.02	133.70	0.02	2.60	0.645	0.005	0.005	0.02
N18B	TOT	01/08/95	na	na	na	na	na	na	na	na	na	na	na	0.084	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	0.160
N18B	DIS	01/08/95	0.003	1.19	0.02	-0.01	0.147	0.002	-0.04	129.0	-0.002	0.005	-0.005	0.002	0.055	0.55	-0.03	0.005	32.40	1.630	0.002	33.0	0.005	-0.04	-0.02	132.60	-0.02	2.82	0.540	0.005	0.005	0.02
N23	TOT	31/01/95	na	na	na	na	na	na	na	na	na	na	na	0.005	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	40.000
N23	TOT	24/02/95	0.030	0.06	0.12	na	0.019	0.001	0.20	668.0	0.001	0.158	0.002	0.007	0.014	na	na	na	369.00	22.900	0.004	51.9	0.390	0.21	-0.03	886.0	0.03	7.10	3.090	0.008	0.003	na
N23-DIAND	TOT	06/03/95	0.001	0.08	0.02	na	0.029	0.0002	0.00	800.0	0.001	0.180	0.010	0.049	0.024	0.24	na	na	442.00	20.900	0.005	63.8	0.424	0.06	-0.01	1080.0	0.05	11.10	3.430	0.004	0.027	na
N23	TOT	08/03/95	0.030	0.08	0.02	na	0.022	0.001	-0.02	677.0	0.001	0.168	0.002	0.009	0.013	na	na	na	373.00	24.300	0.004	55.5	0.390	0.16	0.04	931.0	0.05	8.20	3.390	0.003	0.003	na
N23	TOT	17/04/95	0.030	0.06	0.16	na	0.025	0.001	0.02	665.0	0.007	0.153	0.002	0.008	0.016	na	na	na	350.00	19.700	0.004	50.4	0.370	0.18	-0.03	830.0	0.02	7.90	3.280	0.011	0.003	na
N23	TOT	08/05/95	0.030	0.06	0.14	na	0.024	0.001	0.02	671.0	0.007	0.147	0.002	0.008	0.017	na	na	na	369.00	21.400	0.004	52.3	0.360	0.19	0.04	873.0	0.03	7.80	3.330	0.016	0.003	na
N23-DIAND	TOT	08/05/95	0.001	0.08	0.02	na	0.023	0.0002	0.02	655.0	0.007	0.129	0.006	0.025	0.013	na	na	na	374.00	23.100	0.005	56.2	0.312	0.06	0.05	872.0	0.05	9.07	2.780	0.007	0.002	na
N23	TOT	07/06/95	0.003	2.61	0.15	0.01	0.075	0.001	0.04	576.2	0.007	0.096	0.006	0.015	0.07	0.23	0.03	0.005	318.30	17.830	0.002	54.0	0.269	1.59	0.03	na	0.02	3.45	2.978	0.009	0.006	0.02
N23	TOT	20/07/95	0.003	3.01	0.10	0.01	0.081	0.010	0.04	536.5	0.013	0.107	0.009	0.015	0.23	0.																

SAMPLE SITE	Type	Date	Ag	Al	As	Va	Ba	Be	Bi	Cu	Ca	Cd	Co	Cr	Cu	Fe	Hg	La	Mg	Mn	Mn	Mo	Na	Ni	P	Ph	S	Sb	Si	Sn	Ti	V	W	Zn
R8	TOT	07.06.95	0.003	0.10	0.02	0.01	0.034	0.001	-0.04	12.9	0.002	0.005	0.005	0.005	0.004	0.35	0.03	0.005	3.10	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.14	0.056	0.005	0.012	0.02	0.010		
R8	TOT	20.07.95	0.003	0.05	0.02	0.01	0.012	0.001	0.04	19.4	0.002	0.005	0.005	0.005	0.002	0.25	0.03	0.005	4.70	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.59	0.092	0.005	0.005	0.02	0.010		
R8	TOT	20.07.95	0.003	0.11	0.02	0.01	0.014	0.001	0.04	22.1	0.002	0.005	0.005	0.005	0.002	0.20	0.03	0.005	5.20	0.010	0.002	1.0	0.006	0.04	0.02	0.02	1.19	0.106	0.005	0.005	0.02	0.010		
R8	TOT	23.08.95	0.003	0.26	0.02	0.01	0.042	0.001	-0.04	19.1	0.002	0.005	0.005	0.005	0.002	0.25	-0.03	0.005	3.50	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.68	0.088	0.005	0.005	0.02	0.010		
R8	TOT	23.08.95	0.003	0.23	0.02	0.01	0.041	0.001	-0.04	20.0	0.002	0.005	0.005	0.005	0.003	0.25	0.03	0.005	3.80	0.020	0.002	1.0	0.005	0.04	0.02	0.02	1.68	0.088	0.005	0.005	0.02	0.010		
R8	TOT	16.10.95	0.003	0.21	-0.02	0.01	0.049	0.001	0.04	27.3	0.002	0.005	0.005	0.005	0.003	0.28	0.03	0.005	5.50	0.020	0.002	1.0	0.005	0.04	0.02	0.02	1.14	0.124	0.005	0.005	0.02	0.010		
R8	TOT	14.11.95	0.003	0.09	0.02	0.01	0.074	0.001	-0.04	38.9	0.002	0.005	0.005	0.005	0.003	0.17	0.03	0.005	7.70	0.030	0.002	1.0	0.008	0.04	0.02	0.02	2.71	0.154	0.005	0.005	0.02	0.010		
R8	TOT	14.11.95	0.003	0.11	0.02	0.01	0.067	0.001	-0.04	55.8	0.002	0.005	0.005	0.005	0.003	0.35	0.03	0.005	7.10	0.030	0.002	1.0	0.005	0.04	0.02	0.02	2.59	0.138	0.005	0.005	0.02	0.010		
R8	TOT	14.11.95	0.003	0.02	0.02	0.01	0.054	0.001	0.04	35.5	0.002	0.005	0.005	0.005	0.002	0.17	0.03	0.005	6.30	0.020	0.002	2.0	0.005	0.04	0.02	0.02	2.41	0.129	0.005	0.005	0.02	0.010		
R8	TOT	11.12.95	0.003	0.07	0.02	0.01	0.058	0.001	0.06	35.3	0.002	0.005	0.005	0.005	0.002	0.16	0.03	0.005	6.60	0.010	0.002	1.0	0.005	0.04	0.02	0.02	2.41	0.129	0.005	0.005	0.02	0.010		
R9	TOT	27.03.95	0.030	0.06	0.04	na	0.075	0.001	0.02	46.9	0.002	0.004	0.004	0.002	0.002	0.10	na	na	8.80	0.016	0.004	3.6	0.010	0.04	0.02	0.02	5.90	0.191	0.005	0.005	0.02	0.010		
R9	TOT	18.04.95	0.030	0.06	0.04	na	0.079	0.001	-0.02	40.0	0.002	0.004	0.004	0.002	0.002	0.13	na	na	9.11	0.024	0.004	3.8	0.010	0.04	0.02	0.02	6.30	0.199	0.005	0.005	0.02	0.010		
R9	TOT	07.06.95	0.003	0.09	0.02	0.01	0.033	0.001	0.04	13.9	0.002	0.005	0.005	0.005	0.002	0.25	0.03	0.005	2.20	0.010	0.002	1.0	0.005	0.04	0.02	0.02	2.45	0.063	0.005	0.005	0.02	0.010		
R9	TOT	07.06.95	0.003	0.07	0.02	0.01	0.033	0.001	0.04	11.9	0.002	0.005	0.005	0.005	0.002	0.18	0.03	0.005	2.50	0.010	0.002	1.0	0.005	0.04	0.02	0.02	2.45	0.063	0.005	0.005	0.02	0.010		
R9	TOT	22.06.95	0.003	0.37	0.02	-0.005	0.046	-0.001	-0.05	23.7	0.002	0.005	0.005	0.005	0.002	0.23	-0.02	0.005	4.40	0.040	0.002	1.0	0.006	0.04	0.02	0.02	2.56	0.101	0.005	0.005	0.02	0.010		
R9	TOT	22.06.95	0.003	0.34	0.02	0.005	0.050	-0.001	-0.05	22.4	0.002	0.005	0.005	0.005	0.004	0.21	-0.02	0.005	4.50	0.030	0.002	1.0	0.005	0.04	0.02	0.02	2.64	0.102	0.005	0.005	0.02	0.010		
R9	TOT	20.07.95	0.003	0.07	0.02	0.01	0.004	0.001	0.04	21.0	0.002	0.005	0.005	0.005	0.002	0.21	0.03	0.005	5.20	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.93	0.100	0.005	0.005	0.02	0.010		
R9	TOT	25.08.95	0.003	0.23	0.02	0.01	0.036	0.001	0.04	19.1	0.002	0.005	0.005	0.005	0.002	0.21	0.03	0.005	3.40	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.64	0.087	0.005	0.005	0.02	0.010		
R9	TOT	16.10.95	0.003	0.23	0.02	0.01	0.054	0.001	0.04	27.8	0.002	0.005	0.005	0.005	0.002	0.23	0.03	0.005	5.70	0.030	0.002	1.0	0.005	0.04	0.02	0.02	1.23	0.125	0.005	0.005	0.02	0.010		
R9	TOT	14.11.95	0.003	0.11	0.02	0.01	0.071	0.001	0.04	38.9	0.002	0.005	0.005	0.005	0.002	0.12	0.03	0.005	7.70	0.030	0.004	1.0	0.005	0.04	0.02	0.02	2.70	0.157	0.005	0.005	0.02	0.010		
R9	TOT	11.12.95	0.003	0.02	0.02	0.01	0.061	0.001	0.04	38.7	0.002	0.005	0.005	0.005	0.002	0.16	0.03	0.005	7.20	0.030	0.002	1.0	0.005	0.04	0.02	0.02	2.46	0.117	0.005	0.005	0.02	0.010		
R10	TOT	27.03.95	0.030	0.06	0.04	na	0.079	0.001	0.02	49.6	0.002	0.004	0.004	0.002	0.005	0.12	na	na	9.33	0.021	0.004	3.9	0.010	0.04	0.02	0.02	6.20	0.202	0.005	0.005	0.02	0.010		
R10	TOT	18.04.95	0.030	0.06	0.04	na	0.077	0.001	0.02	47.7	0.002	0.004	0.004	0.002	0.002	0.13	na	na	8.68	0.017	0.004	3.6	0.010	0.04	0.02	0.02	6.20	0.192	0.005	0.005	0.02	0.010		
R10	TOT	07.06.95	0.003	0.12	0.02	0.01	0.030	0.001	0.04	12.9	0.002	0.005	0.005	0.005	0.002	0.23	0.03	0.005	2.40	0.010	0.002	1.0	0.005	0.04	0.02	0.02	2.56	0.064	0.005	0.005	0.02	0.010		
R10	TOT	20.07.95	0.003	0.05	0.02	0.01	0.005	0.001	0.04	21.5	0.002	0.005	0.005	0.005	0.002	0.20	-0.03	0.005	5.20	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.99	0.104	0.005	0.005	0.02	0.010		
R10	TOT	25.08.95	0.003	0.21	0.02	0.01	0.045	0.001	0.04	19.6	0.002	0.005	0.005	0.005	0.002	0.20	-0.03	0.005	3.50	0.010	0.002	1.0	0.005	0.04	0.02	0.02	1.65	0.089	0.005	0.005	0.02	0.010		
R10	TOT	16.10.95	0.003	0.26	0.02	0.01	0.050	0.001	0.04	27.5	0.002	0.005	0.005	0.005	0.002	0.25	0.03	0.005	5.60	0.030	0.002	1.0	0.005	0.04	0.02	0.02	1.29	0.125	0.005	0.005	0.02	0.010		
R10	TOT	14.11.95	0.003	0.12	-0.02	0.01	0.068	0.001	0.04	36.2	0.004	0.005	0.005	0.005	0.003	0.22	0.03	0.005	7.10	0.030	0.002	1.0	0.005	0.04	0.02	0.02	2.55	0.142	0.005	0.005	0.02	0.010		
R10	TOT	11.12.95	0.003	0.05	0.02	0.01	0.054	0.001	0.04	37.6	0.002	0.005	0.005	0.005	0.002	0.18	-0.03	0.005	7.00	0.020	0.002	2.0	0.005	0.04	0.02	0.02	2.44	0.140	0.005	0.005	0.02	0.010		
R11	TOT	18.04.95	0.030	0.06	0.04	na	0.063	0.001	-0.02	48.9	0.002	0.004	0.004	0.002	0.007	-0.05	na	na	10.20	0.009	0.004	4.0	0.012	0.04	0.02	0.02	5.60	0.235	0.005	0.005	0.02	0.010		
R11	TOT	07.06.95	0.003	0.34	-0.02	0.01	0.073	0.001	-0.04	52.5	0.002	0.005	0.005	0.005	0.003	0.07	-0.03	0.005	12.40	0.040	0.002	5.0	0.006	0.04	0.02	0.02	3.02	0.273	0.005	0.005	0.02	0.010		
R11	TOT	20.07.95	0.003	0.54	0.02	0.01	0.120	0.001	-0.04	49.7	0.006	0.008	0.008	0.005	0.005	0.20	-0.03	0.005	17.50	0.040	0.002	6.0	0.015	0.08	0.02	0.02	2.18	0.200	0.005	0.005	0.02	0.010		
R11	TOT	25.08.95	0.003	0.28	-0.02	-0.01	0.063	0.001	-0.04	52.3	0.002	0.005	0.005	0.005	0.005	0.02	-0.03	0.005	11.90	0.020	0.002	5.0	0.005	0.04	0.02	0.02	2.82	0.273	0.005	0.005	0.02	0.010		
R11	TOT	16.10.95	0.003	0.38	-0.02	0.01	0.062	0.001	-0.04	41.4	0.002	0.005	0.005	0.005	0.008	0.07	-0.03	0.005	9.30	0.020	0.002	4.0	0.020	0.04	0.02	0.02	1.46	0.223	0.005	0.005	0.02	0.010		
R11	TOT	14.11.95	0.003	0.19	0.02	0.01	0.064	0.001	-0.04	50.0	0.004	0.005	0.005	0.005	0.004	0.17	0.03	0.005	11.70	0.020	0.002	5.0	0.005	0.05	0.02	0.02	2.82	0.239	0.005	0.005	0.02	0.010		
R12	TOT	18.04.95	0.030	0.06	0.04	na	0.034	0.001	0.02	55.7	0.004	0.004	0.004	0.002	0.002	-0.05	na	na	10.20	0.009	0.004	4.0	0.012	0.04	0.02	0.02	4.24	0.159	0.005	0.005	0.02	0.010		
R12	TOT	07.06.95	0.003	0.57	0.02	0.01	0.063	0.001	-0.04	51.6	0.006	0.005	0.005	0.005	0.005	0.20	-0.03	0.005	17.70	0.040	0.002	5.0	0.013	0.25	0.02	0.02	3.16	0.204	0.005	0.005	0.02	0.010		
R12	TOT	20.07.95	0.003	0.60	0.02	0.01	0.074	0.001	-0.04	57.2	0.007	0.005	0.005	0.005	0.012	0.26	-0.03	0.005	17.50	0.040	0.002	6.0	0.015	0.08	0.02	0.02	3.46	0.204	0.005	0.005	0.02	0.010		
R12	TOT	25.08.95	0.003	0.28	0.02	0.01	0.068	0.001	-0.04	55.8	0.003	0.005	0.005	0.005	0.006	0.03	-0																	

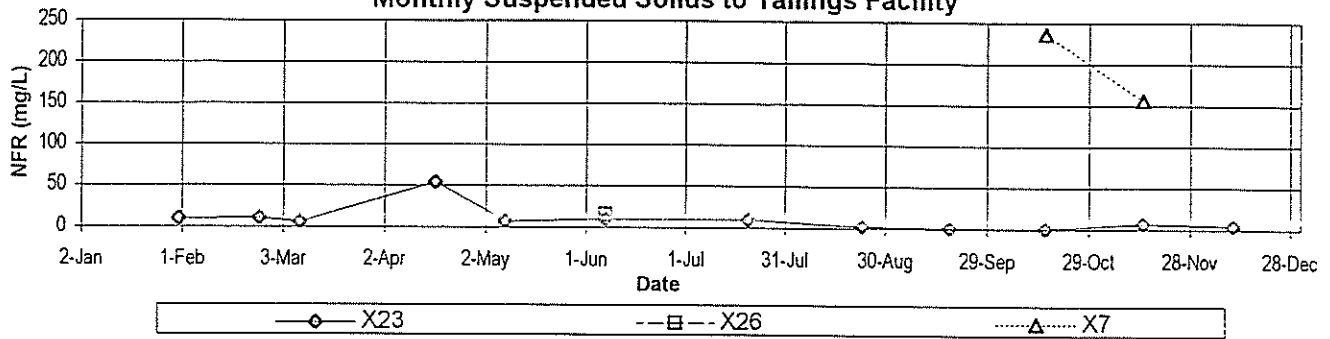
1995 Faro Water Quality - ICP Results

SAMPLE SITE	Type	Date	Ag mg/L	Al mg/L	As mg/L	Au mg/L	Ba mg/L	Be mg/L	Bi mg/L	Ca mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Hg mg/L	La mg/L	Mg mg/L	Mn mg/L	Mo mg/L	Na mg/L	Ni mg/L	P mg/L	Pb mg/L	S mg/L	Sb mg/L	Si mg/L	Sr mg/L	Ti mg/L	V mg/L	W mg/L	Zn mg/L
BH12A	DIS	02/08/95	<0.003	1.58	<0.02	<0.01	0.093	0.002	<0.04	195.6	<0.002	<0.005	<0.005	0.022	0.29	<0.03	<0.005	86.10	<0.010	<0.002	7.0	<0.005	0.08	<0.02	173.1	<0.02	1.88	0.927	0.006	<0.005	<0.02	0.060
BH12B	DIS	02/08/95	<0.003	1.87	<0.02	<0.01	0.098	0.003	<0.04	242.2	<0.002	<0.005	0.005	0.013	0.21	<0.03	0.005	46.80	0.540	<0.002	8.0	<0.005	<0.04	<0.02	150.3	<0.02	1.59	0.919	0.007	<0.005	<0.02	<0.010
BH12B	DIS	02/08/95	<0.003	1.89	<0.02	<0.01	0.097	0.004	<0.04	246.8	<0.002	<0.005	0.011	0.017	0.20	<0.03	<0.005	46.00	0.550	<0.002	8.0	<0.005	<0.04	<0.02	154.3	<0.02	1.59	0.904	0.006	<0.005	<0.02	0.010
BH14A	DIS	02/08/95	<0.003	2.97	0.06	<0.01	0.087	0.004	<0.04	427.3	<0.002	<0.005	<0.005	0.025	0.22	<0.03	0.010	123.10	0.070	<0.002	52.0	<0.005	<0.04	<0.02	292.8	<0.02	2.70	1.999	0.012	<0.005	<0.02	0.030
BH14B	DIS	02/08/95	<0.003	2.87	0.02	<0.01	0.089	0.005	<0.04	407.2	<0.002	<0.005	<0.005	0.018	0.20	<0.03	0.007	125.10	0.060	<0.002	19.0	<0.005	<0.04	<0.02	276.9	<0.02	2.57	1.963	0.012	<0.005	<0.02	0.010
BH15A	DIS	03/08/95	<0.003	1.26	<0.02	<0.01	0.082	0.003	<0.05	197.9	<0.001	<0.005	<0.005	0.014	0.24	<0.02	0.009	57.50	0.390	<0.002	43.0	0.012	0.36	0.05	234.0	<0.02	1.70	0.836	0.007	<0.005	<0.02	0.430
BH15A	DIS	03/08/95	<0.003	1.26	<0.02	<0.01	0.080	0.003	<0.05	195.8	<0.001	<0.005	<0.005	0.019	0.21	<0.03	0.011	56.40	0.380	<0.002	43.0	0.011	0.37	0.04	234.0	0.02	1.69	0.824	0.011	<0.005	<0.02	0.240
BH15C	DIS	03/08/95	<0.003	0.81	<0.02	<0.01	0.054	0.002	<0.05	121.7	<0.001	<0.005	<0.005	0.019	0.85	<0.03	<0.005	22.60	0.290	<0.002	17.0	<0.005	<0.05	0.02	206.1	<0.02	1.80	0.447	0.005	<0.005	<0.02	0.750

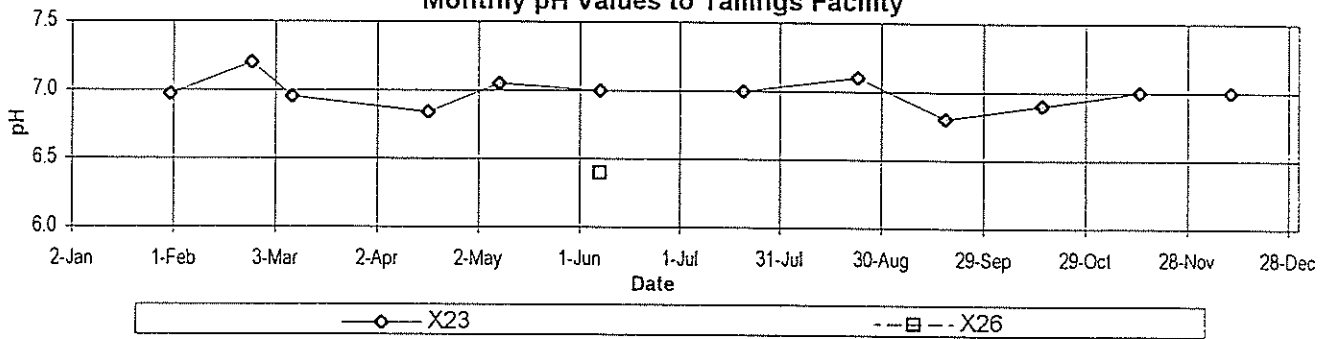
APPENDIX 2

1995 Faro Surface Water Quality

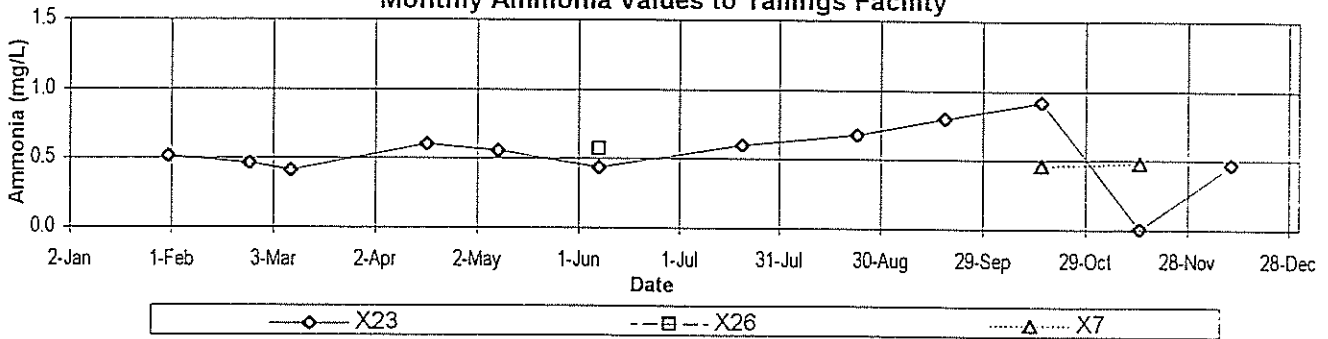
1995 Faro Surface Water Quality Monthly Suspended Solids to Tailings Facility



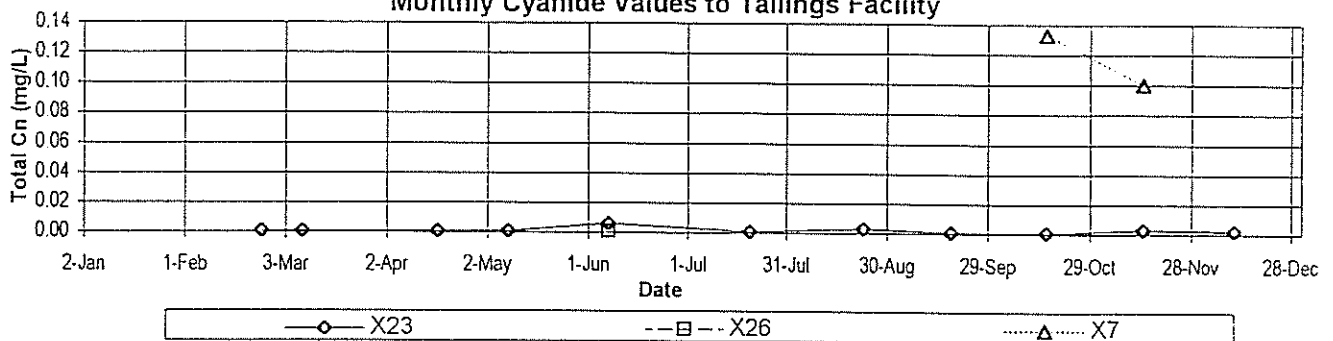
1995 Faro Surface Water Quality Monthly pH Values to Tailings Facility



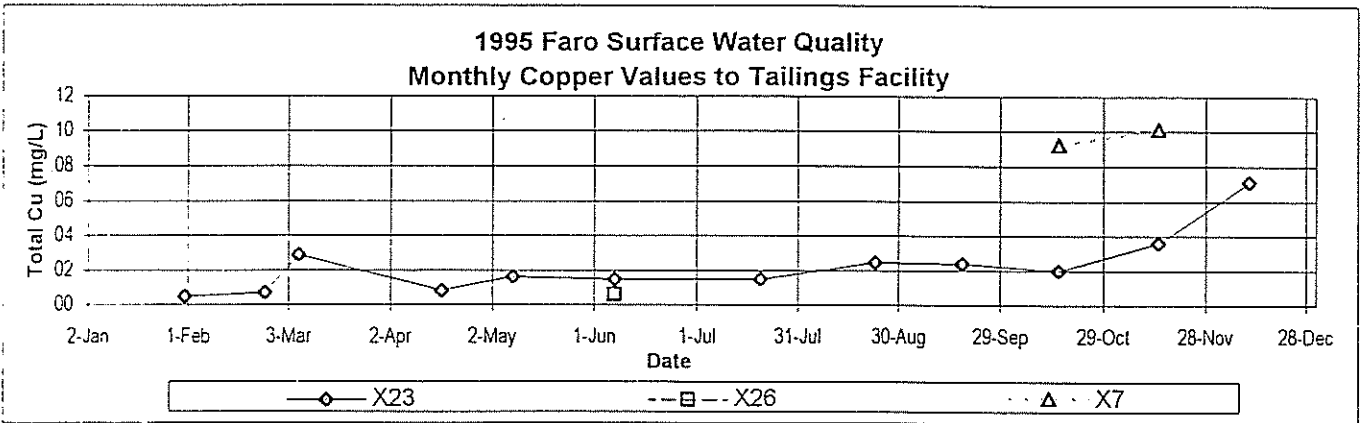
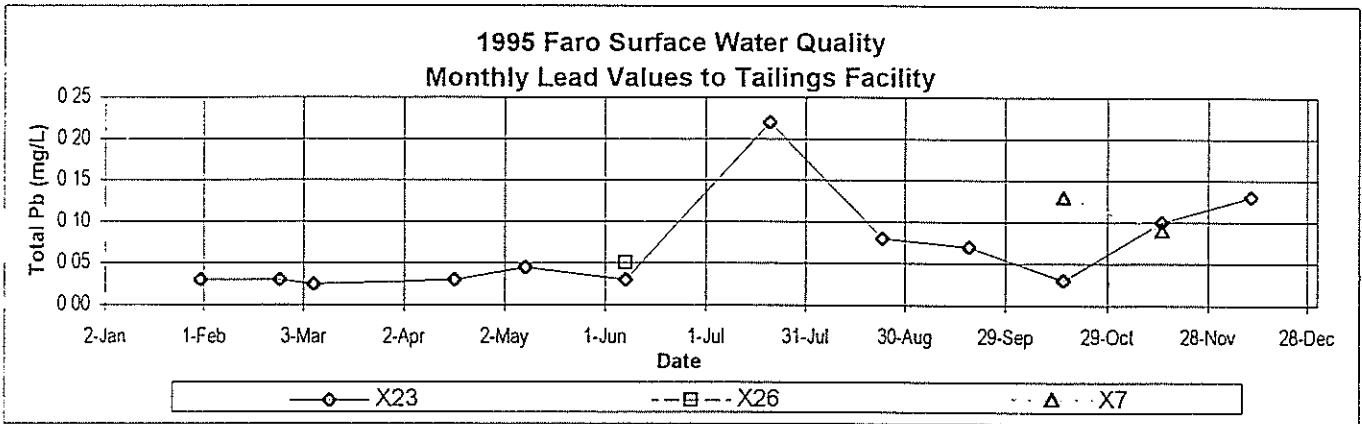
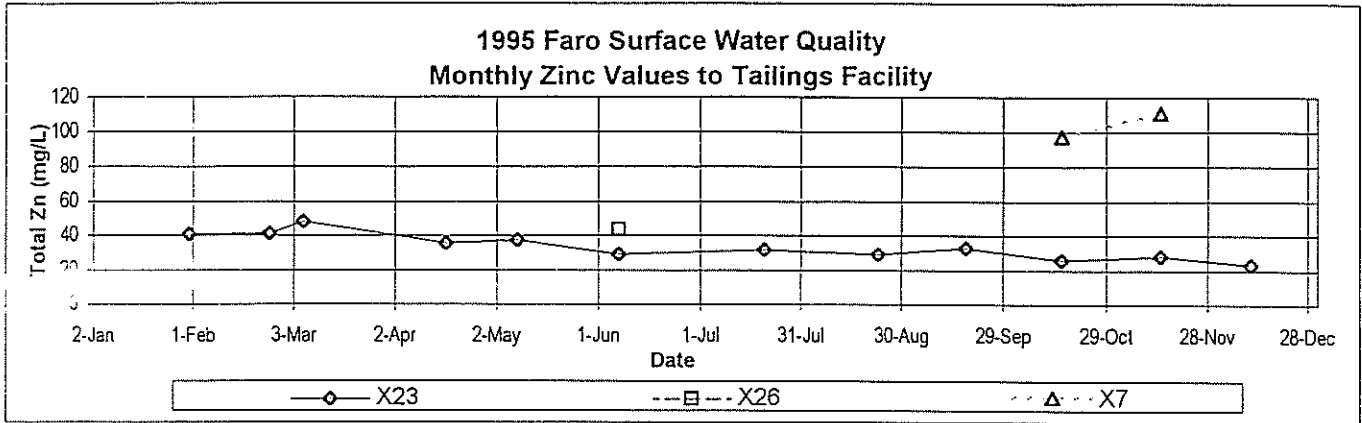
1995 Faro Surface Water Quality Monthly Ammonia Values to Tailings Facility



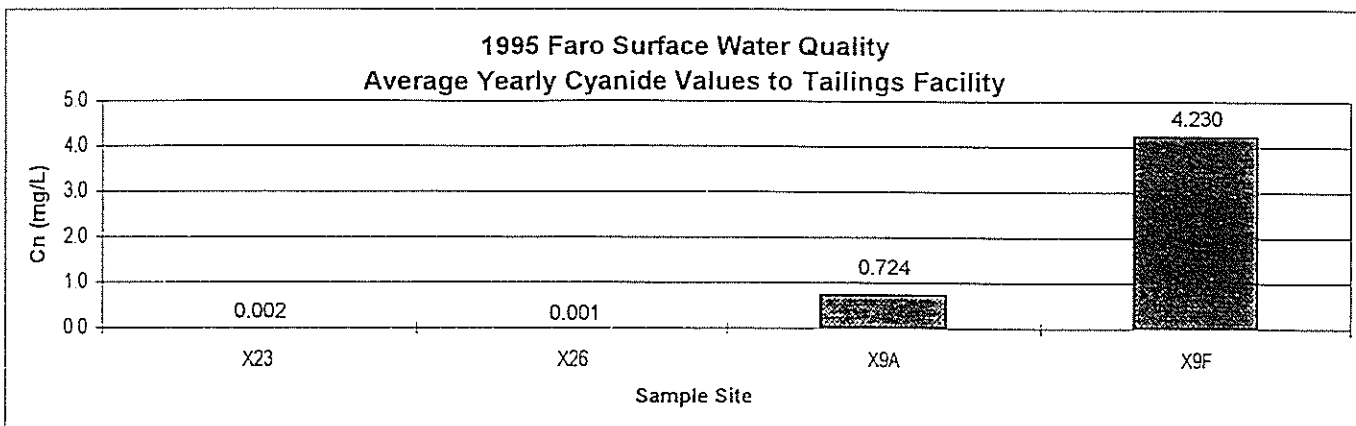
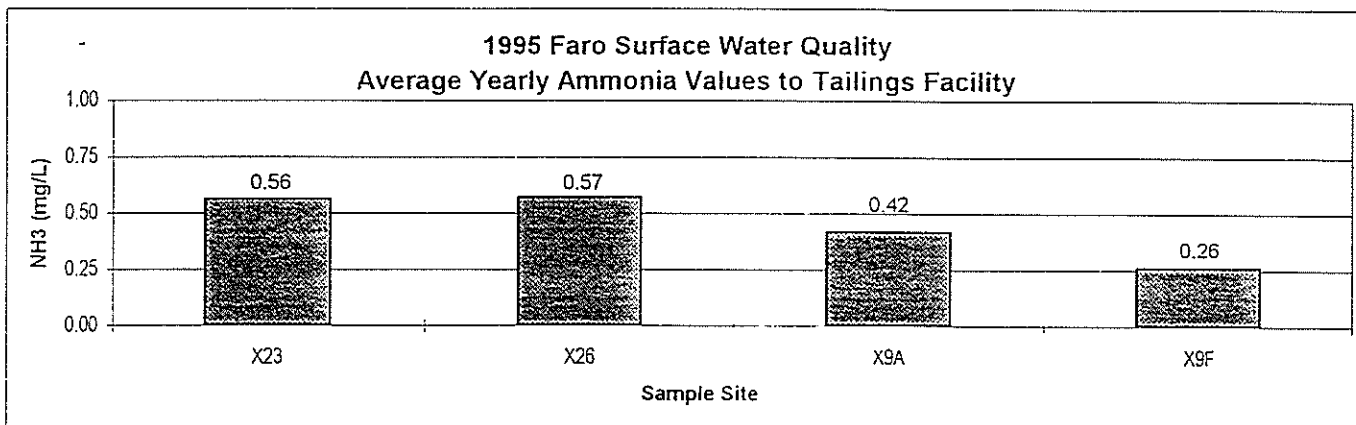
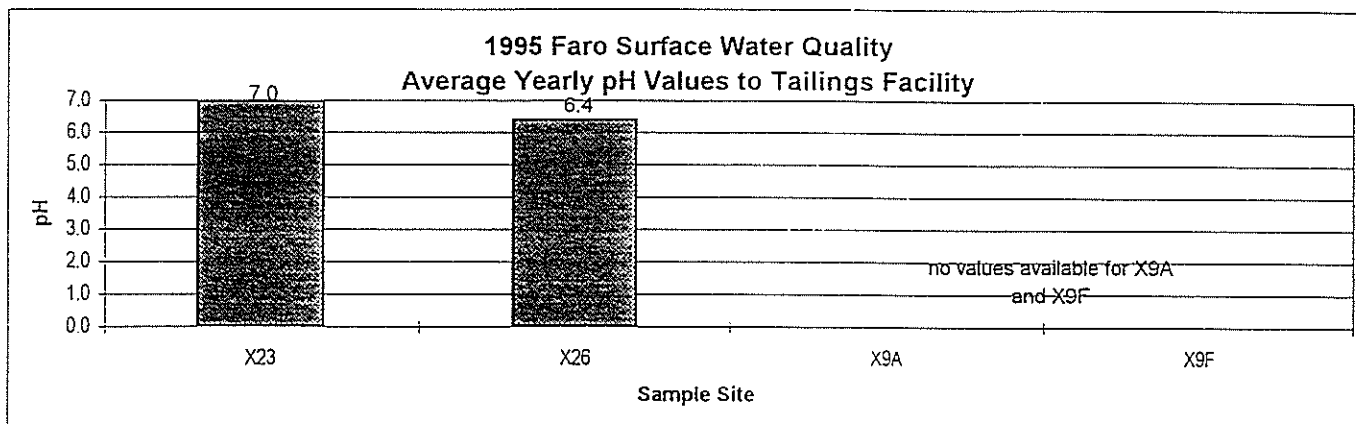
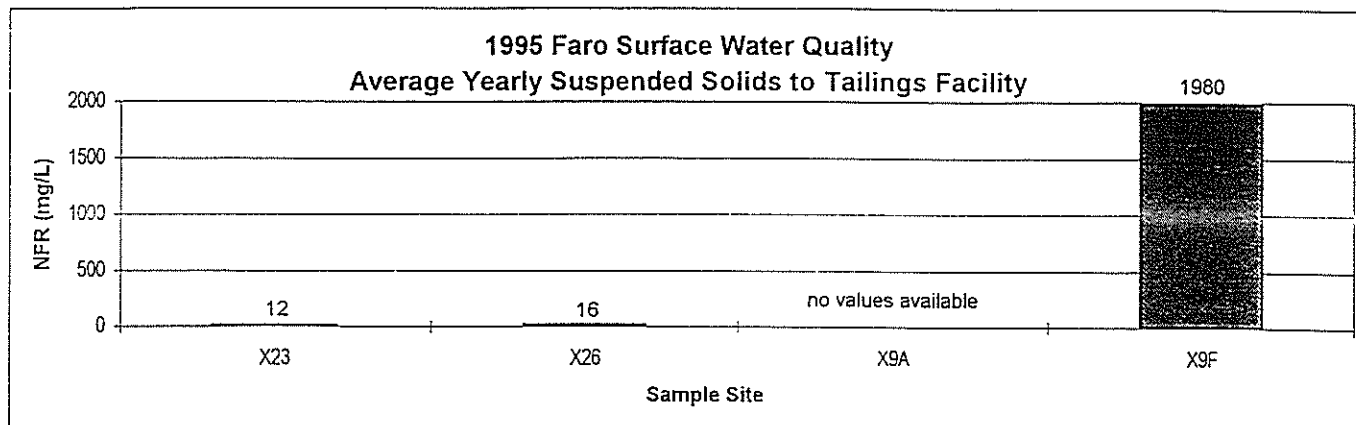
1995 Faro Surface Water Quality Monthly Cyanide Values to Tailings Facility



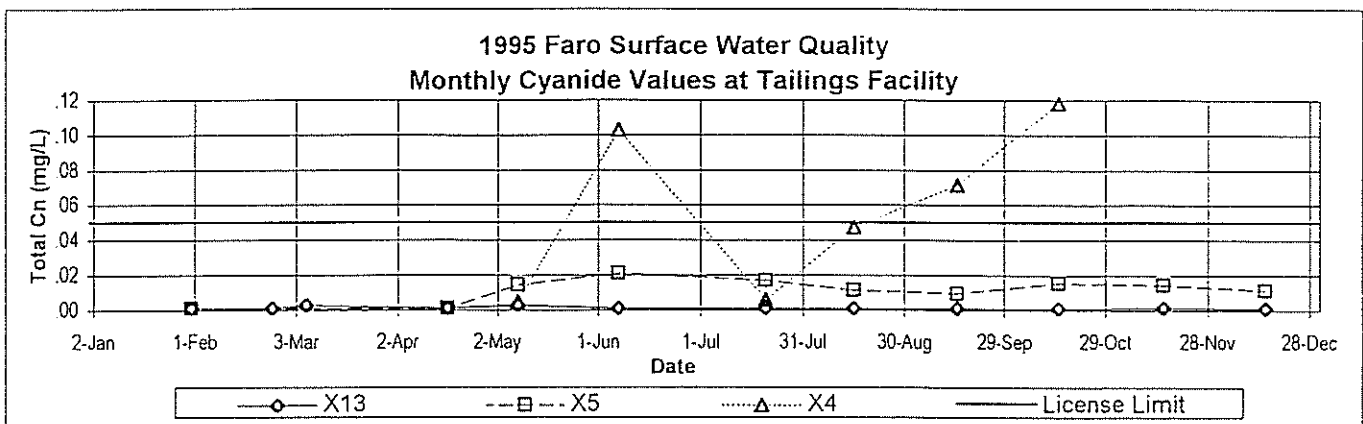
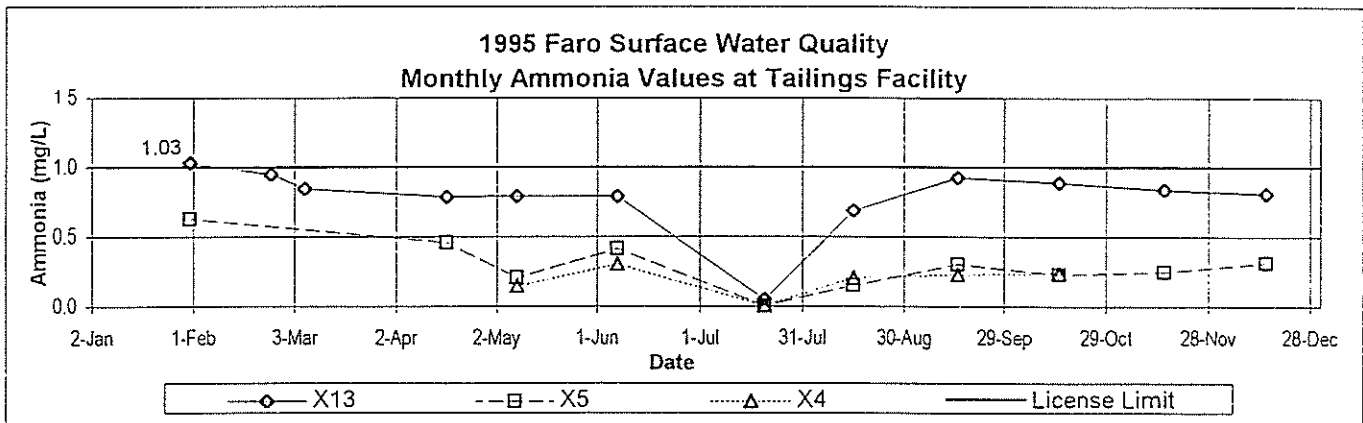
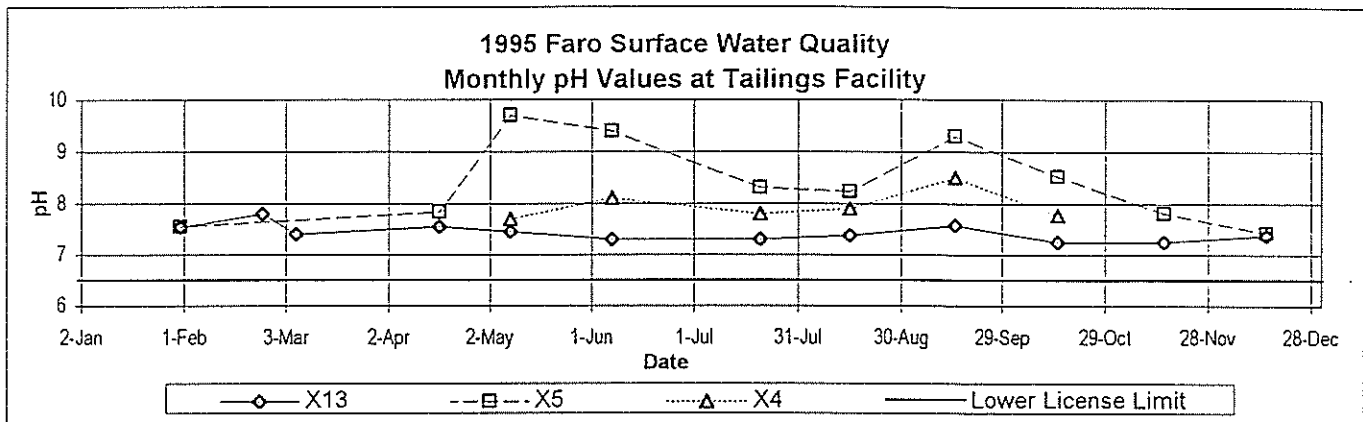
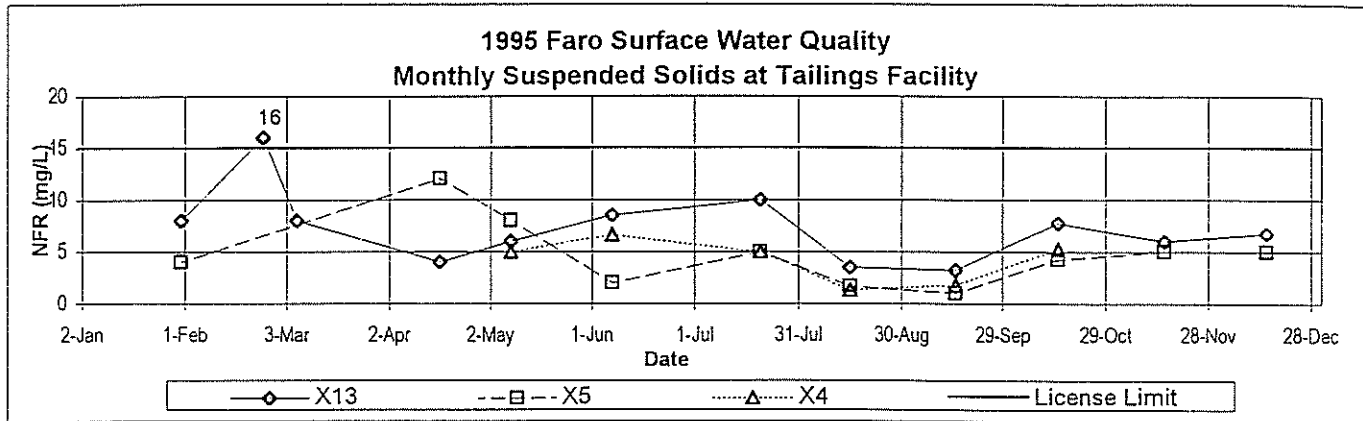
1995 Faro Surface Water Quality



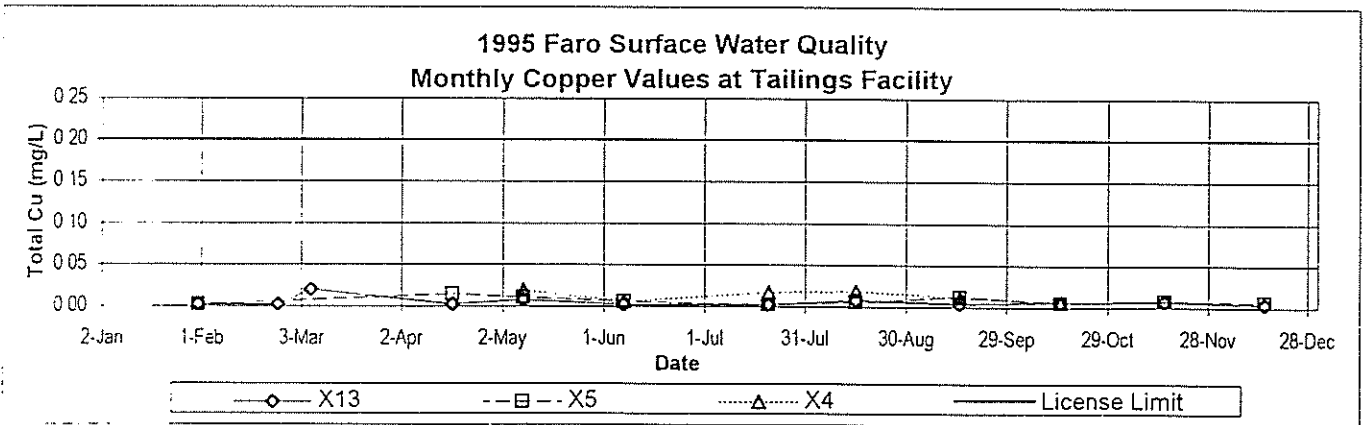
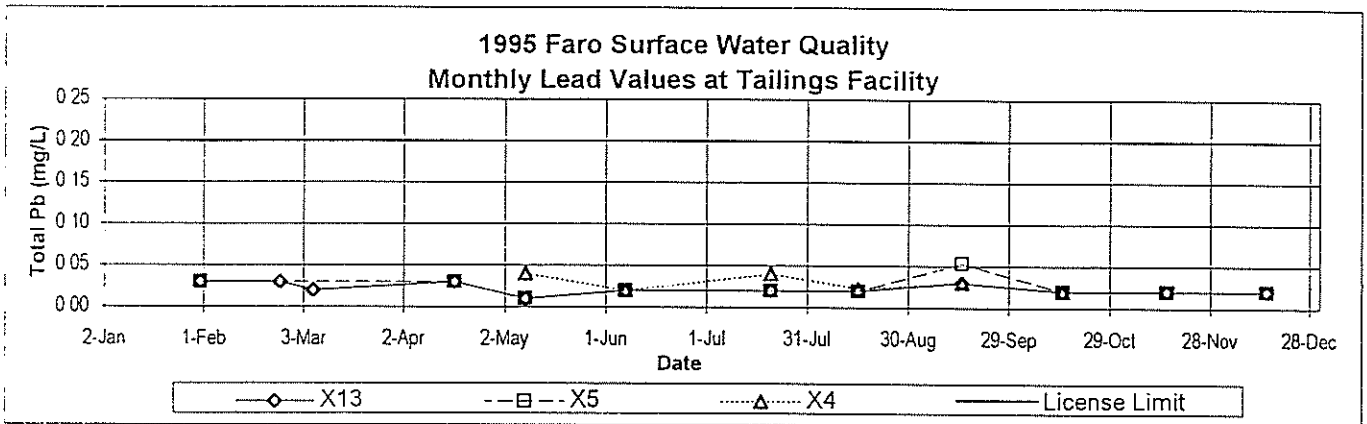
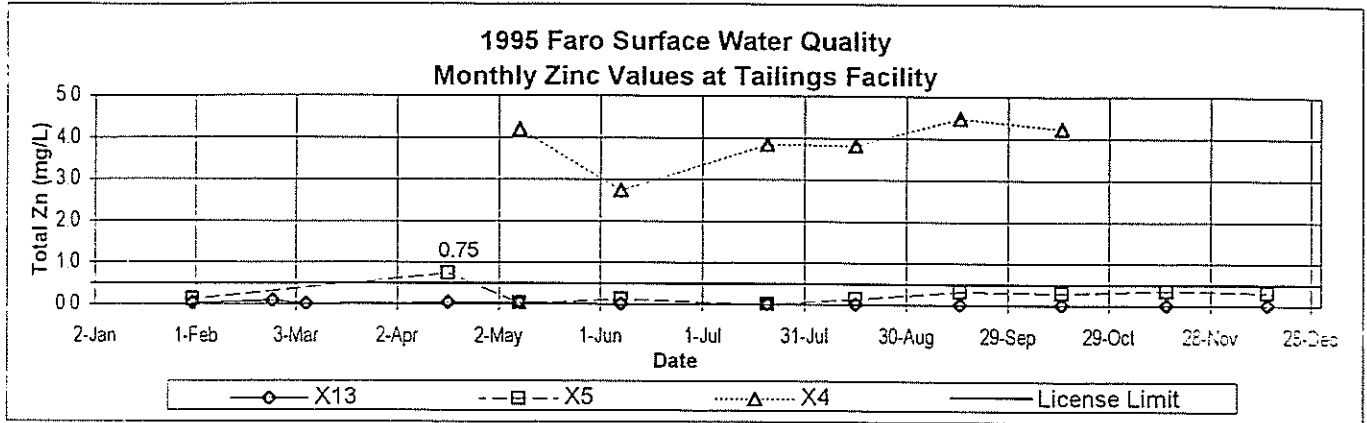
1995 Faro Surface Water Quality



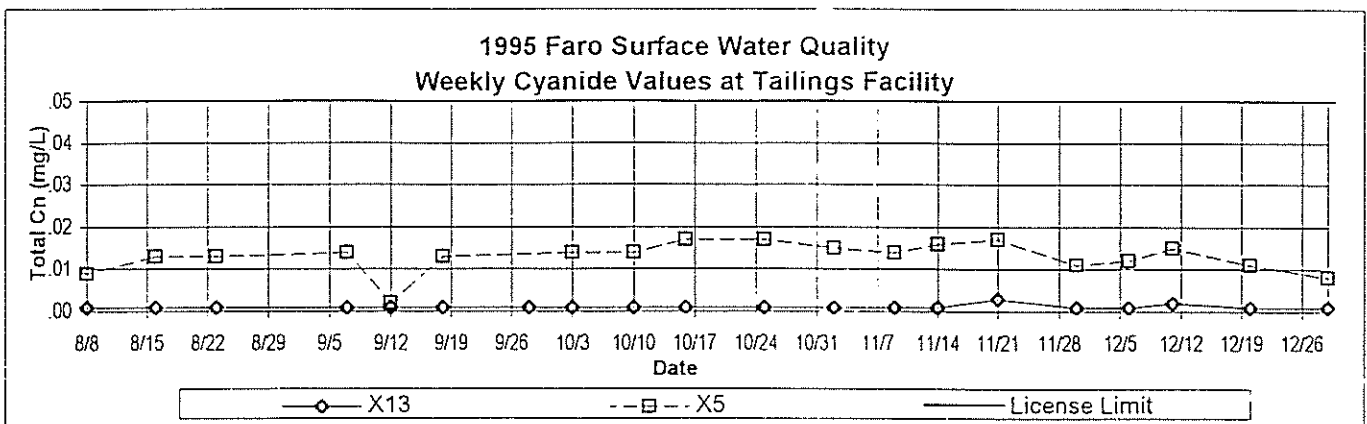
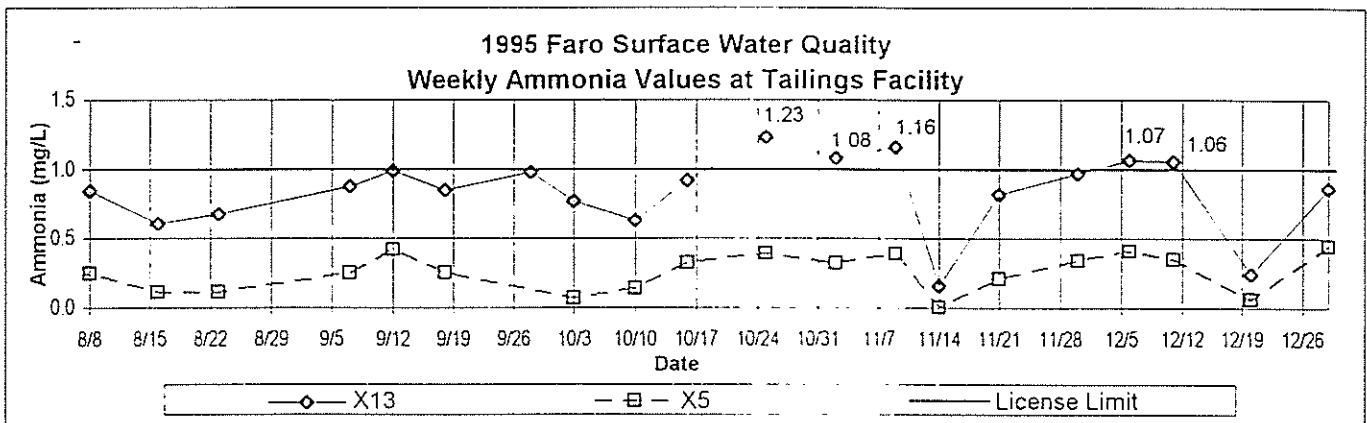
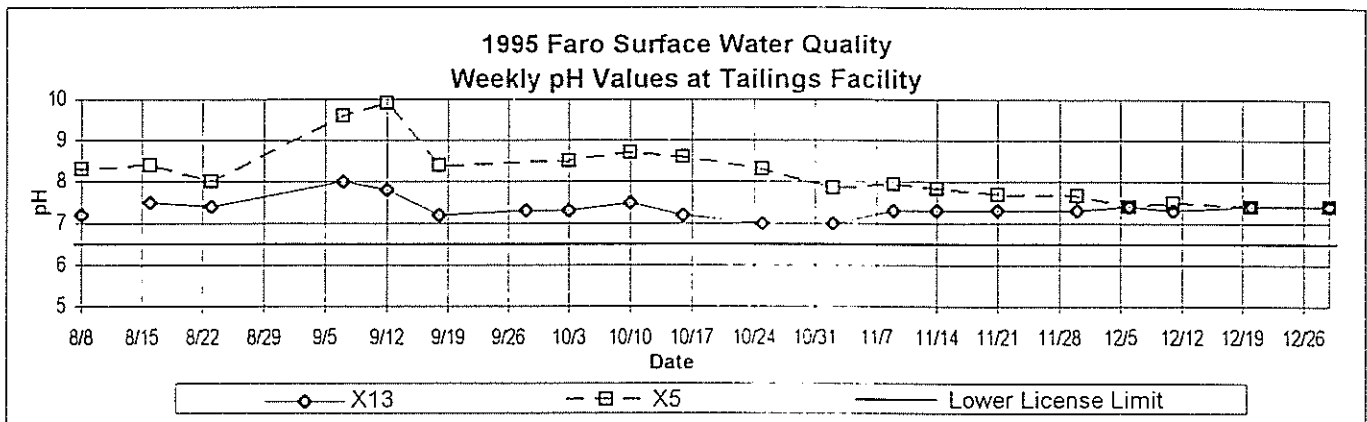
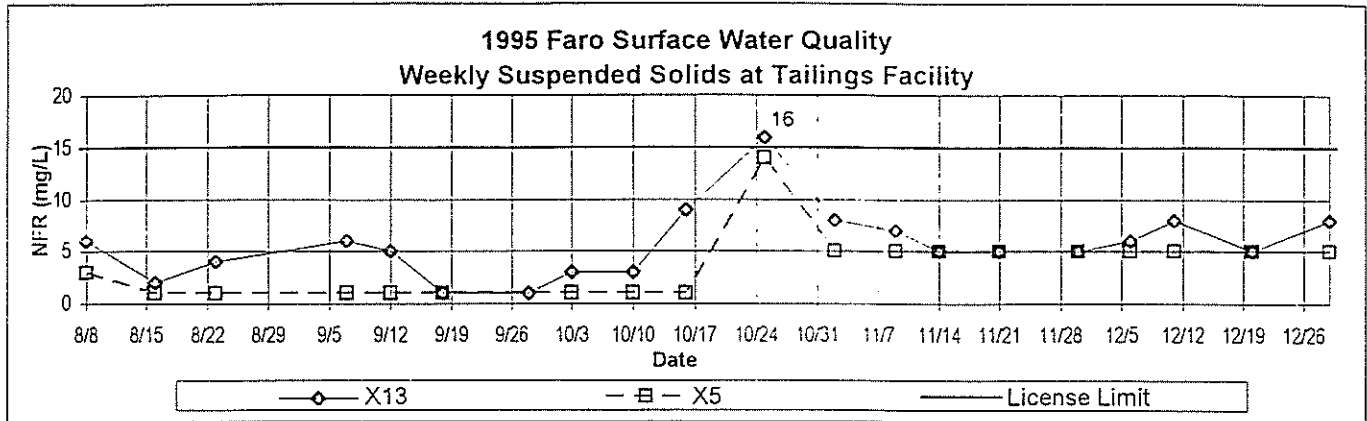
1995 Faro Surface Water Quality



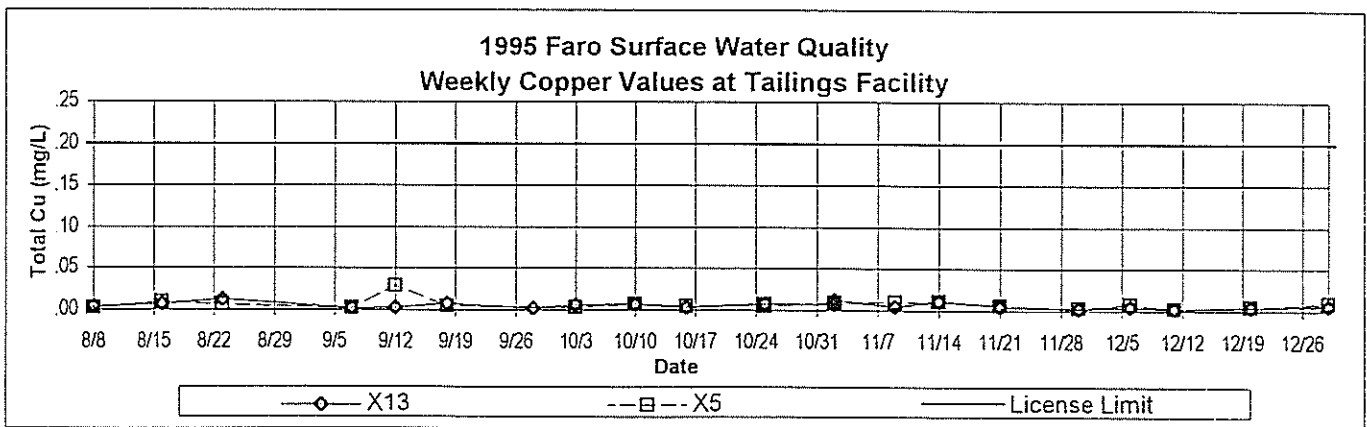
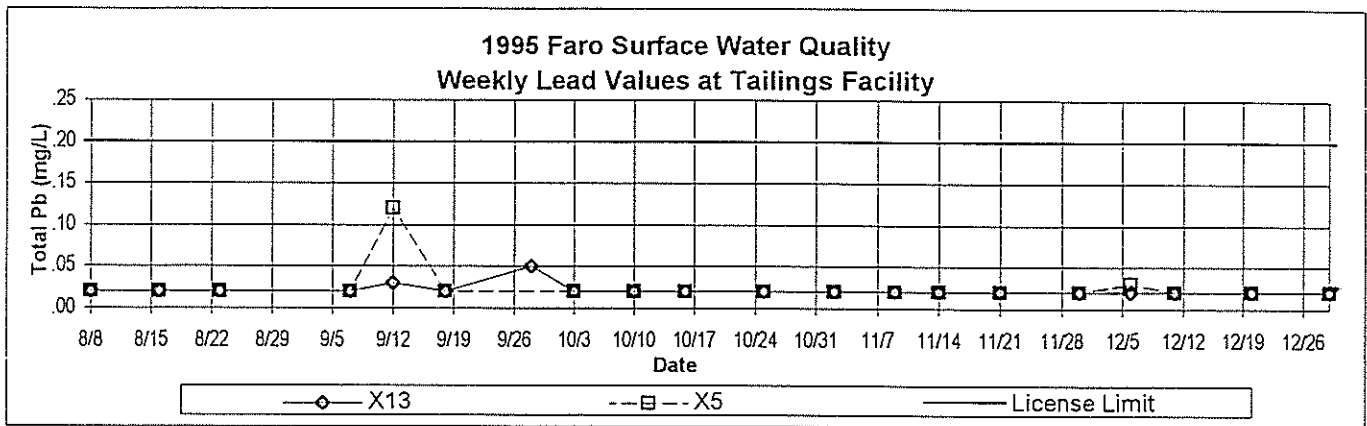
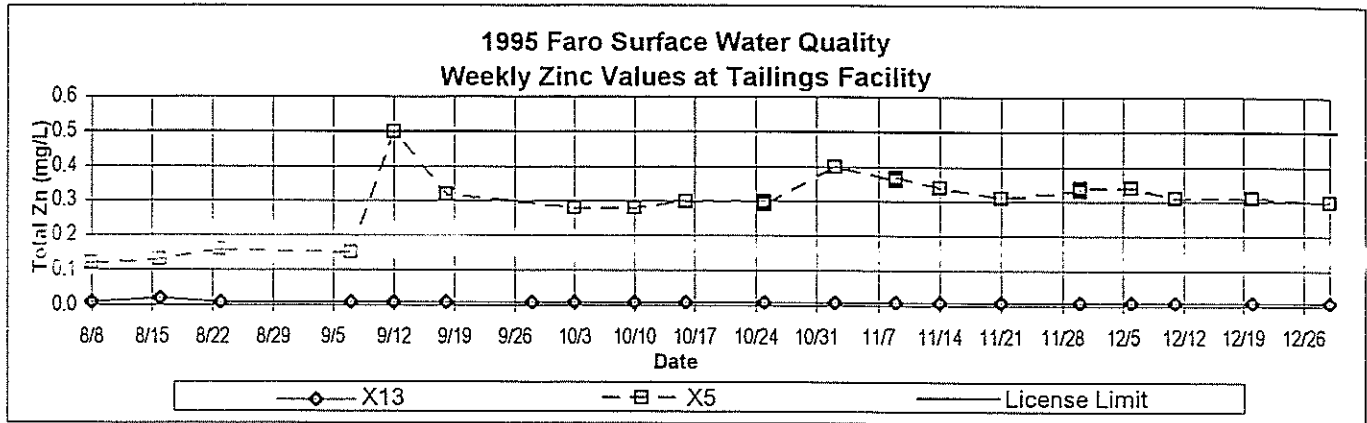
1995 Faro Surface Water Quality



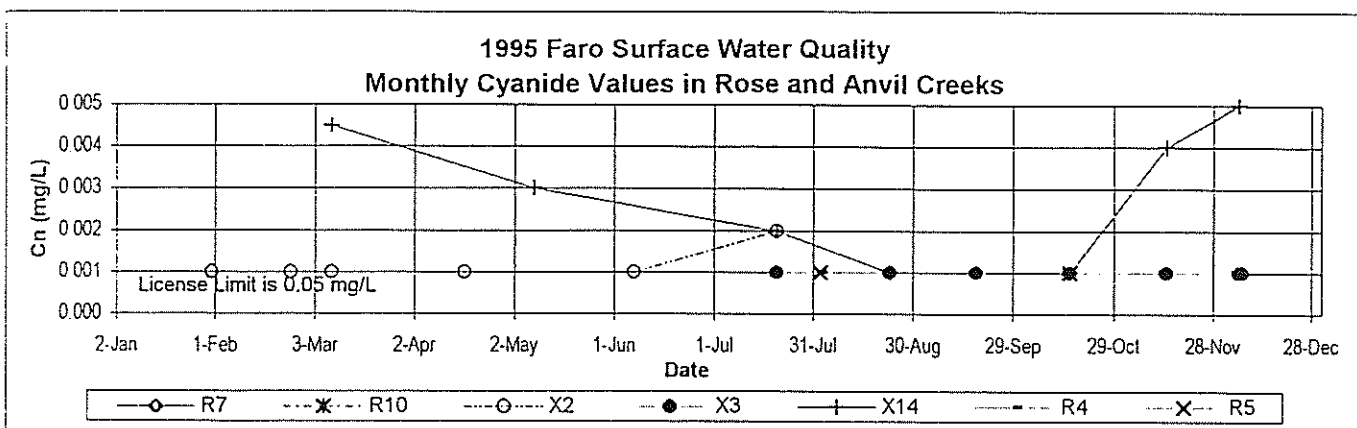
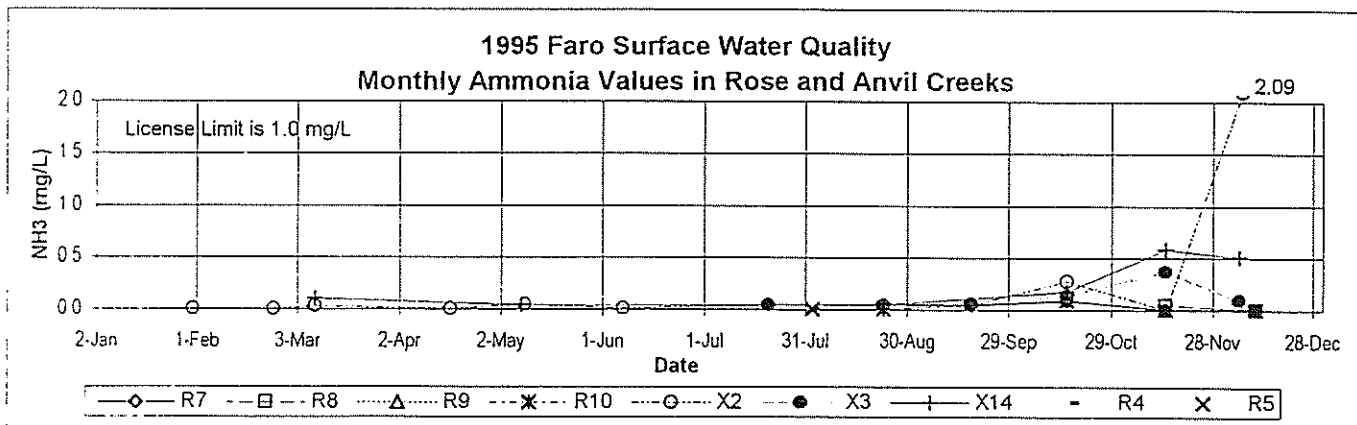
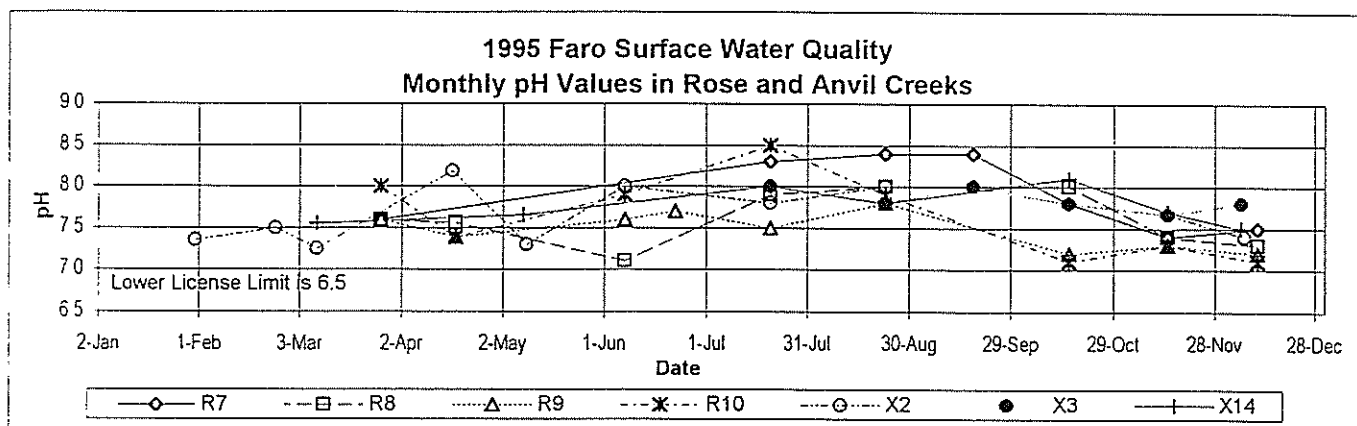
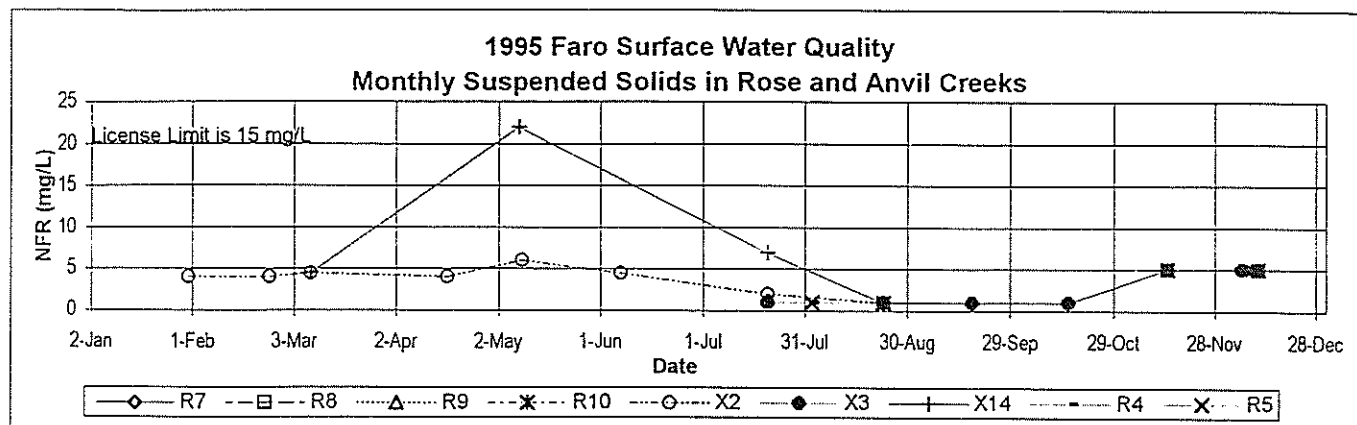
1995 Faro Surface Water Quality



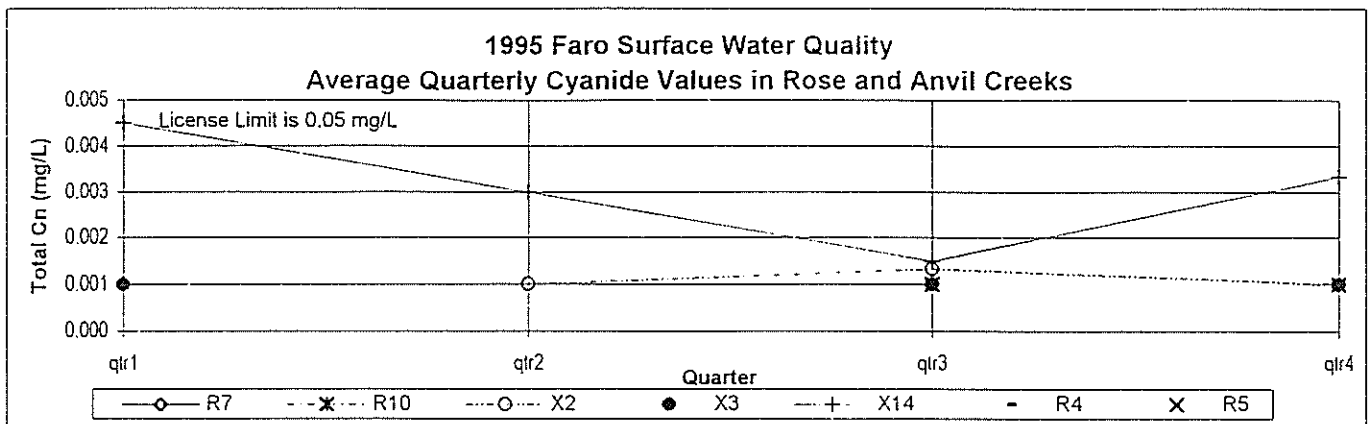
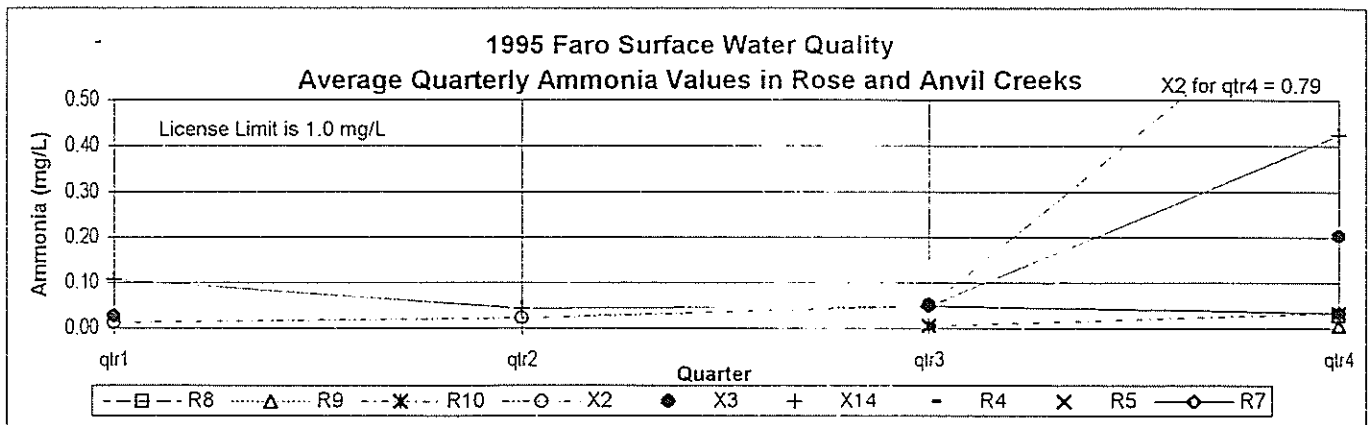
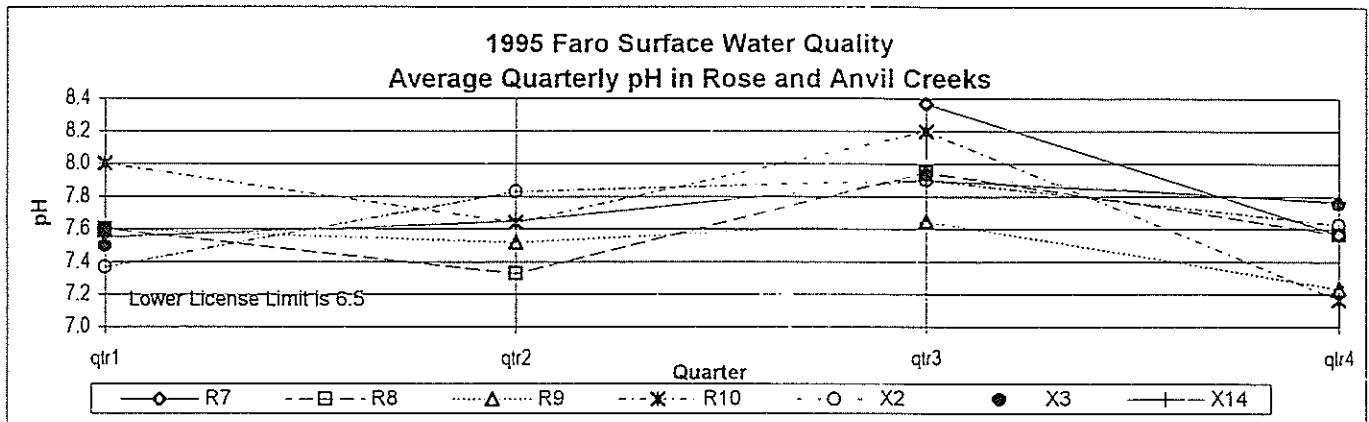
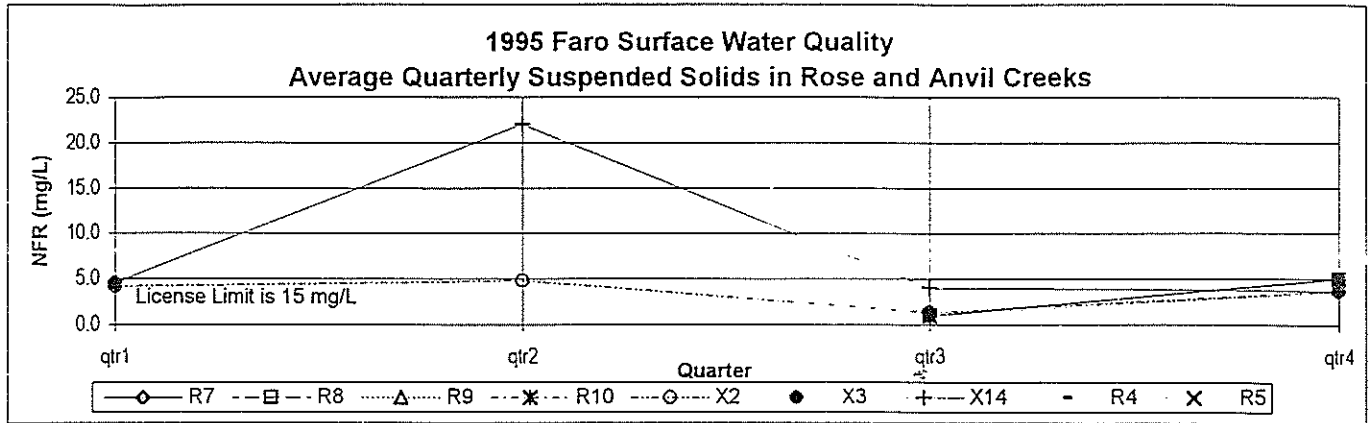
1995 Faro Surface Water Quality



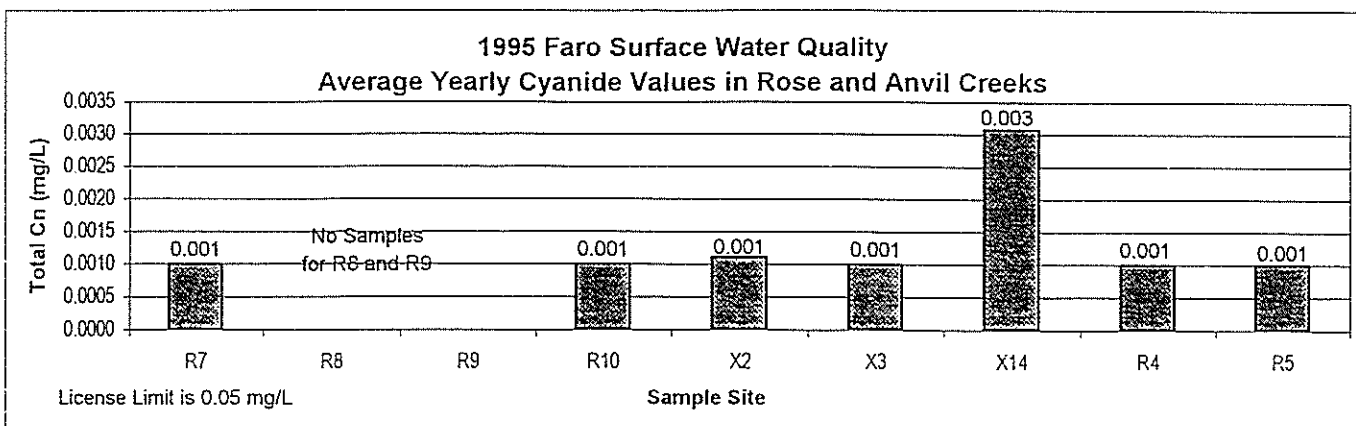
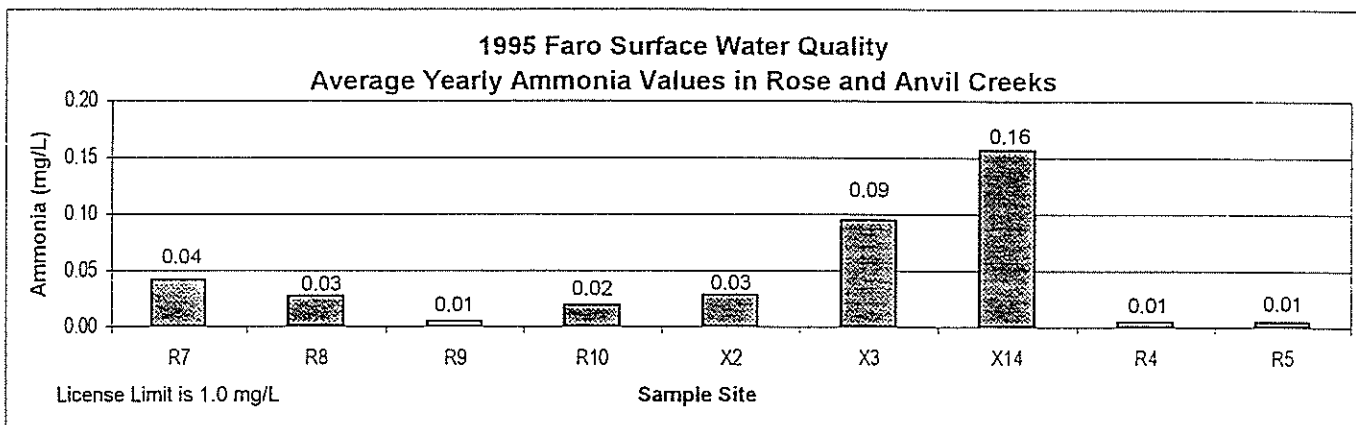
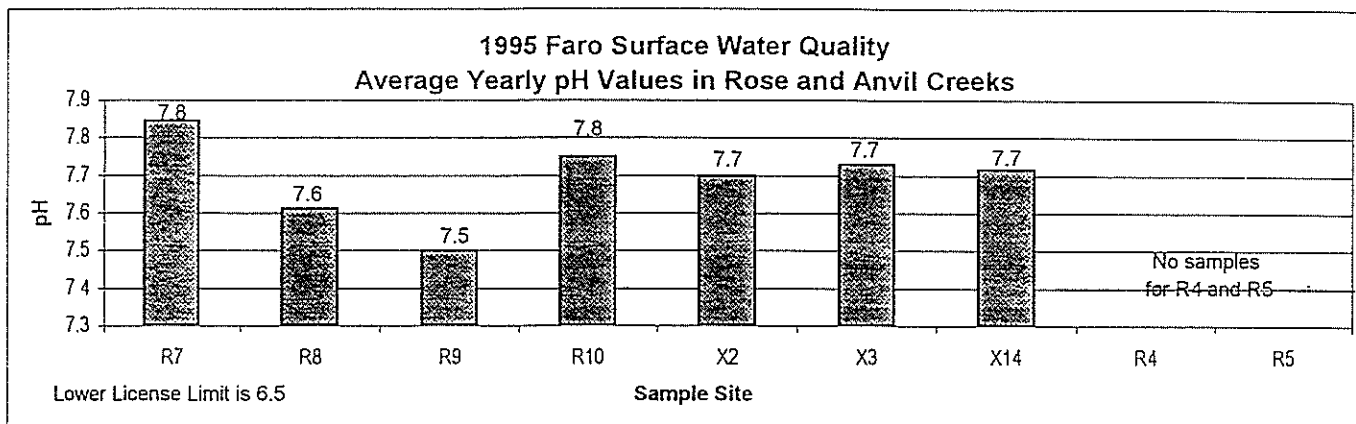
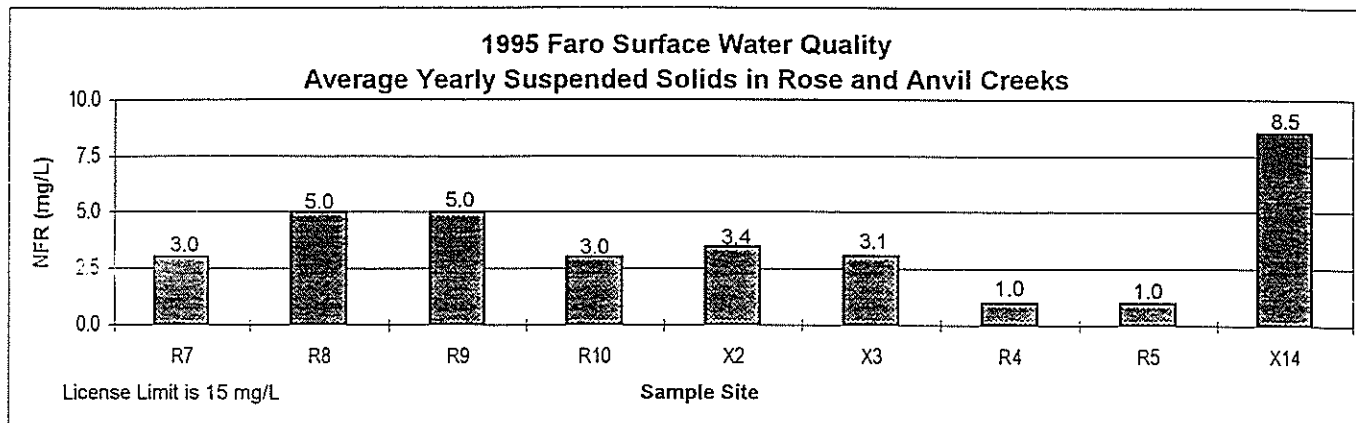
1995 Faro Surface Water Quality



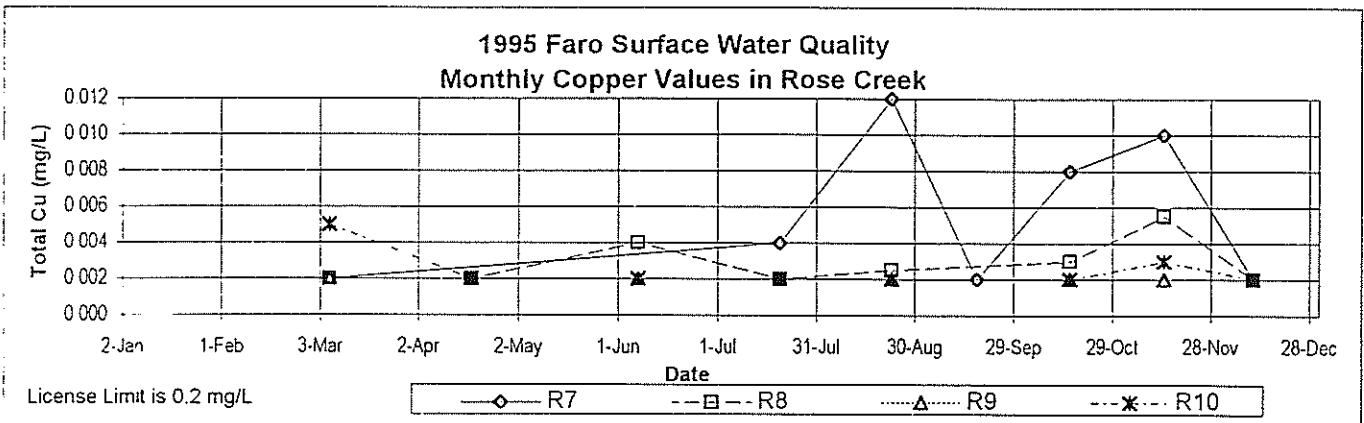
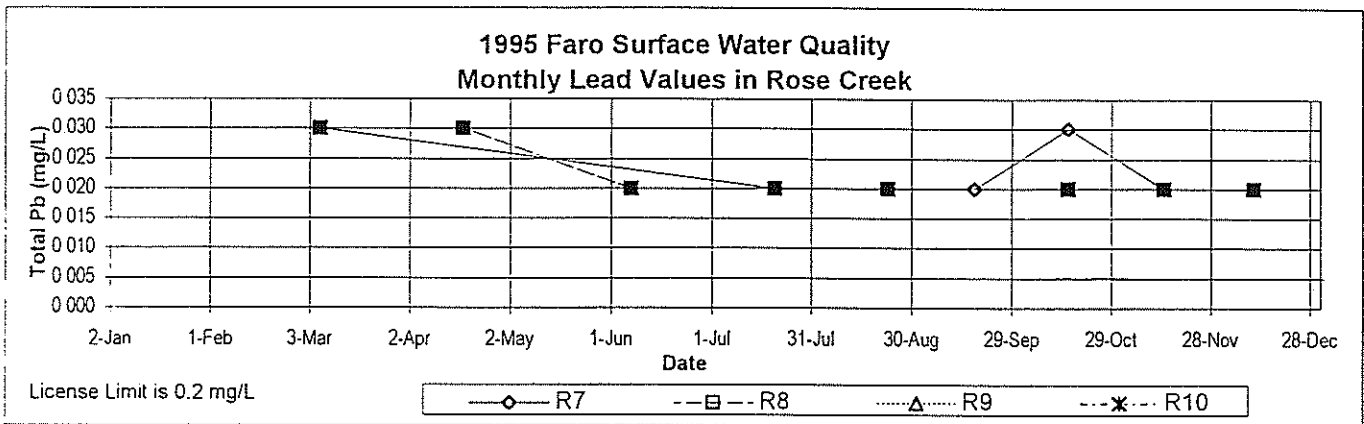
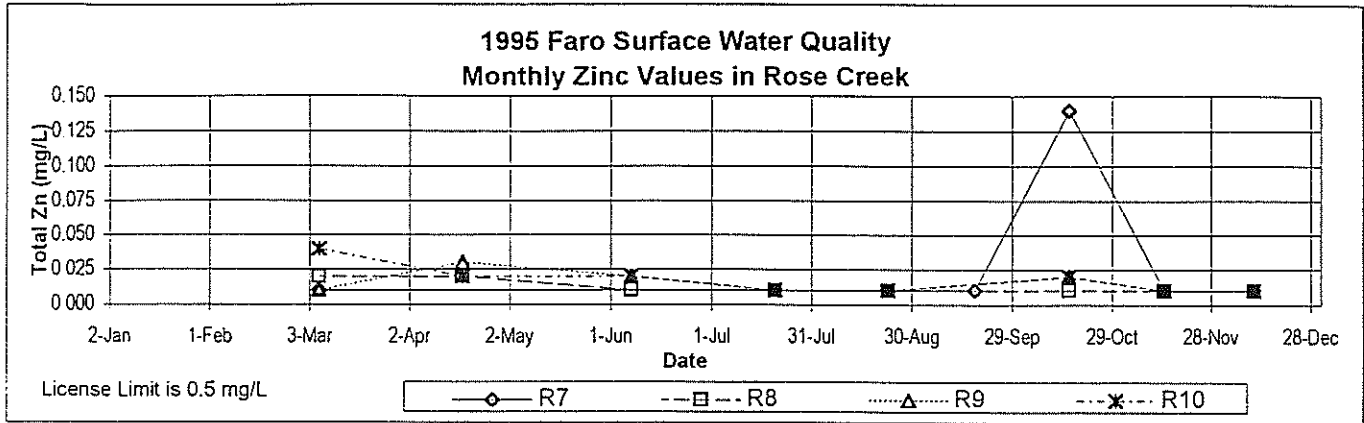
1995 Faro Surface Water Quality

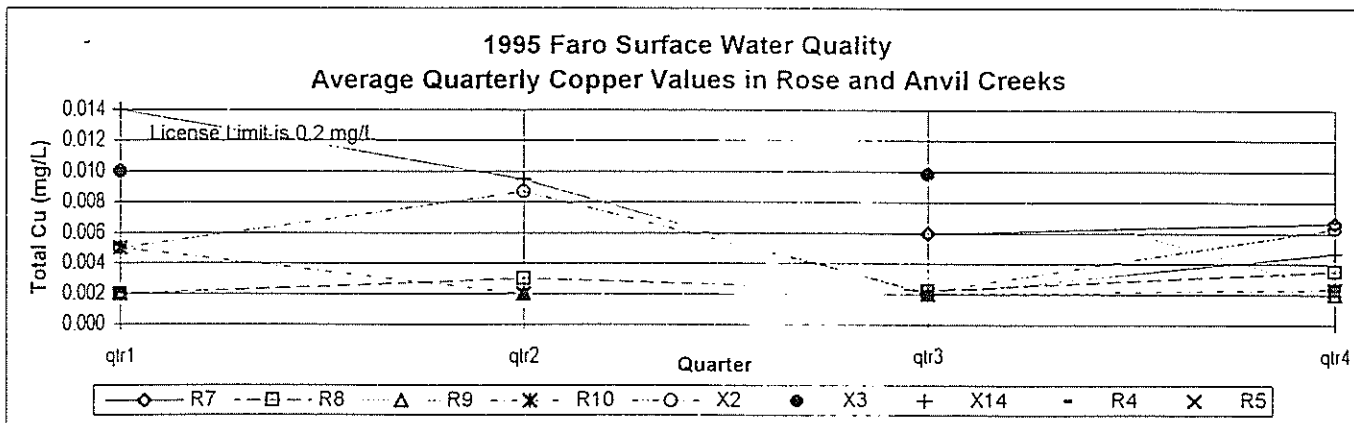
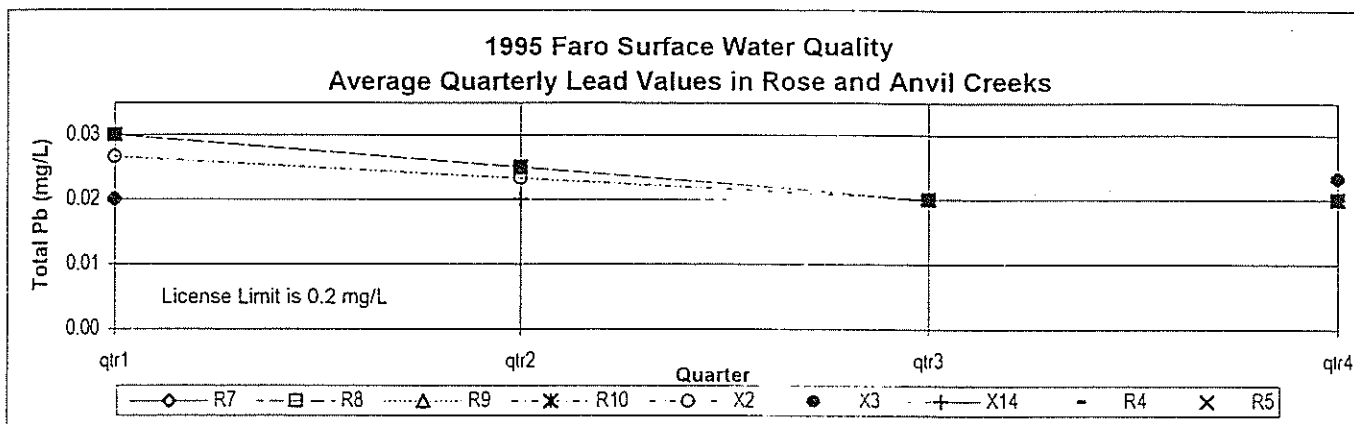
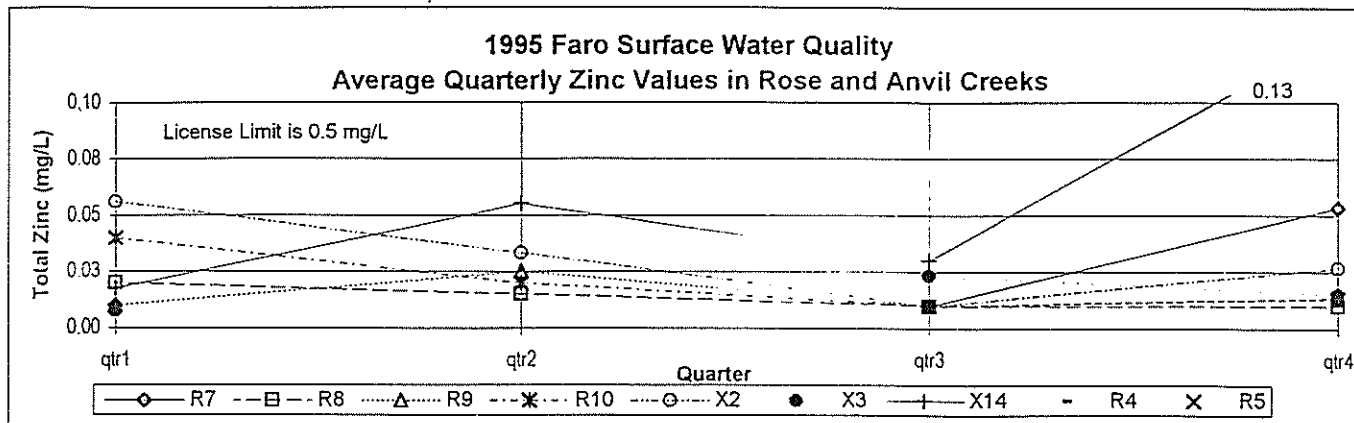


1995 Faro Surface Water Quality

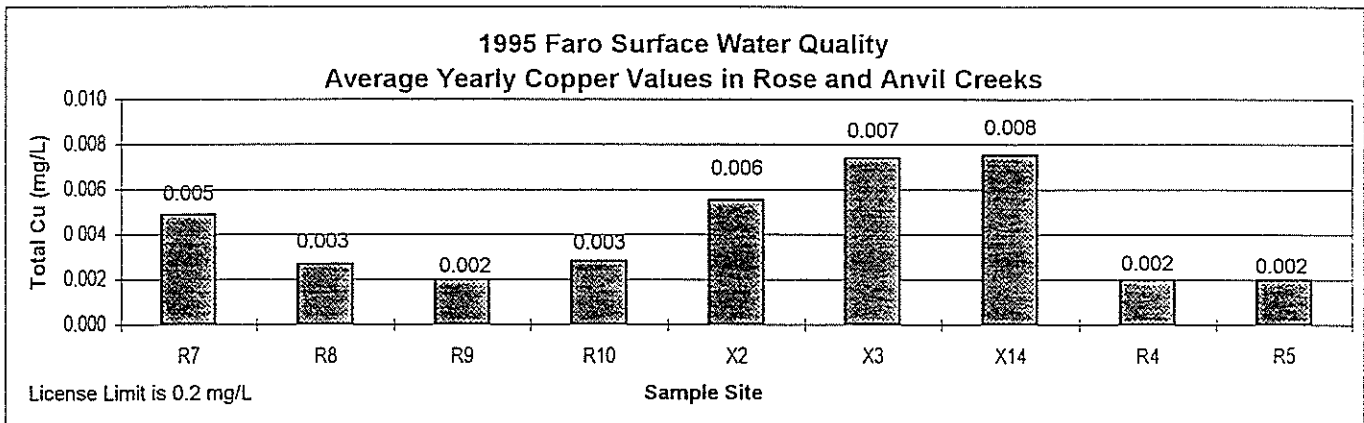
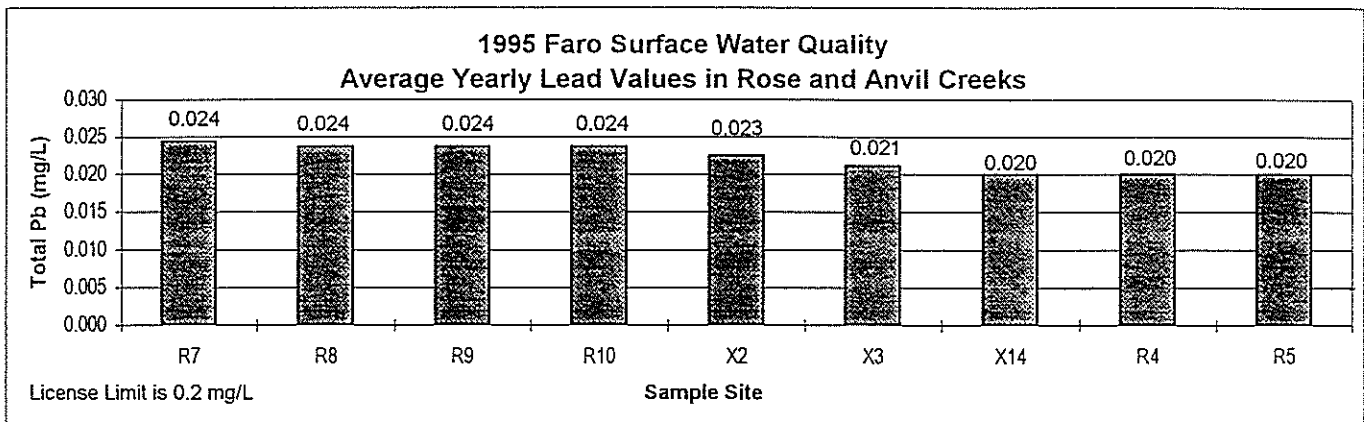
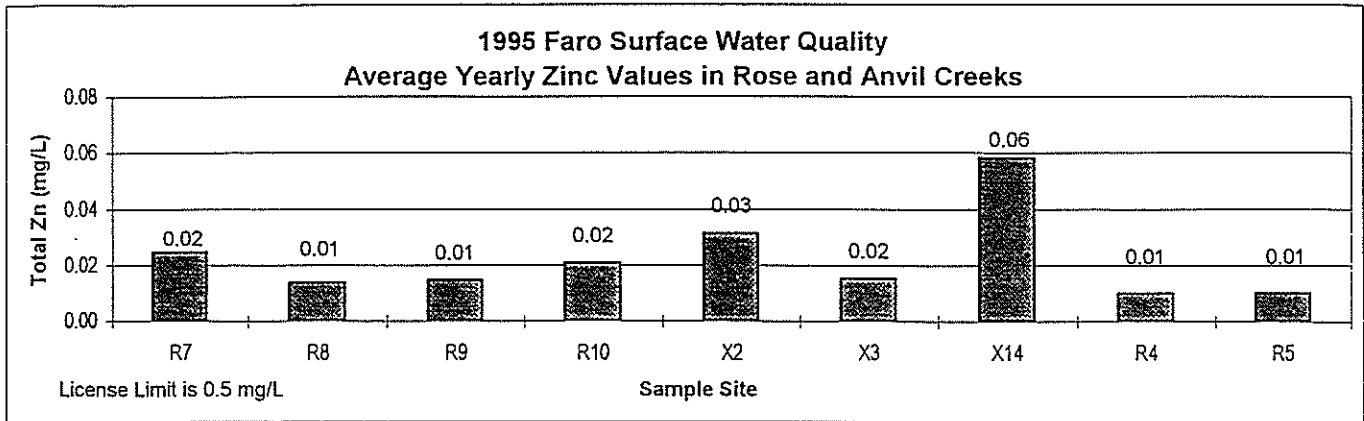


1995 Faro Surface Water Quality



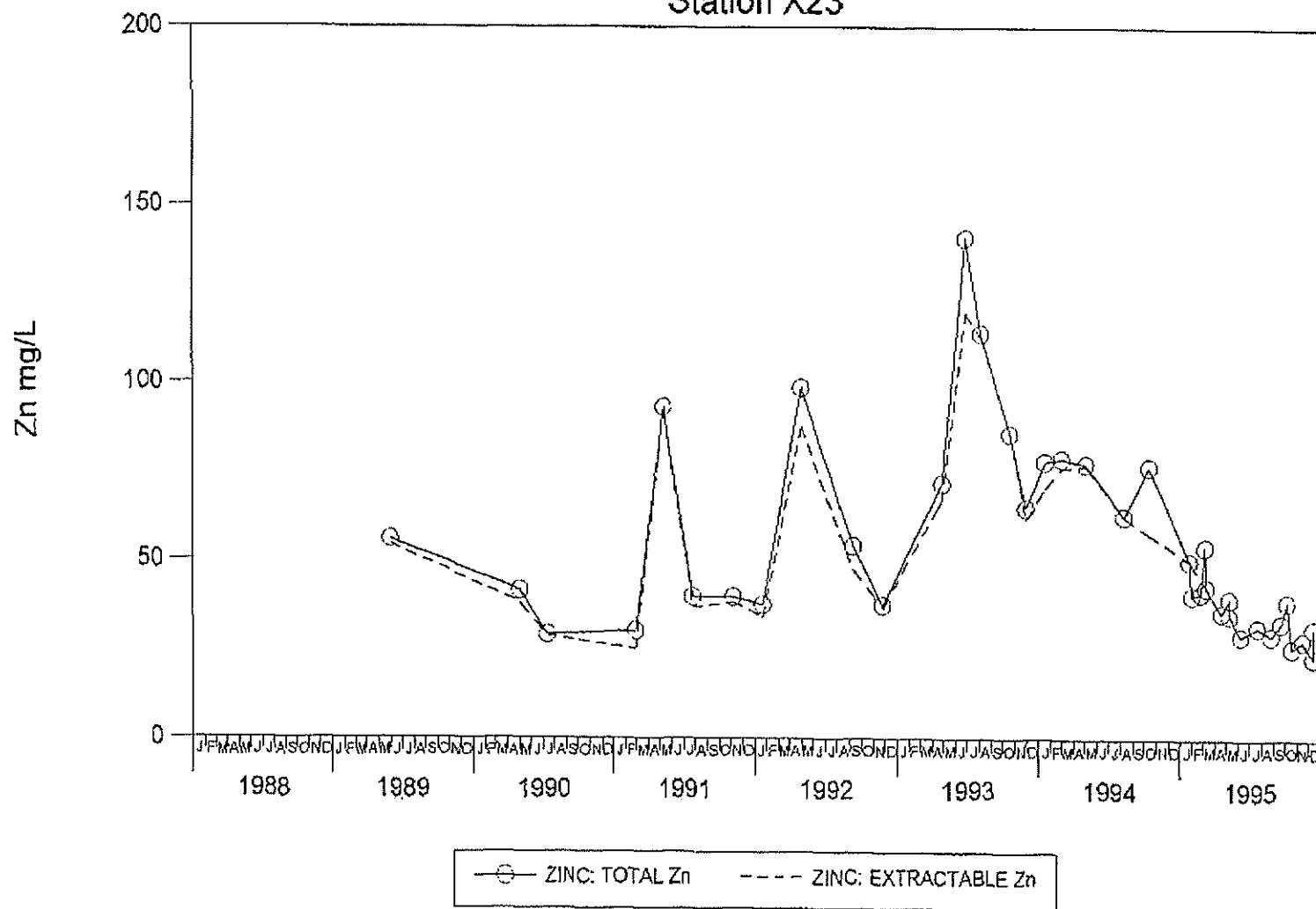


1995 Faro Surface Water Quality

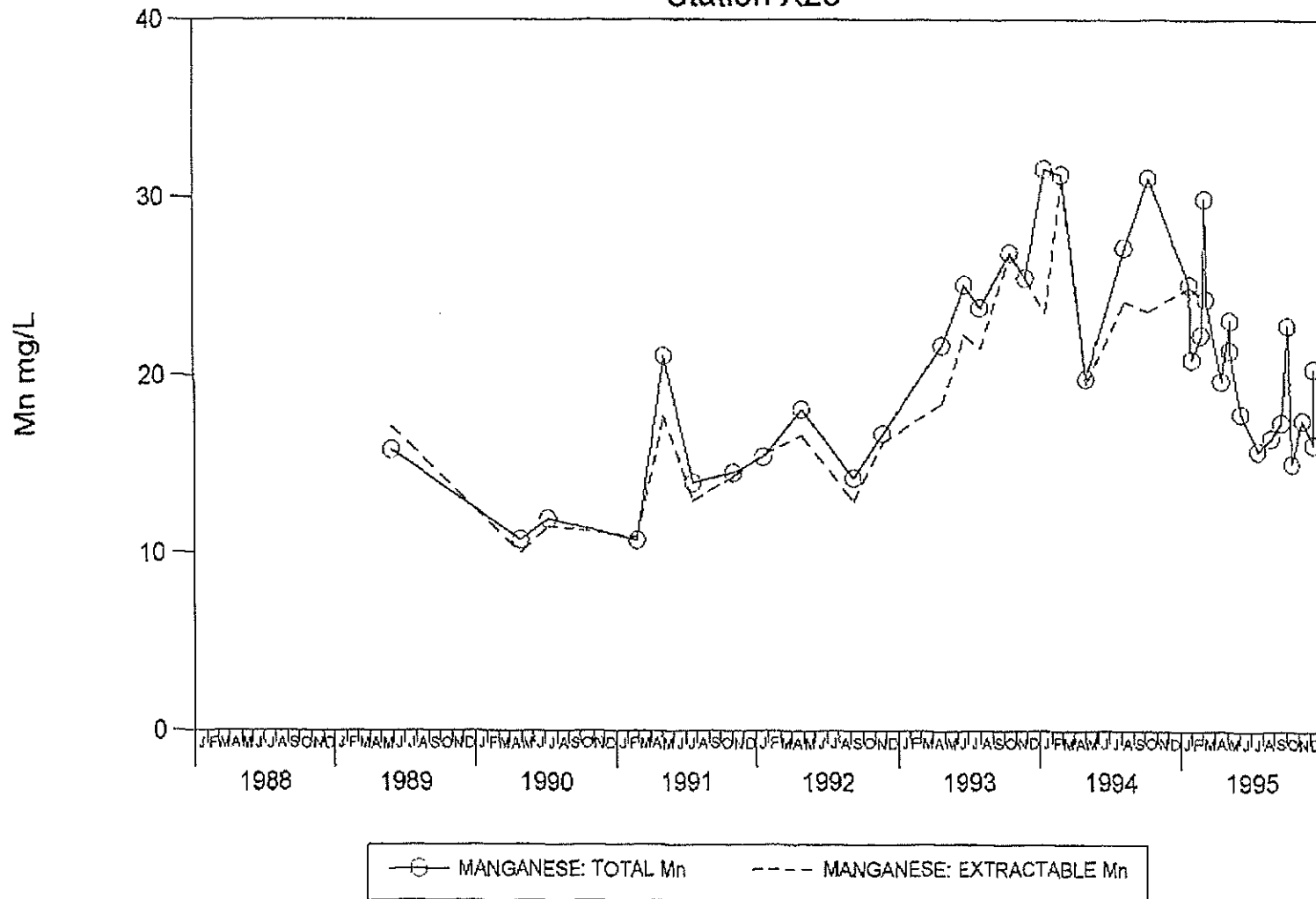


APPENDIX 3

Anvil Range Mining Corporation
Old Faro Creek at Toe of Waste Dumps
Station X23



Anvil Range Mining Corporation
Old Faro Creek at Toe of Waste Dumps
Station X23

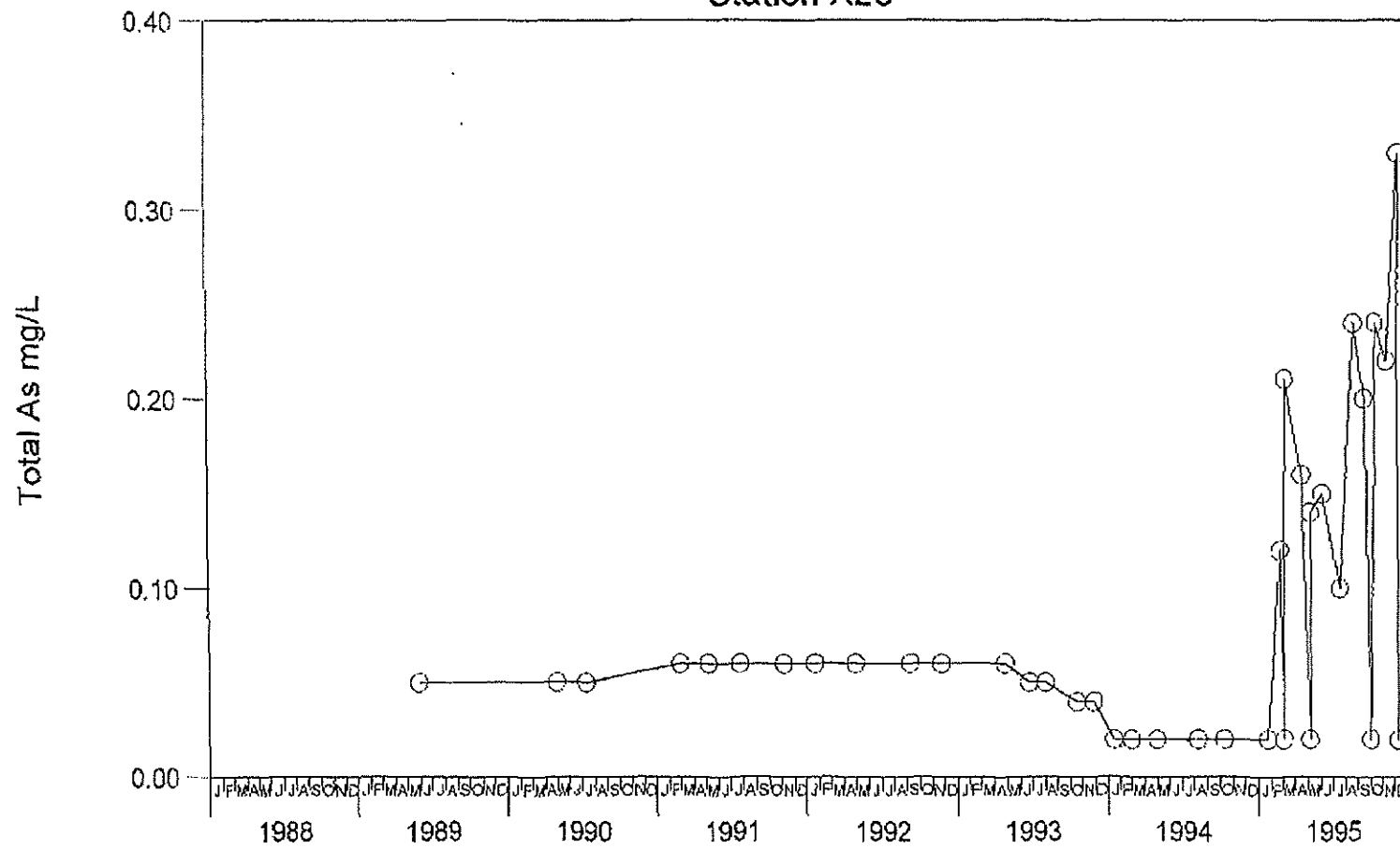


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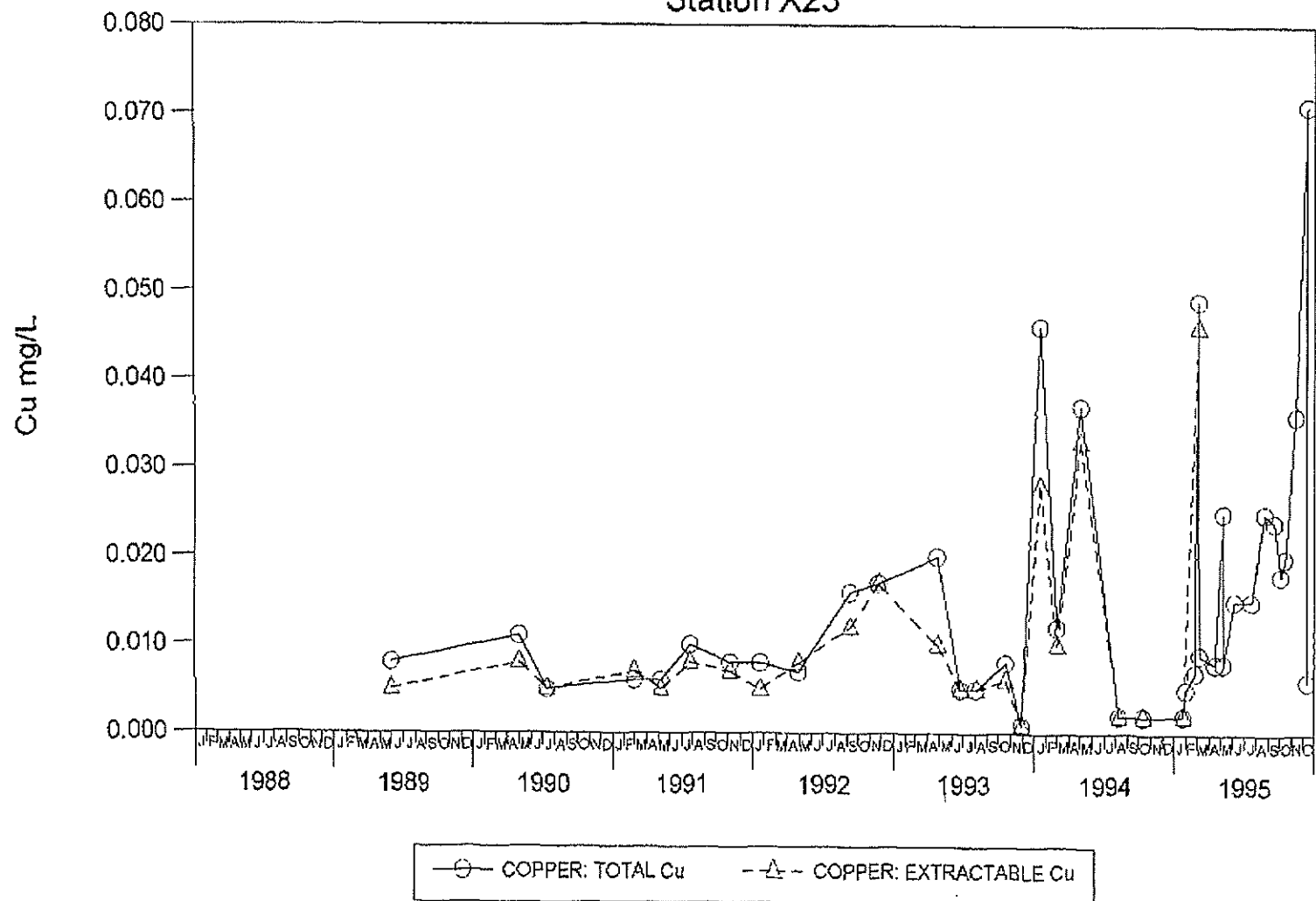
TX/RX NO. 2973

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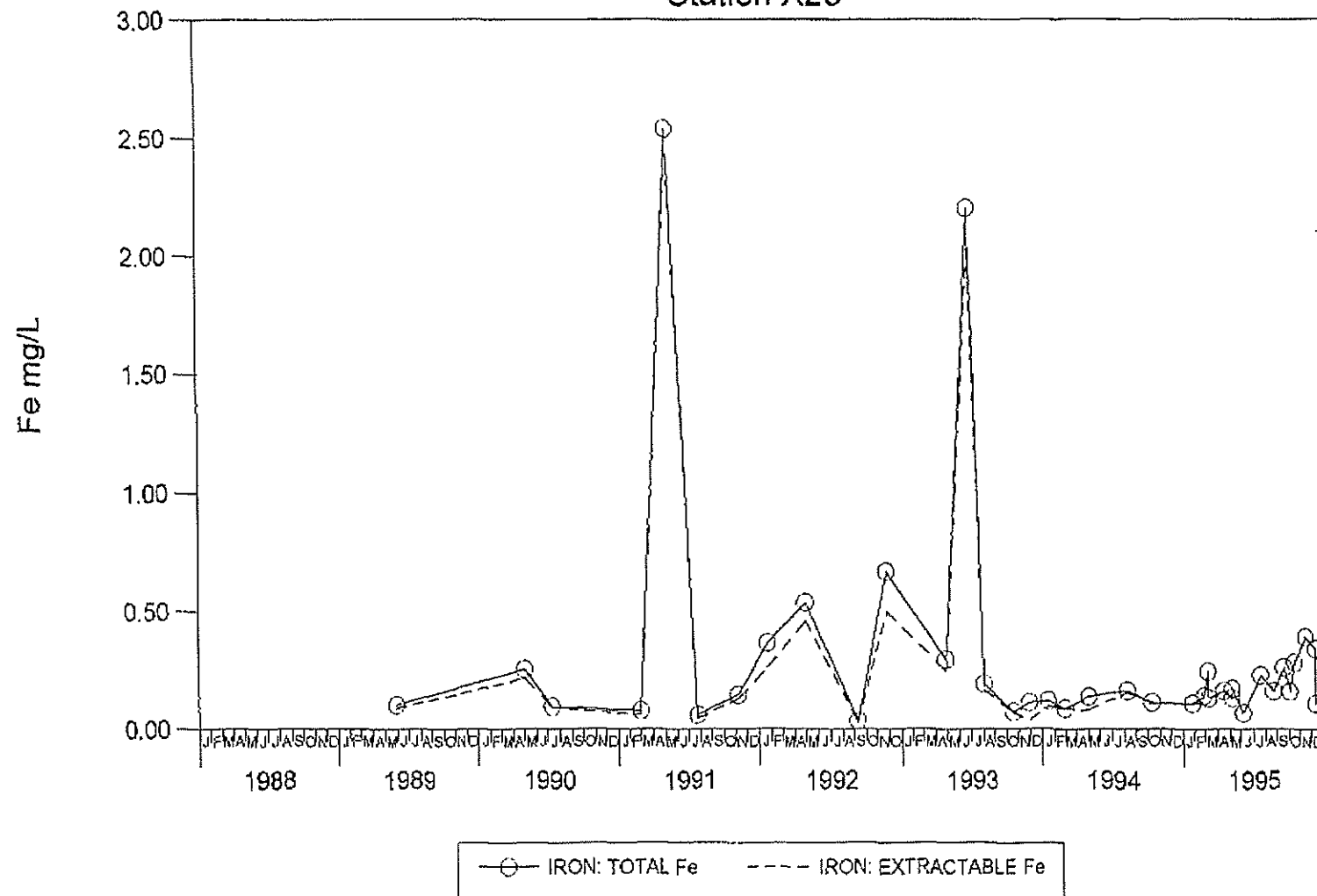
Anvil Range Mining Corporation Old Faro Creek at Toe of Waste Dumps Station X23



Anvil Range Mining Corporation
Old Faro Creek at Toe of Waste Dumps
Station X23



Anvil Range Mining Corporation
Old Faro Creek at Toe of Waste Dumps
Station X23



Anvil Range Mining Corporation
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STATION: Old Faro Creek at Toe of Waste Dumps

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1988 - DEC 1988								
Mean								
Minimum Value								
Maximum Value								
Num. Values								
Num. Values <DL								
JAN 1989 - DEC 1989								
Mean	7.70		55.8000	0.103	15.8000	0.008	0.05	
Minimum Value	7.70		55.8000	0.103	15.8000	0.008	0.05	
Maximum Value	7.70		55.8000	0.103	15.8000	0.008	0.05	
Num. Values	1		1	1	1	1	1	
Num. Values <DL	0		0	0	0	0	1	
JAN 1990 - DEC 1990								
Mean	7.25	1425	35.3000	0.174	11.3000	0.008	0.05	
Minimum Value	6.70	1360	29.1000	0.096	10.7000	0.005	0.05	
Maximum Value	7.80	1490	41.5000	0.253	11.9000	0.011	0.05	
Num. Values	2	2	2	2	2	2	2	
Num. Values <DL	0	0	0	0	0	0	2	
JAN 1991 - DEC 1991								
Mean	7.23	1860	50.7000	0.706	15.0500	0.008	0.06	
Minimum Value	6.80	1460	30.2000	0.061	10.7000	0.006	0.06	
Maximum Value	7.50	2170	93.1000	2.540	21.1000	0.010	0.06	
Num. Values	4	4	4	4	4	4	4	
Num. Values <DL	0	0	0	0	0	2	4	

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Anvil Range Mining Corporation
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STATION: Old Faro Creek at Toe of Waste Dumps

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1992 - DEC 1992								
Mean	7.10	1970	57.0000	0.401	16.1000	0.012	0.06	
Minimum Value	6.70	1830	37.5000	0.035	14.2000	0.007	0.06	
Maximum Value	7.50	2210	98.6000	0.667	18.1000	0.017	0.06	
Num. Values	4	4	4	4	4	4	4	
Num. Values <DL	0	0	0	0	0	0	4	
JAN 1993 - DEC 1993								
Mean	7.01	2512	95.4400	0.575	24.6000	0.008	0.05	0.017
Minimum Value	6.80	1540	64.8000	0.074	21.7000	0.001	0.04	0.005
Maximum Value	7.40	3110	141.0000	2.200	26.9000	0.020	0.06	0.030
Num. Values	5	5	5	5	5	5	5	2
Num. Values <DL	0	0	0	0	0	2	5	2
JAN 1994 - DEC 1994								
Mean	7.34	3076	74.6000	0.125	28.2000	0.020	0.02	0.354
Minimum Value	7.10	2710	62.6000	0.089	19.8000	0.002	0.02	0.354
Maximum Value	7.90	3930	78.9000	0.164	31.6000	0.046	0.02	0.354
Num. Values	5	5	5	5	5	5	5	1
Num. Values <DL	0	0	0	0	0	2	5	0
JAN 1995 - DEC 1995								
Mean	7.40	2866	35.8094	0.193	20.3429	0.020	0.14	
Minimum Value	7.10	2600	23.2200	0.070	15.0000	0.002	0.02	
Maximum Value	7.80	3200	54.1000	0.390	29.9000	0.071	0.33	
Num. Values	5	5	17	16	17	17	16	
Num. Values <DL	0	0	0	0	0	1	4	

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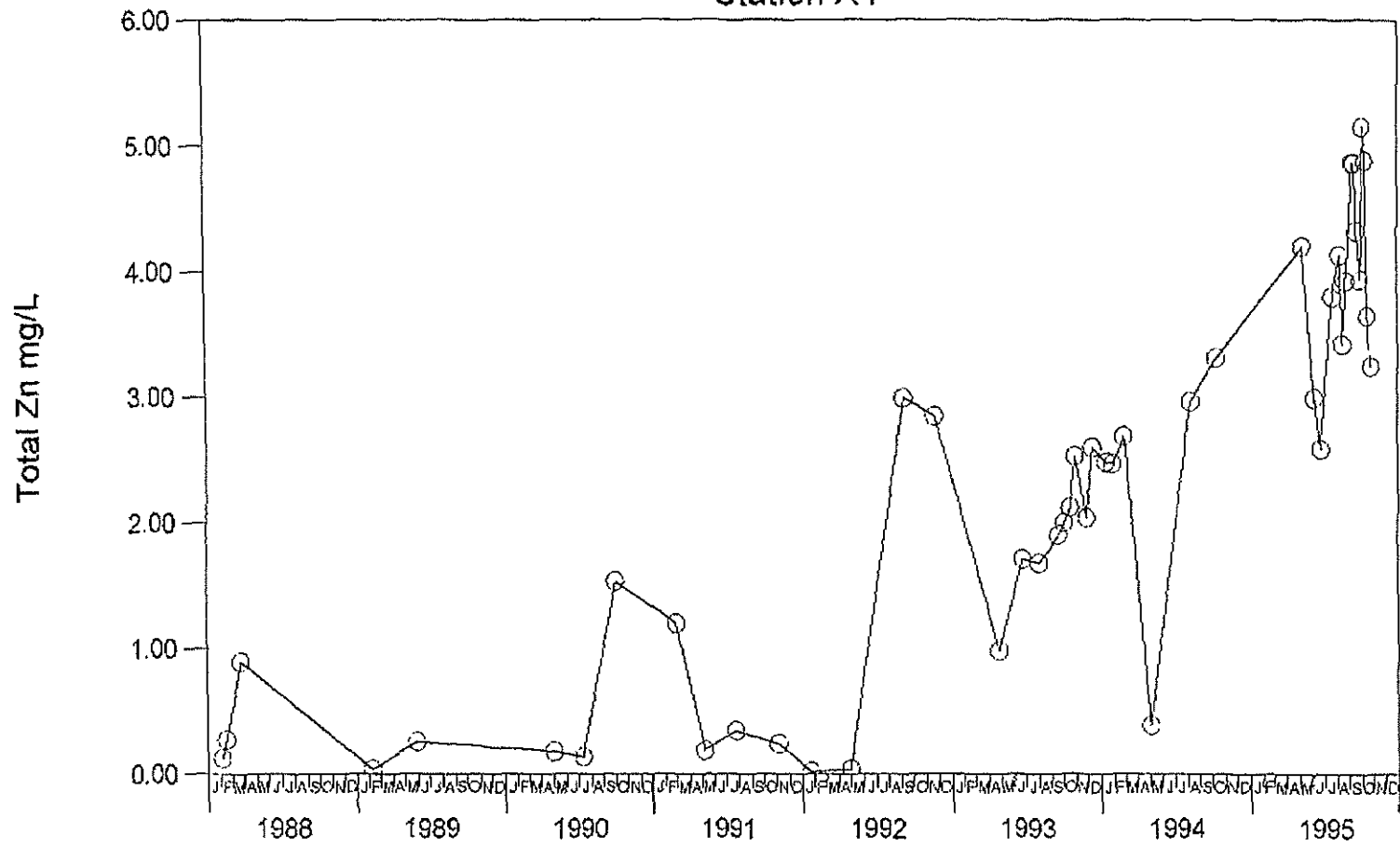
TX/RX NO. 2973

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Anvil Range Mining Corporation
Intermediate Dam decant
Station X4

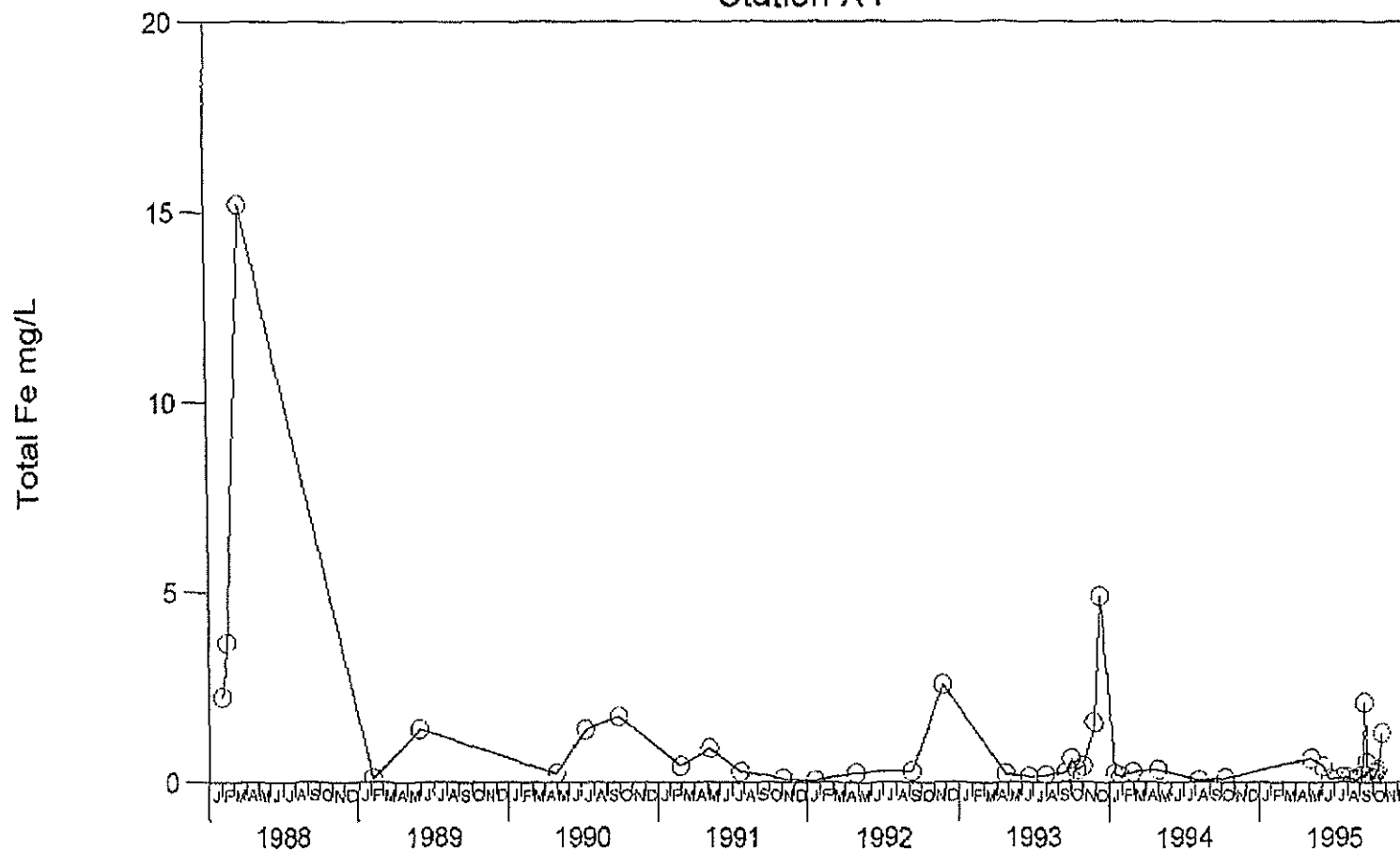


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Anvil Range Mining Corporation Intermediate Dam decant Station X4



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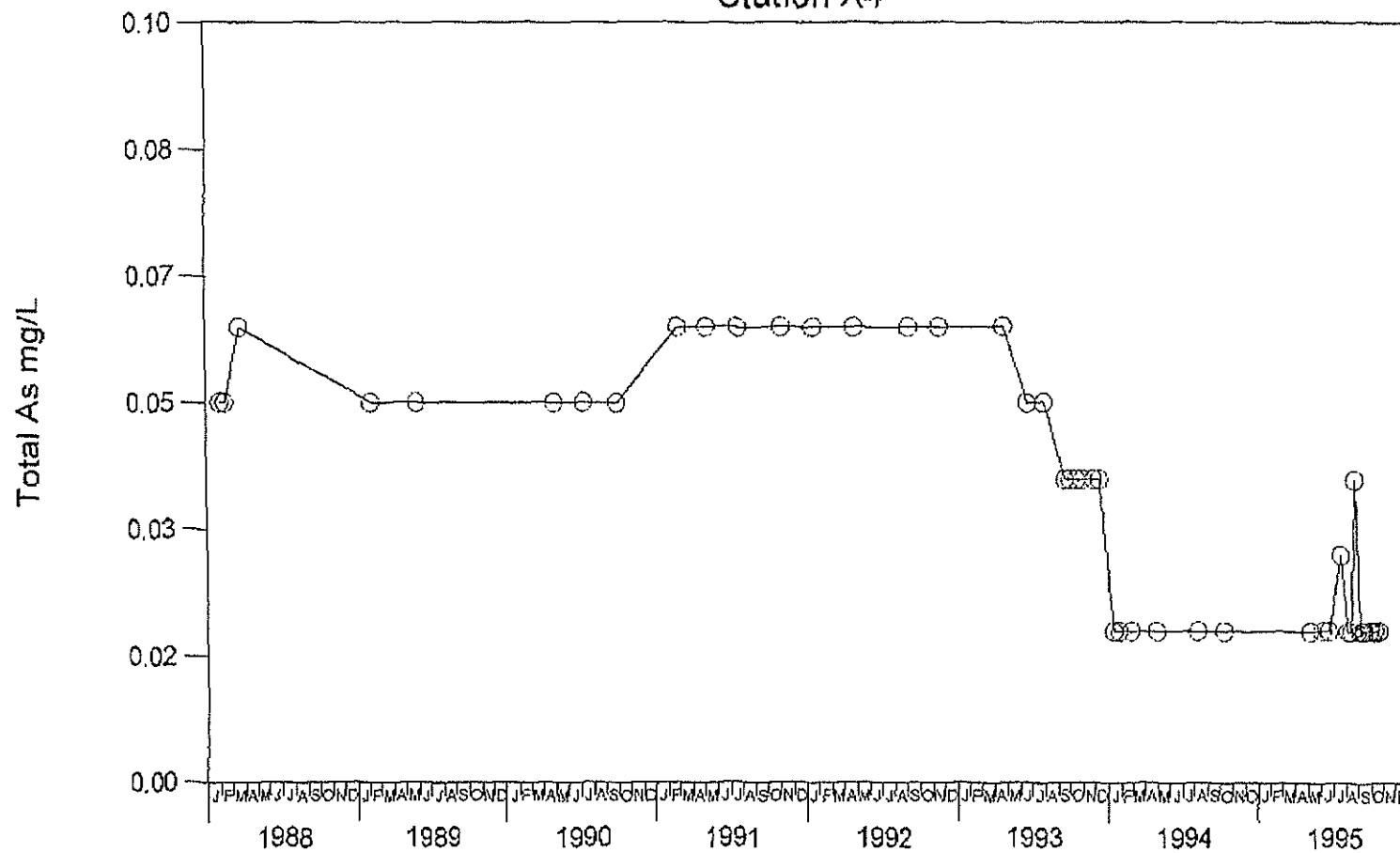
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Anvil Range Mining Corporation Intermediate Dam decant Station X4



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Annual Water Quality Statistics
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STATION: Intermediate Dam decant

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1988 - DEC 1988								
Mean	8.37	260	0.4320	7.033	0.6897	0.076	0.05	0.120
Minimum Value	8.30	240	0.1270	2.230	0.4900	0.056	0.05	0.090
Maximum Value	8.50	290	0.8930	15.200	0.9160	0.093	0.06	0.150
Num. Values	3	3	3	3	3	3	3	2
Num. Values <DL	0	0	0	0	0	0	2	0
JAN 1989 - DEC 1989								
Mean	8.25	305	0.1495	0.746	0.6985	0.020	0.05	0.050
Minimum Value	8.00	210	0.0420	0.103	0.5820	0.020	0.05	0.030
Maximum Value	8.50	400	0.2570	1.390	0.8150	0.020	0.05	0.070
Num. Values	2	2	2	2	2	2	2	2
Num. Values <DL	0	0	0	0	0	0	2	0
JAN 1990 - DEC 1990								
Mean	7.77	306	0.6153	1.110	0.7497	0.009	0.05	0.047
Minimum Value	7.50	246	0.1370	0.221	0.3180	0.008	0.05	0.030
Maximum Value	8.00	351	1.5300	1.720	1.4300	0.012	0.05	0.070
Num. Values	3	3	3	3	3	3	3	3
Num. Values <DL	0	0	0	0	0	0	3	1
JAN 1991 - DEC 1991								
Mean	7.80	424	0.4948	0.426	0.8915	0.495	0.06	0.577
Minimum Value	7.20	323	0.1890	0.098	0.5880	0.006	0.06	0.040
Maximum Value	8.10	564	1.2000	0.890	1.3100	1.670	0.06	2.100
Num. Values	4	4	4	4	4	4	4	4
Num. Values <DL	0	0	0	0	0	1	4	0

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Annual Water Quality Statistics
1995 Faro Annual Report

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STATION: Intermediate Dam decant

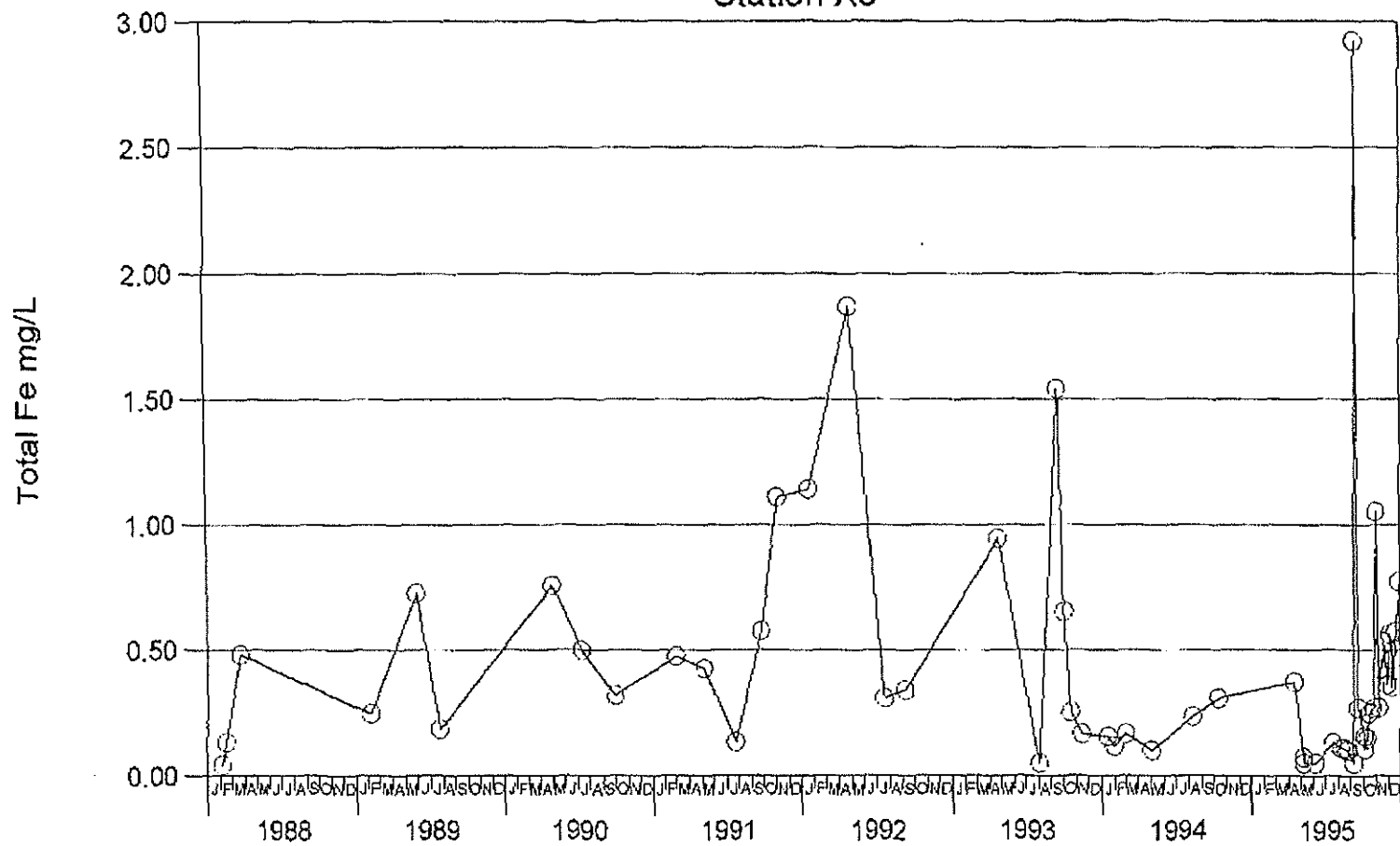
Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1992 - DEC 1992								
Mean	7.62	261	1.4760	0.792	1.7538	0.089	0.06	0.075
Minimum Value	7.05	16	0.0220	0.053	0.0490	0.006	0.06	0.030
Maximum Value	8.50	397	2.9900	2.560	4.4400	0.335	0.06	0.210
Num. Values	4	4	4	4	4	4	4	4
Num. Values <DL	0	0	0	0	0	2	4	3
JAN 1993 - DEC 1993								
Mean	7.86	419	1.9507	0.964	3.3722	0.005	0.04	0.050
Minimum Value	7.30	340	0.9760	0.146	2.5200	0.001	0.04	0.005
Maximum Value	8.51	467	2.6000	4.900	4.2100	0.014	0.06	0.180
Num. Values	9	9	9	9	9	9	9	9
Num. Values <DL	0	0	0	0	0	7	9	6
JAN 1994 - DEC 1994								
Mean	7.63	427	2.3840	0.191	3.3093	0.021	0.02	0.008
Minimum Value	7.20	117	0.3940	0.054	0.5760	0.002	0.02	0.005
Maximum Value	8.10	600	3.3100	0.334	4.2200	0.080	0.02	0.025
Num. Values	6	6	6	6	6	6	6	6
Num. Values <DL	0	0	0	0	0	1	6	5
JAN 1995 - DEC 1995								
Mean	7.70	338	3.9953	0.438	4.4047	0.012	0.02	0.005
Minimum Value	7.70	338	2.5800	0.080	3.3400	0.002	0.02	0.005
Maximum Value	7.70	338	5.1500	2.090	6.0000	0.029	0.04	0.005
Num. Values	1	1	15	15	15	15	15	1
Num. Values <DL	0	0	0	0	0	1	11	1

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Cross Valley Dam Decant
Station X5



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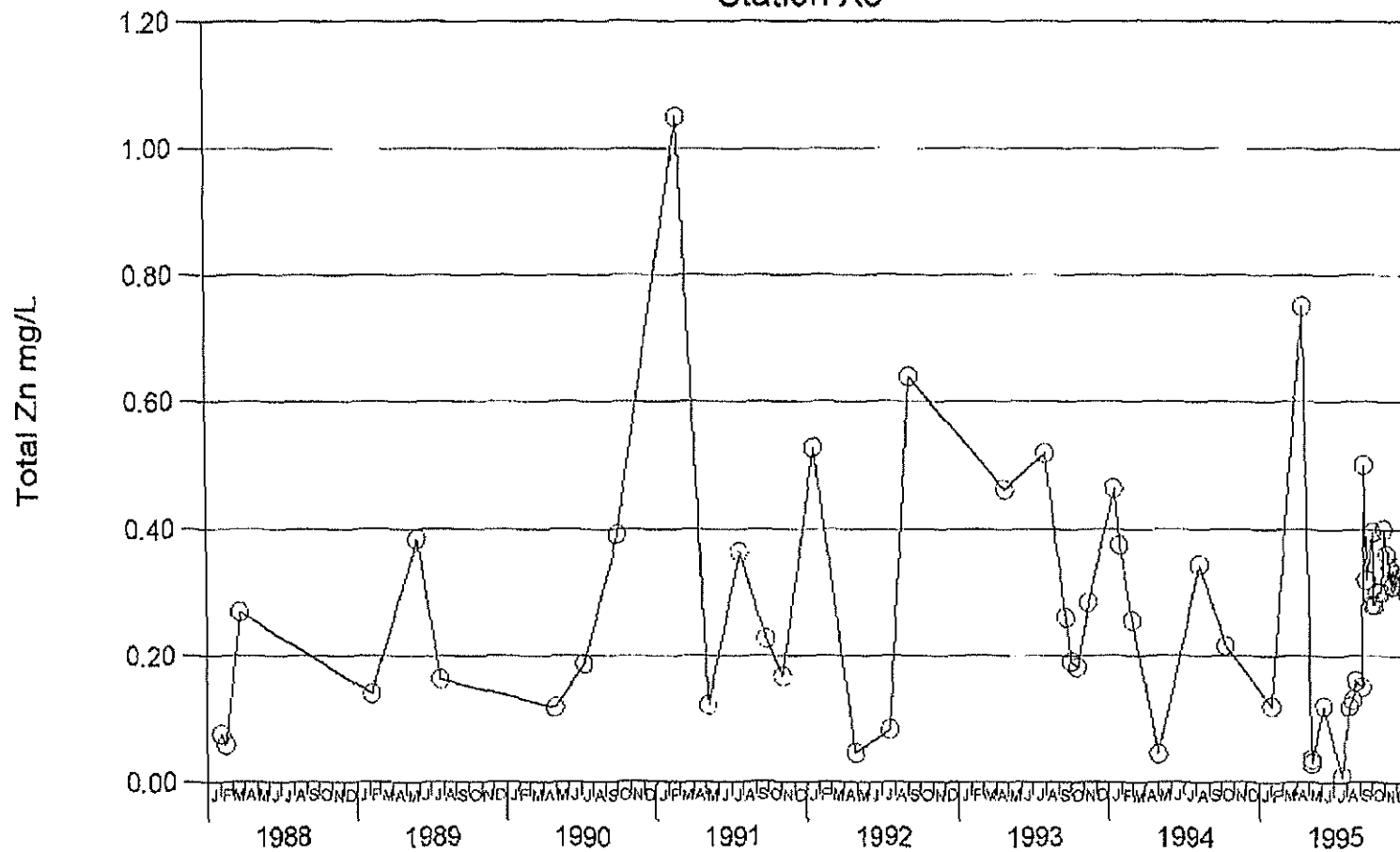
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Anvil Range Mining Corporation
Cross Valley Dam Decant
Station X5

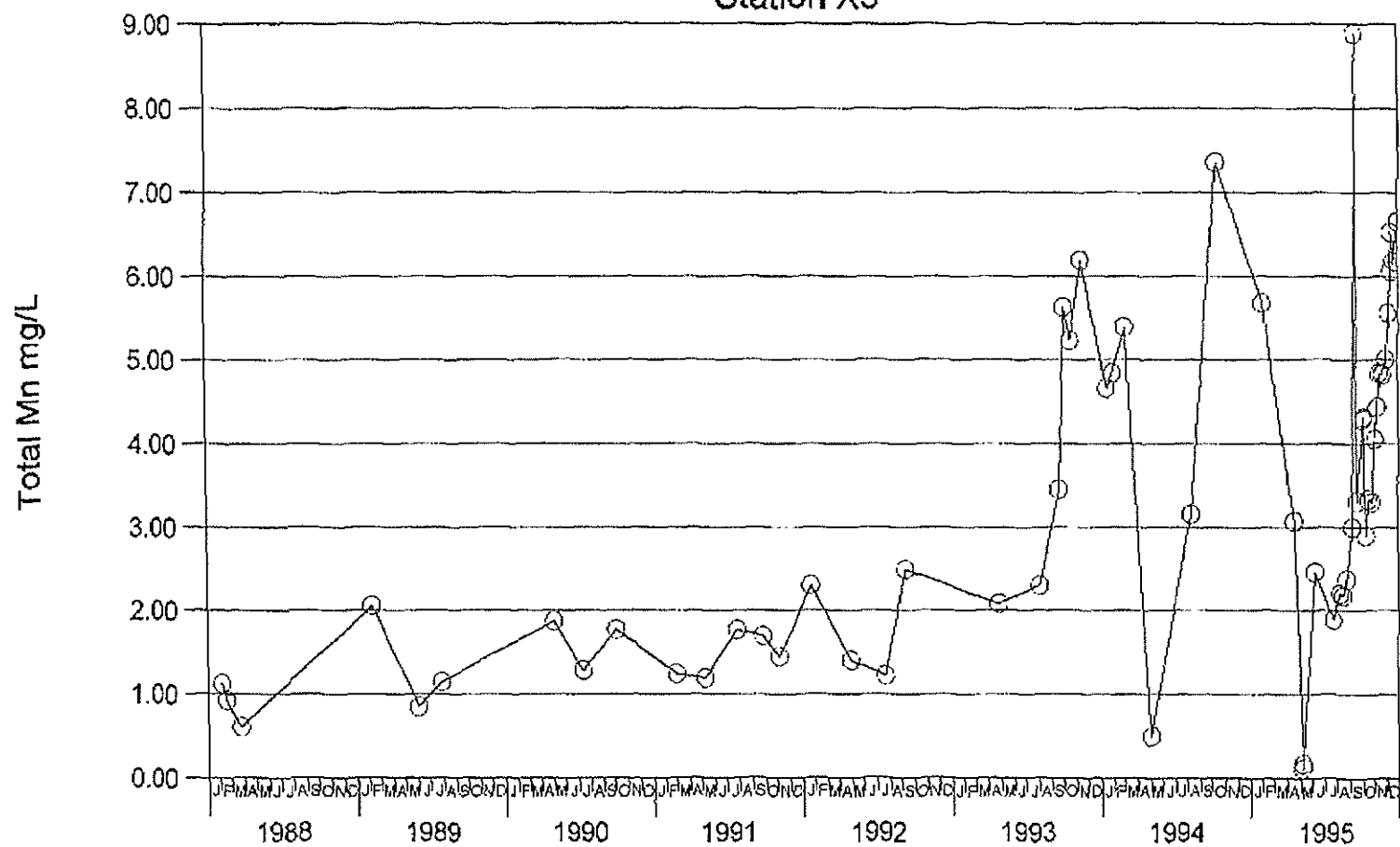


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Anvil Range Mining Corporation
Cross Valley Dam Decant
Station X5

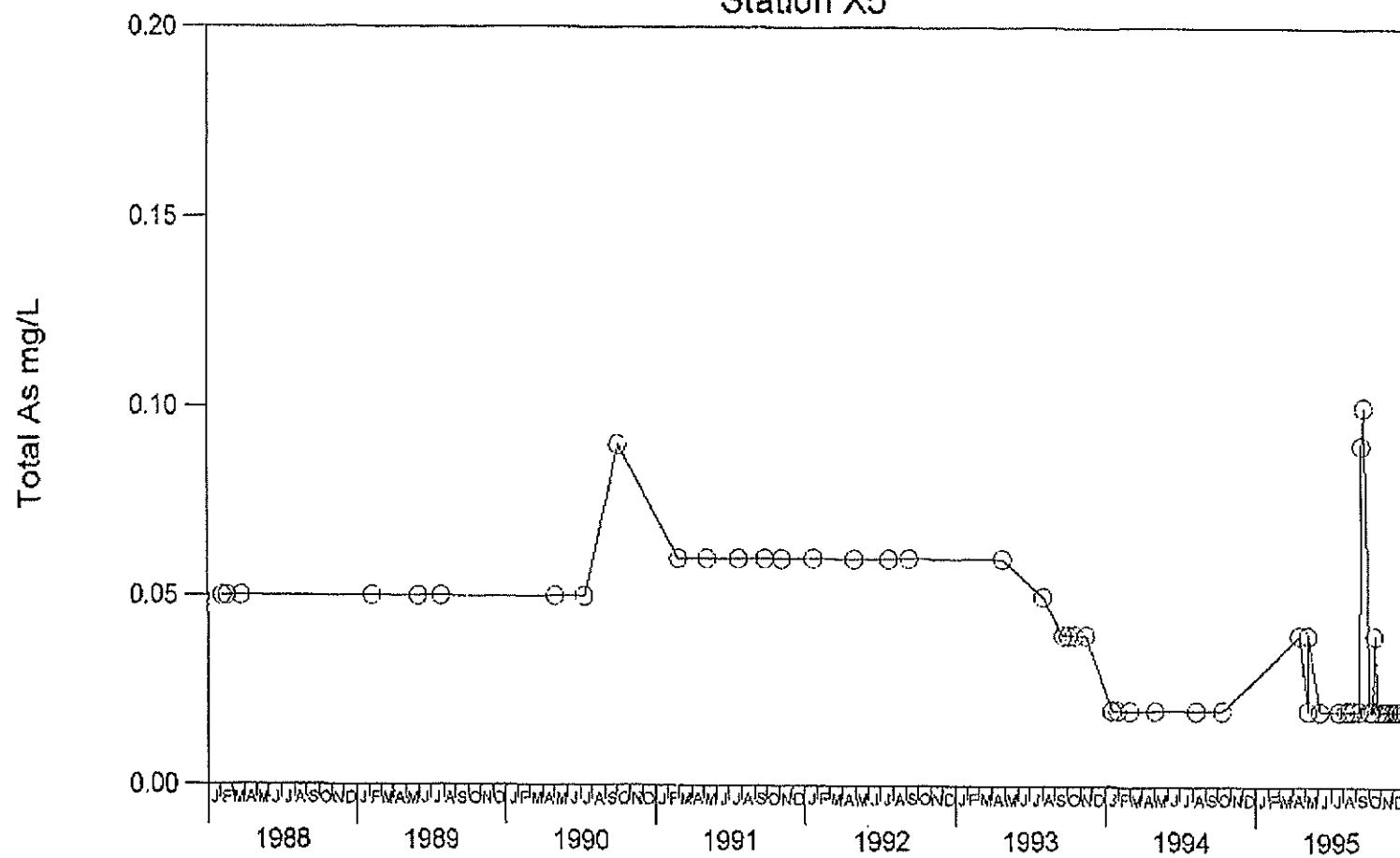


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Anvil Range Mining Corporation
Cross Valley Dam decant
Station X5



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Anvil Range Mining Corporation
Annual Water Quality Statistics
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STATION: Cross Valley Dam decant

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1988 - DEC 1988								
Mean	8.13	303	0.1343	0.220	0.8843	0.044	0.05	0.130
Minimum Value	8.10	270	0.0590	0.044	0.6120	0.021	0.05	0.100
Maximum Value	8.20	350	0.2690	0.482	1.1200	0.071	0.05	0.150
Num. Values	3	3	3	3	3	3	3	3
Num. Values <DL	0	0	0	0	0	0	3	0
JAN 1989 - DEC 1989								
Mean	8.10	340	0.2287	0.385	1.3440	0.009	0.05	0.030
Minimum Value	7.80	310	0.1400	0.185	0.8420	0.005	0.05	0.030
Maximum Value	8.30	390	0.3840	0.725	2.0500	0.012	0.05	0.030
Num. Values	3	3	3	3	3	3	3	3
Num. Values <DL	0	0	0	0	0	1	3	1
JAN 1990 - DEC 1990								
Mean	7.47	358	0.2320	0.523	1.6400	0.006	0.06	0.057
Minimum Value	7.20	341	0.1180	0.319	1.2800	0.005	0.05	0.030
Maximum Value	7.80	370	0.3910	0.753	1.8700	0.009	0.09	0.100
Num. Values	3	3	3	3	3	3	3	3
Num. Values <DL	0	0	0	0	0	2	2	0
JAN 1991 - DEC 1991								
Mean	7.68	441	0.3856	0.544	1.4640	0.032	0.06	0.046
Minimum Value	7.10	300	0.1210	0.136	1.1800	0.006	0.06	0.030
Maximum Value	8.00	591	1.0500	1.110	1.7700	0.076	0.06	0.060
Num. Values	5	5	5	5	5	5	5	5
Num. Values <DL	0	0	0	0	0	1	5	0

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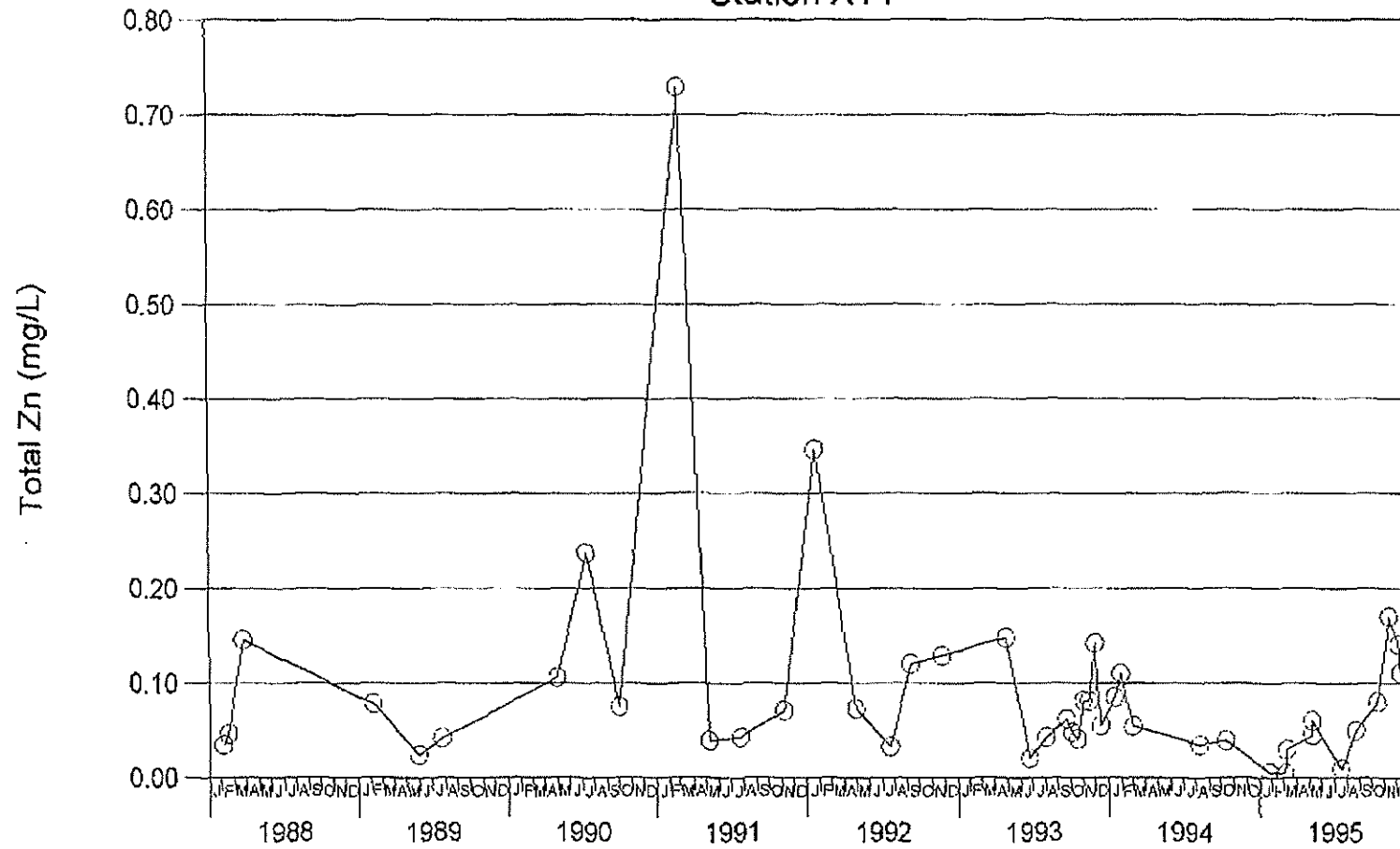
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Annual Water Quality Statistics
1995 Faro Annual Report

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STATION: Cross Valley Dam decant

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1992 - DEC 1992								
Mean	7.87	349	0.3238	0.914	1.8525	0.106	0.06	0.065
Minimum Value	7.70	270	0.0470	0.306	1.2200	0.006	0.06	0.030
Maximum Value	8.00	440	0.6380	1.870	2.4900	0.318	0.06	0.140
Num. Values	4	4	4	4	4	4	4	4
Num. Values <DL	0	0	0	0	0	0	4	2
JAN 1993 - DEC 1993								
Mean	8.12	459	0.3160	0.600	4.1450	0.011	0.04	0.113
Minimum Value	7.90	420	0.1810	0.050	2.0800	0.001	0.04	0.005
Maximum Value	8.63	500	0.5180	1.540	6.1900	0.060	0.06	0.550
Num. Values	6	6	6	6	6	6	6	7
Num. Values <DL	0	0	0	0	0	5	6	5
JAN 1994 - DEC 1994								
Mean	7.83	450	0.2827	0.180	4.3130	0.012	0.02	0.009
Minimum Value	7.60	54	0.0450	0.100	0.4980	0.002	0.02	0.005
Maximum Value	8.20	650	0.4630	0.306	7.3600	0.026	0.02	0.025
Num. Values	6	6	6	6	6	6	6	6
Num. Values <DL	0	0	0	0	0	1	6	4
JAN 1995 - DEC 1995								
Mean	8.23	422	0.2713	0.404	3.9800	0.007	0.03	0.005
Minimum Value	7.00	284	0.0100	0.050	0.1180	0.002	0.02	0.005
Maximum Value	9.40	496	0.7500	2.920	8.8800	0.029	0.10	0.005
Num. Values	3	3	27	26	27	27	26	3
Num. Values <DL	0	0	1	1	0	5	17	2

Anvil Range Mining Corporation Rose Creek Below Diversion Channel Outlet Station X14



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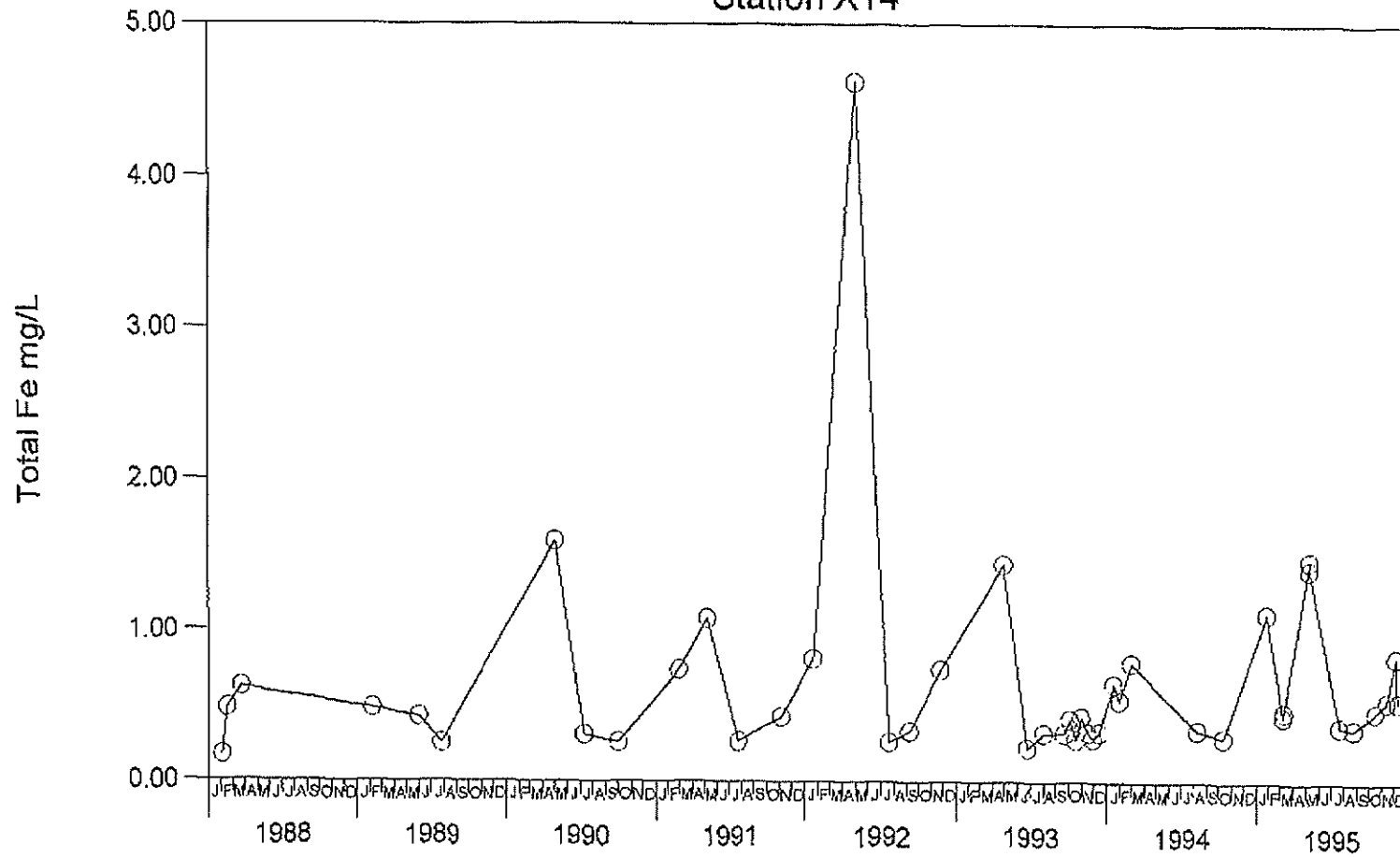
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Anvil Range Mining Corporation
 Rose Creek downstream of diversion channel outlet
 Station X14



Anvil Range Mining Corporation
Annual Water Quality Statistics
1995 Faro Annual Report

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STATION: Rose Creek downstream of diversion channel outlet

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1988 - DEC 1988								
Mean	7.77	327	0.0753	0.422	1.6933	0.028	0.05	0.080
Minimum Value	7.70	280	0.0350	0.169	1.3300	0.017	0.05	0.080
Maximum Value	7.80	390	0.1450	0.617	1.9300	0.034	0.05	0.080
Num. Values	3	3	3	3	3	3	3	2
Num. Values <DL	0	0	0	0	0	0	3	0
JAN 1989 - DEC 1989								
Mean	7.93	166	0.0480	0.385	1.0610	0.008	0.05	0.03
Minimum Value	7.70	59	0.0240	0.248	0.2330	0.005	0.05	0.03
Maximum Value	8.20	330	0.0780	0.482	2.4400	0.013	0.05	0.03
Num. Values	3	3	3	3	3	3	3	3
Num. Values <DL	0	0	0	0	0	2	3	3
JAN 1990 - DEC 1990								
Mean	7.53	116	0.1393	0.718	0.5590	0.007	0.06	0.033
Minimum Value	7.40	108	0.0750	0.257	0.4640	0.005	0.05	0.030
Maximum Value	7.70	124	0.2370	1.590	0.7470	0.010	0.07	0.040
Num. Values	3	3	3	3	3	3	3	3
Num. Values <DL	0	0	0	0	0	2	2	1
JAN 1991 - DEC 1991								
Mean	7.75	157	0.2205	0.628	0.8220	0.008	0.06	0.042
Minimum Value	7.50	63	0.0390	0.263	0.2630	0.006	0.06	0.030
Maximum Value	7.90	340	0.7290	1.080	1.9600	0.010	0.06	0.060
Num. Values	4	4	4	4	4	4	4	4
Num. Values <DL	0	0	0	0	0	2	4	1

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P.021

Anvil Range Mining Corporation
Annual Water Quality Statistics
1995 Faro Annual Report

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STATION: Rose Creek downstream of diversion channel outlet

Date	LAB pH pH unit	TOTAL SULPHATE mg/L	TOTAL ZINC mg/L	TOTAL IRON mg/L	TOTAL MANGANESE mg/L	TOTAL COPPER mg/L	TOTAL ARSENIC mg/L	TOTAL CYANIDE mg/L
JAN 1992 - DEC 1992								
Mean	7.81	201	0.1402	1.354	1.4480	0.048	0.06	0.048
Minimum Value	7.70	83	0.0330	0.262	0.3650	0.006	0.06	0.030
Maximum Value	7.90	360	0.3460	4.620	2.4300	0.201	0.06	0.120
Num. Values	5	5	5	5	5	5	5	5
Num. Values <DL	0	0	0	0	0	2	5	4
JAN 1993 - DEC 1993								
Mean	7.92	75	0.0722	0.438	0.6399	0.003	0.04	0.015
Minimum Value	7.69	23	0.0210	0.225	0.1910	0.001	0.04	0.005
Maximum Value	8.20	162	0.1480	1.440	1.1400	0.006	0.06	0.030
Num. Values	10	10	10	10	10	10	10	10
Num. Values <DL	0	0	0	0	0	8	10	7
JAN 1994 - DEC 1994								
Mean	7.54	130	0.0648	0.522	1.2456	0.008	0.02	0.005
Minimum Value	5.90	56	0.0350	0.295	0.5850	0.002	0.02	0.005
Maximum Value	8.20	196	0.1100	0.785	2.2200	0.013	0.02	0.005
Num. Values	5	5	5	5	5	5	5	5
Num. Values <DL	0	0	0	0	0	1	5	5
JAN 1995 - DEC 1995								
Mean	7.80	176	0.0643	0.728	1.6125	0.007	0.03	0.006
Minimum Value	7.40	40	0.0050	0.360	0.3450	0.002	0.02	0.005
Maximum Value	8.20	299	0.1700	1.470	4.4100	0.024	0.06	0.008
Num. Values	4	4	11	11	11	11	11	4
Num. Values <DL	0	0	2	0	0	5	10	2

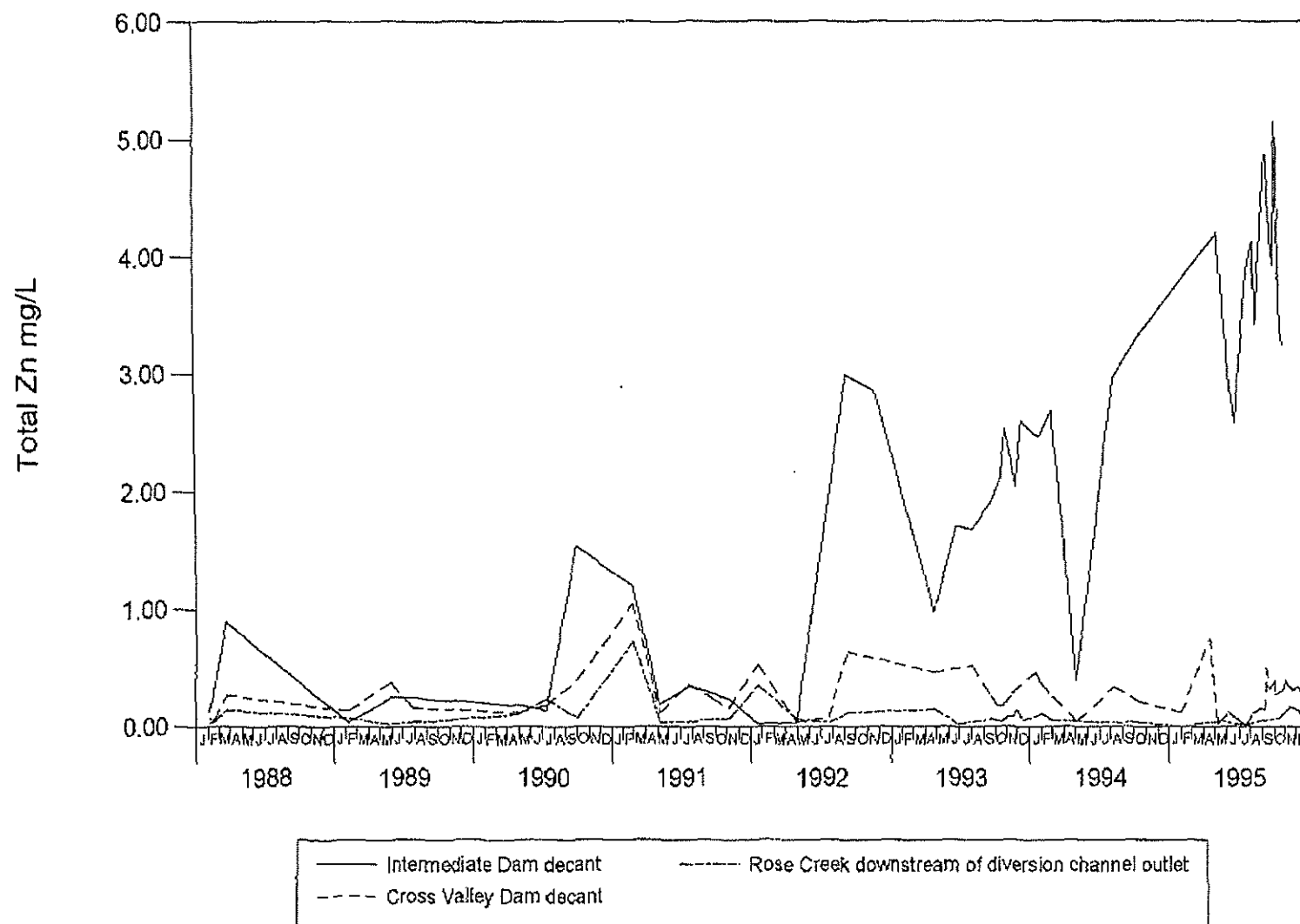
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Anvil Range Mining Corporation Stations X4, X5, X14



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APPENDIX 4

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Parameter	Station	Faro Creek (Old)		Faro Creek Diversion	
		FC5/Site 25	FCO 29	FDU	FDL
Physical Tests					
Conductivity	umhos/cm	33.9	136	35.1	35.5
Hardness	CaCO ₃	-	-	-	-
pH - laboratory		7.05	6.77	7.46	7.35
pH - field		7.81	7.79	7.8	7.8
Temperature - field (C)		6	8	7	7
Dissolved Anions					
Acidity	CaCO ₃	4	5.6	1	2.2
Alkalinity - Total	CaCO ₃	14.4	12.6	15.2	14.9
Sulphate	SO ₄	2	46.8	2.1	2.4
Total Metals					
Aluminum	T-Al	<0.20	0.3	<0.20	<0.20
Antimony	T-Sb	<0.20	<0.20	<0.20	<0.20
Arsenic	T-As	<0.20	<0.20	<0.20	<0.20
Barium	T-Ba	0.011	0.045	0.022	0.022
Beryllium	T-Be	<0.005	<0.005	<0.005	<0.005
Bismuth	T-Bi	<0.10	<0.10	<0.10	<0.10
Boron	T-B	<0.10	<0.10	<0.10	<0.10
Cadmium	T-Cd	<0.010	<0.010	<0.010	<0.010
Calcium	T-Ca	4.04	13.1	4.26	4.22
Chromium	T-Cr	<0.015	<0.015	<0.015	<0.015
Cobalt	T-Co	<0.015	<0.015	<0.015	<0.015
Copper	T-Cu	<0.010	0.045	<0.010	<0.010
Iron	T-Fe	<0.030	0.208	0.034	0.036
Lead	T-Pb	<0.050	<0.050	<0.050	<0.050
Lithium	T-Li	<0.015	<0.015	<0.015	<0.015
Magnesium	T-Mg	0.826	5.06	0.873	0.88
Manganese	T-Mn	<0.005	0.067	<0.005	<0.005
Molybdenum	T-Mo	<0.030	<0.030	<0.030	<0.030
Nickel	T-Ni	<0.020	<0.020	<0.020	<0.020
Phosphorus	T-P	<0.30	<0.30	<0.30	<0.30
Potassium	T-K	<2.0	<2.0	<2.0	<2.0
Selenium	T-Se	<0.20	<0.20	<0.20	<0.20
Silicon	T-Si	6.04	6.65	6.12	6.09
Silver	T-Ag	<0.015	<0.015	<0.015	<0.015
Sodium	T-Na	2	2.8	2	2.1
Strontium	T-Sr	0.028	0.07	0.028	0.028
Thallium	T-Tl	<0.10	<0.10	<0.10	<0.10
Tin	T-Sn	<0.30	<0.30	<0.30	<0.30
Titanium	T-Ti	<0.010	<0.010	<0.010	<0.010
Vanadium	T-V	<0.030	<0.030	<0.030	<0.030
Zinc	T-Zn	<0.005	1.86	0.009	0.017

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Parameter	Station	Faro Creek FC5/Site	(Old) FCO 29	Faro Creek Diversion FDU	FDL
Dissolved Metals					
Aluminum	D-Al	<0.20	<0.20	<0.20	<0.20
Antimony	D-Sb	<0.20	<0.20	<0.20	<0.20
Arsenic	D-As	<0.20	<0.20	<0.20	<0.20
Barium	D-Ba	0.011	0.044	0.019	0.019
Beryllium	D-Be	<0.005	<0.005	<0.005	<0.005
Bismuth	D-Bi	<0.10	<0.10	<0.10	<0.10
Boron	D-B	<0.10	<0.10	<0.10	<0.10
Cadmium	D-Cd	<0.010	<0.010	<0.010	<0.010
Calcium	D-Ca	3.91	13.2	4.1	4.1
Chromium	D-Cr	<0.015	<0.015	<0.015	<0.015
Cobalt	D-Co	<0.015	<0.015	<0.015	<0.015
Copper	D-Cu	<0.010	0.029	<0.010	<0.010
Iron	D-Fe	<0.030	0.036	<0.030	<0.030
Lead	D-Pb	<0.050	<0.050	<0.050	<0.050
Lithium	D-Li	<0.015	<0.015	<0.015	<0.015
Magnesium	D-Mg	0.782	5.04	0.852	0.838
Manganese	D-Mn	<0.005	0.068	<0.005	<0.005
Molybdenum	D-Mo	<0.030	<0.030	<0.030	<0.030
Nickel	D-Ni	<0.020	<0.020	<0.020	<0.020
Phosphorus	D-P	<0.30	<0.30	<0.30	<0.30
Potassium	D-K	<2.0	<2.0	<2.0	<2.0
Selenium	D-Se	<0.20	<0.20	<0.20	<0.20
Silicon	D-Si	5.91	6.47	5.91	5.85
Silver	D-Ag	<0.015	<0.015	<0.015	<0.015
Sodium	D-Na	<2.0	2.8	<2.0	<2.0
Strontium	D-Sr	0.026	0.07	0.028	0.027
Thallium	D-Tl	<0.10	<0.10	<0.10	<0.10
Tin	D-Sn	<0.30	<0.30	<0.30	<0.30
Titanium	D-Ti	<0.010	<0.010	<0.010	<0.010
Tungsten	D-W	<0.10	-	<0.10	<0.10
Vanadium	D-V	<0.030	<0.030	<0.030	<0.030
Zinc	D-Zn	<0.005	1.83	0.009	0.016

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Parameter	Station	Faro Pit Walls		Next Creek by NW Dump		
		A30	SP5/6	W10	W8	W8 Dup.
Physical Tests						
Conductivity umhos/cm		752	773	93.8	130	130
Hardness CaCO ₃		-	-	-	-	-
pH - laboratory		5.27	7.75	7.71	7.63	7.63
pH - field		5.4	6.9	8.0	8.0	8.0
Temperature - field (C)		7	10	8	8	8
Dissolved Anions						
Acidity CaCO ₃		85.4	9.6	2.2	2.6	3.2
Alkalinity - Total CaCO ₃		4.3	174	43.6	53.5	54.3
Sulphate SO ₄		403	239	3.7	10.8	10.8
Total Metals						
Aluminum T-Al		0.78	<0.20	<0.20	<0.20	<0.20
Antimony T-Sb		<0.20	<0.20	<0.20	<0.20	<0.20
Arsenic T-As		<0.20	<0.20	<0.20	<0.20	<0.20
Barium T-Ba		0.016	0.025	0.014	0.053	0.053
Beryllium T-Be		<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth T-Bi		<0.10	<0.10	<0.10	<0.10	<0.10
Boron T-B		<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium T-Cd		0.054	<0.010	<0.010	<0.010	<0.010
Calcium T-Ca		52.9	91	15.6	21.3	20.9
Chromium T-Cr		<0.015	<0.015	<0.015	<0.015	<0.015
Cobalt T-Co		0.088	<0.015	<0.015	<0.015	<0.015
Copper T-Cu		0.28	<0.010	<0.010	<0.010	<0.010
Iron T-Fe		0.051	0.044	<0.030	<0.030	<0.030
Lead T-Pb		0.173	<0.050	<0.050	<0.050	<0.050
Lithium T-Li		0.024	0.027	<0.015	<0.015	<0.015
Magnesium T-Mg		53.7	49	2.04	3.11	3.07
Manganese T-Mn		2.79	0.313	<0.005	<0.005	<0.005
Molybdenum T-Mo		<0.030	<0.030	<0.030	<0.030	<0.030
Nickel T-Ni		0.104	<0.020	<0.020	<0.020	<0.020
Phosphorus T-P		<0.30	<0.30	<0.30	<0.30	<0.30
Potassium T-K		<2.0	3.5	<2.0	<2.0	<2.0
Selenium T-Se		<0.20	<0.20	<0.20	<0.20	<0.20
Silicon T-Si		7.61	5.13	6.48	6.39	6.34
Silver T-Ag		<0.015	<0.015	<0.015	<0.015	<0.015
Sodium T-Na		4.2	5	<2.0	2	2
Strontium T-Sr		0.215	0.376	0.054	0.079	0.077
Thallium T-Tl		<0.10	<0.10	<0.10	<0.10	<0.10
Tin T-Sn		<0.30	<0.30	<0.30	<0.30	<0.30
Titanium T-Ti		<0.010	<0.010	<0.010	<0.010	<0.010
Vanadium T-V		<0.030	<0.030	<0.030	<0.030	<0.030
Zinc T-Zn		42.7	2.3	<0.005	0.016	0.015

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Parameter	Station	Faro Pit Walls		Next Creek by NW Dump		
		A30	SP5/6	W10	W8	W8 Dup.
Dissolved Metals						
Aluminum	D-Al	0.76	<0.20	<0.20	<0.20	<0.20
Antimony	D-Sb	<0.20	<0.20	<0.20	<0.20	<0.20
Arsenic	D-As	<0.20	<0.20	<0.20	<0.20	<0.20
Barium	D-Ba	0.015	0.026	0.016	0.049	0.049
Beryllium	D-Be	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	D-Bi	<0.10	<0.10	<0.10	<0.10	<0.10
Boron	D-B	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium	D-Cd	0.056	<0.010	<0.010	<0.010	<0.010
Calcium	D-Ca	51.4	90.4	14.8	20.9	20.4
Chromium	D-Cr	<0.015	<0.015	<0.015	<0.015	<0.015
Cobalt	D-Co	0.091	<0.015	<0.015	<0.015	<0.015
Copper	D-Cu	0.276	<0.010	<0.010	<0.010	<0.010
Iron	D-Fe	<0.030	<0.030	<0.030	<0.030	<0.030
Lead	D-Pb	0.161	<0.050	<0.050	<0.050	<0.050
Lithium	D-Li	0.022	0.026	<0.015	<0.015	<0.015
Magnesium	D-Mg	52.5	48.9	1.91	3.02	2.98
Manganese	D-Mn	2.74	0.31	<0.005	<0.005	<0.005
Molybdenum	D-Mo	<0.030	<0.030	<0.030	<0.030	<0.030
Nickel	D-Ni	0.096	0.025	<0.020	<0.020	<0.020
Phosphorus	D-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	D-K	<2.0	3.3	<2.0	<2.0	<2.0
Selenium	D-Se	<0.20	<0.20	<0.20	<0.20	<0.20
Silicon	D-Si	7.47	5.03	6.01	6.17	6.1
Silver	D-Ag	<0.015	<0.015	<0.015	<0.015	<0.015
Sodium	D-Na	4.1	5	<2.0	2	2
Strontium	D-Sr	0.209	0.377	0.046	0.077	0.075
Thallium	D-Tl	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	D-Sn	<0.30	<0.30	<0.30	<0.30	<0.30
Titanium	D-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Tungsten	D-W	-	-	<0.10	-	-
Vanadium	D-V	<0.030	<0.030	<0.030	<0.030	<0.030
Zinc	D-Zn	42	2.27	<0.005	0.025	0.024

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Parameter	Station	North Fork NF2	North Wall Int. NW1	Guardhouse GHSCR2
Physical Tests				
Conductivity	umhos/cm	152	201	647
Hardness	CaCO ₃	76.5	-	-
pH - laboratory		7.69	7.99	8.05
pH - field		8.1	8.2	8.1
Temperature - field (C)		7	7	8
Dissolved Anions				
Acidity	CaCO ₃	1.4	3.2	3.2
Alkalinity - Total	CaCO ₃	66.5	91.9	169
Sulphate	SO ₄	9.7	13	186
Total Metals				
Aluminum	T-Al	<0.20	<0.20	<0.20
Antimony	T-Sb	<0.20	<0.20	<0.20
Arsenic	T-As	<0.20	<0.20	<0.20
Barium	T-Ba	0.041	0.041	0.059
Beryllium	T-Be	<0.005	<0.005	<0.005
Bismuth	T-Bi	<0.10	<0.10	<0.10
Boron	T-B	<0.10	<0.10	<0.10
Cadmium	T-Cd	<0.010	<0.010	<0.010
Calcium	T-Ca	23.4	32.7	117
Chromium	T-Cr	<0.015	<0.015	<0.015
Cobalt	T-Co	<0.015	<0.015	<0.015
Copper	T-Cu	<0.010	<0.010	<0.010
Iron	T-Fe	0.059	0.039	0.305
Lead	T-Pb	<0.050	<0.050	<0.050
Lithium	T-Li	<0.015	<0.015	<0.015
Magnesium	T-Mg	5.14	5.8	16.7
Manganese	T-Mn	0.005	0.006	0.606
Molybdenum	T-Mo	<0.030	<0.030	<0.030
Nickel	T-Ni	<0.020	<0.020	<0.020
Phosphorus	T-P	<0.30	<0.30	<0.30
Potassium	T-K	<2.0	<2.0	2.7
Selenium	T-Se	<0.20	<0.20	<0.20
Silicon	T-Si	3.83	3.77	5.94
Silver	T-Ag	<0.015	<0.015	<0.015
Sodium	T-Na	<2.0	2	5.6
Strontium	T-Sr	0.095	0.137	0.416
Thallium	T-Tl	<0.10	<0.10	<0.10
Tin	T-Sn	<0.30	<0.30	<0.30
Titanium	T-Ti	<0.010	<0.010	<0.010
Vanadium	T-V	<0.030	<0.030	<0.030
Zinc	T-Zn	<0.005	0.006	0.568

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Parameter	Station	North Fork NF2	North Wall Int. NW1	Guardhouse GHSCR2
Dissolved Metals				
Aluminum	D-Al	<0.20	<0.20	<0.20
Antimony	D-Sb	<0.20	<0.20	<0.20
Arsenic	D-As	<0.20	<0.20	<0.20
Barium	D-Ba	0.041	0.039	0.061
Beryllium	D-Be	<0.005	<0.005	<0.005
Bismuth	D-Bi	<0.10	<0.10	<0.10
Boron	D-B	<0.10	<0.10	<0.10
Cadmium	D-Cd	<0.010	<0.010	<0.010
Calcium	D-Ca	22.5	32.8	115
Chromium	D-Cr	<0.015	<0.015	<0.015
Cobalt	D-Co	<0.015	<0.015	<0.015
Copper	D-Cu	<0.010	<0.010	<0.010
Iron	D-Fe	0.05	<0.030	<0.030
Lead	D-Pb	<0.050	<0.050	<0.050
Lithium	D-Li	<0.015	<0.015	<0.015
Magnesium	D-Mg	4.9	5.82	16.4
Manganese	D-Mn	0.006	<0.005	0.592
Molybdenum	D-Mo	<0.030	<0.030	<0.030
Nickel	D-Ni	<0.020	<0.020	<0.020
Phosphorus	D-P	<0.30	<0.30	<0.30
Potassium	D-K	<2.0	<2.0	3.3
Selenium	D-Se	<0.20	<0.20	<0.20
Silicon	D-Si	3.62	3.75	5.74
Silver	D-Ag	<0.015	<0.015	<0.015
Sodium	D-Na	<2.0	2.1	5.6
Strontium	D-Sr	0.092	0.137	0.412
Thallium	D-Tl	<0.10	<0.10	<0.10
Tin	D-Sn	<0.30	<0.30	<0.30
Titanium	D-Ti	<0.010	<0.010	<0.010
Tungsten	D-W	-	-	-
Vanadium	D-V	<0.030	<0.030	<0.030
Zinc	D-Zn	0.009	0.009	0.485

Anvil Range, Faro Schedule D Sampling - July 19-23, 1995

Site No.	Name	Flow L/s
FC5/Site 25	Faro Creek Upstream	138
FCO29	Old Faro Creek Channel	ponded
FDU	Faro Creek Diversion Upstream	98
FDL	Faro Creek Diversion Downstream	100
A30	Upper Pit Wall Seep	2
SP5/6	Zone 2 Area	17
W10	Toe of Dump, Next Creek Upstream	0.25
W8	Toe of Dump, Next Creek Downstream	0.25
NW1	North Wall Interceptor	135
NF2	Lower North Fork Rose Creek	2000
GHSCR2	Guardhouse Creek	17

APPENDIX 5

Laberge
ENVIRONMENTAL SERVICES

P.O. BOX 5111
WHITEHORSE, YT
Y1A 4S3

OFFICE PHONE (403) 668-6838
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September 5, 1995

Access Mining Consultants Ltd
204-D Strickland Street
Whitehorse, Yukon
Y1A 2J8

Attention: Gregg Jilson

Re: Anvil Range - Groundwater Monitoring, August 1 to 3, 1995

Please find attached a data report complete with respective appendices regarding the above groundwater monitoring program.

Yours truly,



Ken Nordin
Laberge Environmental Services

c.c. Yolanda Vandermeer

Data Report

Results of Groundwater Sampling

Conducted on

August 1 to 3, 1995

at

Faro, Yukon

For

**Anvil Range Mining Corporation
Box 1000,
Faro, Yukon**

By

Laberge Environmental Services

CONTENTS:

- o X - Series
- o Piezometers Below Sulphide Dump
- o BH Series, Groundwater Investigation, North Fork Rose Creek

INTRODUCTION

Laberge Environmental Services (LES) was contracted by Anvil Range Mining Corporation to carry out water sampling and in-situ measurements at the groundwater stations at the Faro mine site. The field work took place on July 31 to August 2, 1995. Analyses were carried out by Cavendish Laboratory Ltd. The groundwater sampling was related to three categories:

- (1) Groundwater sample stations under Schedule A, Amendment #3 to Water Use Licence IN89-001.
- (2) Groundwater sample stations established under Schedule D, Amendment #3 to Water Use Licence IN89-001. (Specifically, piezometers located south of Zone II and south west of the Sulphide Waste Dump.)
- (3) Groundwater sample stations established during the Groundwater Investigation - North Fork of Rosa Creek, Faro Mine, by Steffen Robertsen and Kirsten, November, 1994.

METHODS AND DATA PRESENTATION

The following procedure was followed at all piezometers unless otherwise noted in the comments column of the attached data tables:

- (1) The sample site was located, relabelled, grubbed out, and flagged as required.
- (2) Static water level (SWL) and total depth was measured from the tip of the piezometer using either a well sounder or weighted fibreglass tape measure.
- (3) The volume of water in the piezometer was calculated ($\pi r^2 \times \text{depth}$). Three volumes were purged from the piezometer using a variety of sizes of Waterra foot valves and tubing, depending on the diameter of the piezometer.

- (4) Sample bottles were rinsed three times with the sample waters before filling. An aliquot was filtered in the Mine's lab on the same day through a 0.45 micron filter and preserved with concentrated nitric acid for dissolved metals analysis.
- (5) In-situ measurements of temperature, pH, and specific conductance were made in the field using Orion model 210A pH meter and Orion model 126 Conductivity meter.
- (6) The sampling apparatus was either replaced in the piezometer, wrapped in poly and left on site, or marked and carried back to the lab as the situation warranted. (See comments in attached tables.)

The attached tables contain the in-situ measurements and analytical results for the parameters of main interest including general parameters and ICP metals. The complete lab reports are also appended for further reference. The last set of results from the Groundwater Investigation, North Fork of Rose Creek are also appended for reference (from S.R.K. report A114101).

TABLE 1 RESULTS FROM THE X - SERIES PIEZOMETERS SAMPLED AUGUST 1, 1995

I.D.	S.W.L. (m)	DEPTH (m)	IN-SITU			LAB		NFR (mg/L)	AMMONIA (mg/L)	SO4 (mg/L)	COPPER		LEAD DISS	ZINC		COMMENTS
			TEMP (°C)	pH	Cond (µs/cm)	pH	Cond (µs/cm)				TOTAL	DISS		TOTAL	DISS	
X16A	3.66	6.37	8.2	9.35	304			97	<0.005	28.2	0.010	<0.002	<0.02	0.06	<0.01	sampled at 28m (vs 30 m in licence)
X16B	3.86	28.09	4.6	7.82	343			279	<0.005	24.8	0.017	<0.002	<0.02	0.02	0.02	
X17A	2.16	6.06	4.2	8.35	322			751	0.038	26.4	0.025	0.004	<0.02	0.06	0.01	
X17B	2.74	24.80	3.6	8.73	316			125	0.050	25.8	0.017	<0.002	<0.02	0.02	0.02	
X18A	4.11	9.29	4.2	7.21	876			105	0.090	397	0.014	0.002	<0.02	0.01	<0.01	blocked at 10.7m, sampled at 10m - (vs 20m in licence) collapsed or frozen no longer exists
X18B	3.75	10.70	3.6	8.50	821			760	0.410	392	0.084	0.002	<0.02	0.16	<0.01	
X20		3.40														
X21																

Note: All Walters foot valves and tubing were wrapped in 6 mil poly and left at each well head.
We suggest these tubes be placed into the piezometers, sealed, and covered with steel drums.

TABLE 2 RESULTS FROM THE PIEZOMETERS LOCATED SOUTHWEST OF THE BULPHIDE DUMP IN THE NORTH FORK ROSE CREEK, SAMPLED AUGUST 1, 1995

I.D.	S.W.L. (m)	DEPTH (m)	IN-SITU			LAB		NFR (mg/L)	ALKALINITY (mg/L)	SO4 (mg/L)	COPPER DISS	LEAD DISS	ZINC DISS	COMMENTS
			TEMP (°C)	pH	Cond (µs/cm)	pH	Cond (µs/cm)							
1A	4.11	12.8	1.2	6.80	2020	6.73	2230	1100	286	1202	0.007	<0.02	0.09	lip broken, capped at ground level
1B	3.81	6.37	0.6	NR	1776	6.62	1820	458	97	1213	0.012	<0.02	0.04	
2A	4.84	8.04	0.9	NR	1720	6.54	1470	1020	194	1084	0.011	0.02	0.10	
2B	3.14	10.60	1.2	NR	2050	6.55	2020	5010	226	685	<0.002	<0.02	0.09	
3	2.96	6.58	2.9	NR	2430	5.98	2530	2510	83	1380	0.019	0.08	0.15	

NR: not recorded, meter malfunction

NOTE: All piezometers labelled and flagged.
All Walters foot valves and tubing labelled and returned to water lab.

Results of Groundwater Sampling, Faro, Y.T.

LES, 1995

TABLE 3 RESULTS FROM THE BH SERIES PIEZOMETERS, GROUNDWATER INVESTIGATION, NORTH FORK OF ROSE CREEK,
SAMPLED AUGUST 2 AND 3, 1995

ID.	S.W.L. (m)	DEPTH (m)	IN-SITU			LAB		ALKALINITY (mg/L)	DISSOLVED METALS (mg/L)								COMMENTS
			TEMP (°C)	pH	Cond (µS/cm)	pH	Cond (µS/cm)		As	Cd	Cu	Fe	Pb	Mn	Zn		
BH 1	3.35	6.18	3.0	6.18	331	6.23	327	151	<0.02	0.006	0.007	0.20	<0.02	0.44	0.58	broken lip, under crushed barrel.	
BH 2	4.78	6.55	4.1	6.21	387	6.48	412	116	<0.02	0.008	0.005	0.20	<0.02	0.01	2.02		
BH 4	2.43	3.20	6.8	2.91	2080	3.15	3000	<1*	0.10	0.096	0.075	14.65	0.06	5.28	48.75		
BH 6	2.65	8.33	3.9	5.75	602	5.92	875	146	<0.02	0.011	0.007	27.18	<0.02	1.98	3.78		
BH 8	3.44	8.55	5.1	6.05	431	6.11	481	89	<0.02	0.004	0.006	9.43	<0.02	4.06	5.65		
BH 7A	5.30	8.00	NR	6.78	253	6.44	345	122	<0.02	<0.002	0.003	0.47	<0.02	0.51	0.71		
BH 7B	5.67	6.78	4.3	6.35	318	6.63	277	120	<0.02	0.002	0.005	0.84	<0.02	0.03	0.54		
BH 8	17.14	21.00	0.6	5.10	3020											unable to raise water to surface, changed foot valve but still wouldn't raise, sampled bottom, unable to raise water to surface, sampled from bottom. 3 volume purge ok, but lost foot valve, sampled vol in tube.	
BH 9	NR	NR	NR	6.57	1187												
BH 10A	NR	NR	NR	NR	NR	6.50	455	145	<0.02	0.010	0.006	25.05	<0.02	0.59	1.60		
BH 10B	NR	NR	4.0	5.48	1058	5.80	1090	410	<0.02	0.014	0.006	51.15	<0.02	1.31	3.36		
BH 11	NR	54.80	NR	NR	NR				<0.02	0.116	2.406	14.22	<0.02	0.70	15.46	unable to raise water to surface, sampled bottom, surface casing missing.	
BH 12A	2.23	2.85	6.0	6.81	1249	6.99	1280	167	<0.02	<0.002	0.022	0.29	<0.02	<0.01	0.06		
BH 12B	2.25	8.05	2.9	6.90	1238	7.44	1240	200	<0.02	<0.002	0.013	0.21	<0.02	0.64	<0.01	suspect that 13A and B are frozen due to shallow depth and low water temp.	
BH 13A	3.64	3.70	0.4	NR	NR												
BH 13B	2.50	4.25	0.4	NR	NR											installed 5/8" tube and Waterra Q-25 unable to raise water from tube, water reports beside tube no equipment installed due to broken standpipe during initial installation. suspect BH 16 is still frozen, was frozen in Nov. '94 immediately after drilling	
BH 14A	3.10	8.22	3.8	6.94	2520	7.38	2670	354	0.06	<0.002	0.025	0.27	<0.02	0.07	0.33		
BH 14B	4.07	10.00	5.1	7.09	2230	7.51	2400	324	0.02	<0.002	0.018	0.20	<0.02	0.00	0.01		
BH 15A	6.10	13.70	NR	6.58	1580												
BH 15B	3.85	43.17															
BH 16A	4.83	6.46															
BH 16B	6.70	6.90															
BH 16C	6.06	6.28															

* Acidity for BH 4: 1858 mg/L at pH 8.3, 578 mg/L at pH 4.5

NOTE: Appropriate length of tubing and Waterra foot valves are located inside all piezometers unless otherwise noted.
Suggest these sites be sealed and covered with well marked 45 gallon drums.

Results of Groundwater Sampling, Faro, Y.T.

LES, 1995

CAVENDISH LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-2560 Fax:299-6252

To : LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

Project: BORE HOLE SERIES AUG02/95
Type of Analysis: WICP-30 DIS

Certificate: 950804K
Invoice: 0804K
Date Entered: 95-08-04
File Name: LAB0804K
Page No.: 1

PRE FIX	SAMPLE NAME	PPM AG	PPM AL	PPM AS	PPM AU	PPM BA	PPM BE	PPM BI	PPM CA	PPM CD	PPM CO	PPM CR	PPM CU	PPM FE	PPM HG	PPM LA	PPM MG	PPM MN	PPM MO	PPM NA	PPM NI	PPM P	PPM PB	PPM S	PPM SB	PPM SI	PPM SR	PPM TI	PPM V	PPM W	PPM ZN
D	BH1	<.003	0.54	<.02	<.01	0.120	0.001	<.04	49.7	0.006	0.008	<.005	0.007	0.20	<.03	<.005	12.2	0.44	<.002	5	<.005	0.18	<.02	11.9	<.02	2.18	0.290	<.005	<.005	<.02	0.58
D	BH2	<.003	0.57	<.02	<.01	0.063	0.001	<.04	54.6	0.006	<.005	<.005	0.005	0.20	<.03	<.005	17.7	0.01	<.002	5	0.013	0.23	<.02	34.6	<.02	1.71	0.294	<.005	<.005	<.02	2.92
D	BH4	<.003	125.80	0.10	<.01	0.064	0.043	<.04	329.6	0.096	0.576	0.021	0.975	14.65	<.03	0.147	61.5	5.28	<.002	11	0.574	0.35	0.06	643.9	<.02	18.48	1.269	0.015	<.005	<.02	48.76
D	BH5	<.003	1.01	<.02	<.01	0.055	0.001	<.04	81.8	0.011	0.044	0.035	0.007	27.16	<.03	0.008	30.7	1.95	<.002	14	0.018	0.39	<.02	63.3	<.02	4.46	0.414	<.005	<.005	<.02	3.76
D	BH6	<.003	0.57	<.02	<.01	0.041	0.001	<.04	53.1	0.004	0.060	0.012	0.006	9.43	<.03	<.005	19.6	4.08	<.002	7	0.035	0.30	<.02	52.4	<.02	2.86	0.292	<.005	<.005	<.02	5.65
D	BH7A	<.003	0.43	<.02	<.01	0.042	0.001	<.04	39.0	<.002	<.005	<.005	0.003	0.47	<.03	<.005	14.3	0.51	<.002	12	<.005	0.04	<.02	20.8	<.02	1.84	0.179	<.005	<.005	<.02	0.71
D	BH7B	<.003	0.51	<.02	<.01	0.022	0.001	<.04	38.5	0.002	<.005	<.005	0.005	0.64	<.03	<.005	9.2	0.03	<.002	4	<.005	0.11	<.02	8.9	<.02	1.45	0.197	<.005	<.005	<.02	0.54
D	BH10A	<.003	0.59	<.02	<.01	0.096	0.001	<.04	60.0	0.010	0.037	0.037	0.006	25.05	<.03	<.005	18.9	0.59	<.002	8	0.022	0.16	<.02	11.7	<.02	3.21	0.322	<.005	<.005	<.02	1.90
D	BH10B	<.003	1.53	<.02	<.01	0.093	0.003	<.04	146.4	0.014	0.060	0.065	0.006	51.15	<.03	<.005	49.4	1.31	<.002	18	0.030	0.64	<.02	77.1	<.02	7.64	0.899	<.005	<.005	<.02	3.36
D	BH11	<.003	1.75	<.02	<.01	0.053	0.002	<.04	84.6	0.118	0.070	0.015	2.486	14.22	<.03	<.005	27.8	0.70	<.002	8	0.047	0.36	<.02	133.5	<.02	6.70	0.446	<.005	<.005	<.02	15.46
D	BH12A	<.003	1.58	<.02	<.01	0.093	0.002	<.04	195.6	<.002	<.005	<.005	0.022	0.29	<.03	<.005	86.1	<.01	<.002	7	<.005	0.08	<.02	173.1	<.02	1.88	0.927	0.006	<.005	<.02	0.06
D	BH12B	<.003	1.87	<.02	<.01	0.098	0.003	<.04	242.2	<.002	<.005	0.005	0.013	0.21	<.03	0.005	46.8	0.54	<.002	8	<.005	<.04	<.02	150.3	<.02	1.59	0.919	0.007	<.005	<.02	<.01
D	BH14A	<.003	2.97	0.06	<.01	0.087	0.004	<.04	427.3	<.002	<.005	<.005	0.025	0.22	<.03	0.010	123.1	0.07	<.002	52	<.005	<.04	<.02	292.8	<.02	2.70	1.999	0.012	<.005	<.02	0.03
D	BH14B	<.003	2.97	0.02	<.01	0.089	0.005	<.04	407.2	<.002	<.005	<.005	0.018	0.20	<.03	0.007	125.1	0.06	<.002	19	<.005	<.04	<.02	276.9	<.02	2.57	1.963	0.012	<.005	<.02	0.01
D	BH2-DUP.	<.003	0.60	<.02	<.01	0.074	0.001	<.04	57.2	0.007	<.005	0.012	0.012	0.20	<.03	<.005	17.3	0.01	<.002	5	0.035	0.08	<.02	33.6	<.02	1.72	0.289	<.005	<.005	<.02	2.99
D	BH12B-DUP.	<.003	1.89	<.02	<.01	0.097	0.004	<.04	246.8	<.002	<.005	0.011	0.017	0.20	<.03	<.005	46.0	0.55	<.002	8	<.005	<.04	<.02	154.3	<.02	1.59	0.904	0.006	<.005	<.02	0.01

CERTIFIED BY :



CAVENDISH LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-2560 Fax:299-6252

To: LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

Project: BORE HOLE SERIES AUG02/95
Type of Analysis: WANVIL-SPECIAL

Certificate: 950804K.ENV
Invoice: 0804K
Date Entered: 95-08-04
File Name: LAB0804K.ENV
Page No.: 1

PRE PIX	SAMPLE NAME	mg/L Alkalinity	mg/L Cl-	us/cm Conductivity	mg/L CN-tot	mg/L NH3	acidity pH8.3 pH4.5		mg/L SO4	pH	mg/L NPR
N	BH-1	151	na	327	na	na	na	na	na	6.23	3940
N	BH-2	116	na	412	na	na	na	na	na	6.49	110
N	BH-4	<1	na	3000	na	na	1858	578	na	3.15	134
N	BH-5	149	na	675	na	na	na	na	na	5.92	5700
N	BH-6	69	na	461	na	na	na	na	na	6.11	4550
N	BH-7A	122	na	345	na	na	na	na	na	6.44	5910
N	BH-7B	120	na	277	na	na	na	na	na	6.53	7770
N	BH-10A	145	na	455	na	na	na	na	na	6.5	1210
N	BH-10B	410	na	1090	na	na	na	na	na	5.8	1680
N	BH-12A	167	na	1280	na	na	na	na	na	6.99	123
N	BH-12B	200	na	1240	na	na	na	na	na	7.44	127
N	BH-14A	354	na	2670	na	na	na	na	na	7.38	619
N	BH-14B	324	na	2400	na	na	na	na	na	7.51	209

Notes: _ = analyze parameter.
na = do not analyze parameter.

CERTIFIED BY:



CERTIFICATE OF ANALYSIS

To : LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

Project: SULFIDE WELLS, AUG2/95
Type of Analysis: ICP

Certificate: 950804N
Invoice: 0804N
Date Entered: 95-08-04
File Name: LAB0804N
Page No.: 1

PRE FIX	SAMPLE NAME	PPM AG	PPM AL	PPM AS	PPM AU	PPM BA	PPM BE	PPM BI	PPM CA	PPM CD	PPM CO	PPM CR	PPM CU	PPM FE	PPM HG	PPM LA	PPM MG	PPM MH	PPM MO	PPM NA	PPM NI	PPM P	PPM PB	PPM S	PPM SB	PPM SI	PPM SR	PPM TI	PPM V	PPM W	PPM ZN
D	SULPHIDE-1A	DIS <.003	2.48	<.02	<.01 0.068	0.001	<.05 366.6	<.001 <.006	<.005 0.007	0.32	<.03 <.005	125.6	0.59 <.001	17	<.006	0.08	<.02 106.1	<.02	3.60	1.201	0.007	<.006	<.02	0.09							
D	SULPHIDE-1B	DIS <.003	2.13	<.02	<.01 0.061	0.003	<.05 318.7	<.001 <.005	<.005 0.012	0.04	<.03 <.005	80.6	0.14 <.002	52	<.005	<.05	<.02 394.8	<.02	2.20	0.891	0.011	<.005	<.02	0.04							
D	SULPHIDE-2A	DIS <.003	2.39	<.02	<.01 0.078	0.004	<.05 353.2	<.001 <.005	<.005 0.011	24.88	<.03 <.009	76.3	5.27 <.002	14	<.005	<.04	<.02 358.9	<.02	2.37	1.095	0.010	<.005	<.02	0.10							
D	SULPHIDE-2B	DIS <.003	1.26	<.02	<.01 0.057	<.001	<.05 213.8	<.001 <.005	<.005 0.002	4.30	<.03 <.005	71.2	1.34 <.003	8	<.006	<.05	<.02 216.4	<.02	3.08	0.770	<.005	<.005	<.02	0.09							
D	SULPHIDE-#3	DIS <.003	2.67	0.02	<.01 0.114	0.004	<.05 415.7	<.001 <.005	<.005 0.019	46.19	<.03 0.015	129.9	2.20 <.002	18	0.005	<.04	0.08 494.0	<.02	3.17	1.378	0.022	<.005	0.05	0.15							
A	SULPHIDE-1A	TOT <.003	23.49	<.02	<.01 0.723	0.005	<.05 334.0	<.001 <.005	0.046	0.080	96.04	<.03 0.016	105.6	0.84 <.002	11	0.047	0.60	0.03 351.5	<.02	14.63	0.973	1.449	0.042	0.04	1.13						
A	SULPHIDE-1B	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
A	SULPHIDE-2A	TOT <.003	13.30	0.02	<.01 0.314	0.002	<.05 320.7	<.001 <.005	0.048	0.053	71.22	<.03 <.005	71.5	5.71 <.002	9	0.042	0.39	0.10 322.9	<.02	9.12	0.954	0.787	0.023	<.02	0.69						
A	SULPHIDE-2B	TOT <.003	78.74	<.02	<.01 1.522	0.005	<.05 225.2	0.016	0.083	0.586	0.255	183.8	<.03 0.051	106.9	2.24	0.002	9	0.356	2.76	0.39	187.8	<.02	37.12	0.896	4.333	0.198	0.09	13.20			
A	SULPHIDE-#3	TOT <.003	45.75	0.04	<.01 4.296	0.004	<.05 399.9	0.003	0.059	0.132	0.187	135.0	<.03 0.054	136.9	2.57	<.002	16	0.115	2.78	0.19	518.0	<.02	25.03	1.507	2.491	0.105	0.08	5.18			
A	SULPHIDE-1B-DUP	DIS <.003	2.01	<.02	<.01 0.058	0.001	<.05 321.7	<.001 <.006	<.005 0.010	0.06	<.03 <.005	80.3	0.15 <.002	49	<.006	<.05	<.02 416.8	<.02	2.45	0.872	0.009	<.006	<.02	0.09							

NOTE: SUSPECT SOME SULFUR FORMS INSOLUABLE SULFATES IN LOW pH ENVIRONMENT.

CERTIFIED BY :

A. P. Lewis

CAVENDISH LABORATORY LTD.

CERTIFICATE OF ANALYSIS

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British Columbia, Can. V5B 3N1
Ph:(604)299-2560 Fax:299-6252

To: LaBARGE ENVIRONMENTAL
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Project: SULFIDE WELLS, AUG2/95
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File Name: LAB0804N.ENV
Page No.: 1

PRB PIX	SAMPLE NAME	mg/L Alkalinity	mg/L Cl-	us/cm Conductivity	mg/L CN-tot	mg/L NH3	acidity pH8.3 pH4.5		pH	mg/L SO4	mg/L NFR
N	SULPHIDE-1A	296	na	2230	na	na	na	na	6.73	1202	1100
N	SULPHIDE-1B	97	na	1920	na	na	na	na	6.52	1213	458
N	SULPHIDE-2A	194	na	2020	na	na	na	na	6.54	1064	1020
N	SULPHIDE-2B	226	na	1470	na	na	na	na	6.55	685	5010
N	SULPHIDE-#3	83	na	2530	na	na	na	na	5.98	1380	2510

na = no analysis.

CERTIFIED BY :

K. P. P. P.

CAVENDISH LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 Springer Ave., Burnaby,
British Columbia, Can. V5B 3N1
Ph:(604)299-2560 Fax:299-6252

To: LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

Project: AUG2&3/95
Type of Analysis: ICP

Certificate: 950808C
Invoice: 0808C
Date Entered: 95-08-08
File Name: LAB0808C
Page No.: 1

PRE FIX	SAMPLE NAME	PPM AG	PPM AL	PPM AS	PPM AU	PPM BA	PPM BE	PPM BI	PPM CA	PPM CD	PPM CO	PPM CR	PPM CU	PPM FE	PPM HG	PPM LA	PPM MG	PPM MN	PPM MO	PPM NA	PPM NI	PPM P	PPM PB	PPM S	PPM SB	PPM SI	PPM SR	PPM TI	PPM V	PPM W	PPM ZN
D	BH8	<.003	12.9	<.2	<.01	0.26	0.02	<.05	273.0	0.45	0.34	<.05	0.25	524	<.2	0.25	152	9.9	<.02	100	0.43	<.05	0.2	1142	<.2	2.20	1.31	0.10	<.05	<.2	189.4
D	BH15A	<.003	1.26	<.02	<.01	0.082	0.003	<.05	197.9	<.001	<.005	<.005	0.014	0.24	<.02	0.009	57.5	0.39	<.002	43	0.012	0.36	0.05	234.0	<.02	1.70	0.836	0.007	<.005	<.02	0.43
D	BH15C	<.003	0.81	<.02	<.01	0.054	0.002	<.05	121.7	<.001	<.005	<.005	0.019	0.86	<.03	<.005	22.6	0.29	<.002	17	<.005	<.05	0.02	206.1	<.02	1.80	0.447	0.006	<.005	<.02	0.75
D	BH15A-DUP.	<.003	1.26	<.02	<.01	0.080	0.003	<.05	195.8	<.001	<.005	<.005	0.019	0.21	<.03	0.011	56.4	0.38	<.002	43	0.011	0.37	0.04	234.0	0.02	1.69	0.824	0.011	<.005	<.02	0.24

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To: LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

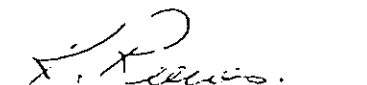
Project: AUG2&3/95

Type of Analysis: WANVIL-SPECIAL

Certificate: 950808C.ENV
Invoice: 0808C.ENV
Date Entered: 95-08-08
File Name: LAB0808C.ENV
Page No.: 1

PRE FIX	SAMPLE NAME	mg/L Alkalinity	mg/L Cl-	us/cm Conductivity	mg/L CN-tot	mg/L NH3	mg/L SO4	mg/L NPR
D	BH-9	7	na	993	na	na	569.7	4990
na = no analysis.								

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CAVENDISH LABORATORY LTD.

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British Columbia, Can. V5B 3N1
Ph:(604)299-2560 Fax:299-6252

To : LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

Certificate: 950803C
Invoice: 0803C
Date Entered: 95-08-03
File Name: LAB0803C
Page No.: 1

Project: AUG. 01/95
Type of Analysis: WICP30 TOTAL

PRE FIX	SAMPLE NAME	PPM AG	PPM AL	PPM AS	PPM AU	PPM BA	PPM BE	PPM BI	PPM CA	PPM CD	PPM CO	PPM CR	PPM CU	PPM FE	PPM HG	PPM LA	PPM MG	PPM MN	PPM MO	PPM NA	PPM NI	PPM P	PPM PB	PPM SB	PPM S	PPM SI	PPM SR	PPM TI	PPM V	PPM W	PPM ZN	
A	V24	TOT	<.003	1.23	0.04	<.01	0.013	0.003	<.04	117.3	0.018	0.118	<.005	0.011	0.98	<.03	<.005	39.3	4.12	<.002	7	0.126	<.04	<.02	<.02	174.3	2.19	1.031	0.011	<.005	<.02	13.07
A	V25-BF	TOT	<.003	0.98	<.02	<.01	0.003	0.002	<.04	100.7	<.002	<.005	<.005	<.002	0.16	<.03	<.005	33.0	0.12	<.002	7	<.005	<.04	<.02	<.02	166.6	1.67	0.853	<.005	<.005	<.02	0.04
A	V25-AF	TOT	<.003	1.02	0.07	<.01	0.008	0.002	<.04	101.0	<.002	<.005	<.005	<.002	0.20	<.03	<.005	33.0	0.11	0.006	7	<.005	<.04	<.02	<.02	171.2	1.95	0.847	<.005	<.005	<.02	0.02
A	X16A	TOT											0.010																		0.06	
A	X16B	TOT											0.021																		0.02	
A	X17A	TOT											0.025																		0.06	
A	X17B	TOT											0.017																		0.02	
A	X18A	TOT											0.014																		0.01	
A	X18B	TOT											0.084																		0.16	
A	V25-BF-DUP.	TOT	<.003	0.95	<.02	<.01	0.002	<.001	<.04	103.5	<.002	0.005	<.005	0.002	0.18	<.03	<.005	32.1	0.12	<.002	6	<.005	<.04	<.02	<.02	171.0	1.69	0.861	<.005	<.005	<.02	0.04
N	V25-BF	DIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
N	V25-AF	DIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
N	X16A	DIS	<.003	0.40	<.02	<.01	0.098	<.001	<.04	46.2	<.002	<.005	<.005	<.002	0.17	<.03	<.005	11.3	<.01	<.002	2	<.005	<.04	<.02	<.02	8.6	2.25	0.152	<.005	<.005	<.02	<.01
N	X16B	DIS	<.003	0.50	<.02	<.01	0.153	<.001	<.04	53.8	<.002	<.005	<.005	0.002	0.27	<.03	<.005	14.7	<.01	<.002	2	<.005	<.04	<.02	<.02	6.9	2.13	0.186	<.005	<.005	<.02	0.02
N	X17A	DIS	<.003	0.45	<.02	<.01	0.116	0.001	<.04	45.6	<.002	<.005	<.005	0.004	0.40	<.03	<.005	13.6	<.01	<.002	3	<.005	<.04	<.02	<.02	11.1	2.12	0.145	<.005	<.005	<.02	0.01
N	X17B	DIS	<.003	0.45	<.02	<.01	0.185	<.001	<.04	51.4	<.002	<.005	<.005	<.002	0.76	<.03	<.005	15.4	0.16	<.002	6	<.005	<.04	<.02	<.02	10.0	2.33	0.282	<.005	<.005	<.02	0.02
N	X18A	DIS	<.003	1.13	<.02	<.01	0.238	0.002	<.04	136.6	<.002	<.005	<.005	0.002	2.88	<.03	<.005	34.1	0.15	<.002	38	<.005	<.04	<.02	<.02	133.7	2.60	0.645	<.005	<.005	<.02	<.01
N	X18B	DIS	<.003	1.19	<.02	<.01	0.147	0.002	<.04	129.0	<.002	<.005	<.005	0.002	0.55	<.03	<.005	32.4	1.63	<.002	33	<.005	<.04	<.02	<.02	132.6	2.82	0.540	<.005	<.005	<.02	<.01
N	V25-BF/DUP.	DIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	

CERTIFIED BY :

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To : LaBARGE ENVIRONMENTAL
#11 4078 4th AVE, WHITEHORSE, Y.T..
Y1A 4K8

Project: AUG. 01/95

Type of Analysis: WANVIL-SPECIAL

Certificate: 950803C
Invoice: 0803C
Date Entered: 95-08-03
File Name: LAB0803C.ENV
Page No.: 1

PRB		mg/L	us/cm	mg/L	mg/L	mg/L
PIX	SAMPLE NAME	Alkalinity	Conductivity	NH3	SO4	NFR
A	V24	110	1050	1.49	502	3
A	V25-BF	22	890	1.11	495	6
A	V25-AP	26	893	1.10	495	3
A	X16A	na	na	<.005	28.2	97
A	X16B	na	na	<.005	24.8	279
A	X17A	na	na	0.036	26.4	751
A	X17B	na	na	0.056	25.9	126
A	X18A	na	na	0.090	397	105
A	X18B	na	na	0.410	392	760

na = no analysis.

CERTIFIED BY :

K. Remo

APPENDIX 6

RESPONSE TO VIOLATION MESURE PRISE A LA SUITE D'UNE INFRACTION

Warning

Avertissement

Environmental Protection
P.O. Box 6010
mile 917.6 Alaska Hwy.
Whitehorse, Y.T. Y1A 5L7

DOUBLE REGISTERED
PW 95-61

June 27, 1995

NOTICE

The purpose of this letter is to serve notice on:

- 1) Anvil Range Mining Corporation
Postal Bag 1000, Faro, Y.T. Y0B 1K0
- 2) Mr. Lorne Hunter
General Manager, Anvil Range Mining Corporation
Postal Bag 1000, Faro, Y.T. Y0B 1K0
- 3) Mr. Kenneth D. Ball
Manager of Processing, Anvil Range Mining Corporation
Postal Bag 1000, Faro, Y.T. Y0B 1K0
- 4) Mr. Kurt Forgaard
President, Anvil Range Mining Corporation
117 Industrial Road, Whitehorse, Y.T. Y1A 2T8

that as a result of an inspection of Anvil Range Mining Corporation's Vangorda Mine and Faro Mine, I, George Balmer, an Inspector under Section 38 of the Fisheries Act have reasonable grounds to believe that Anvil Range Mining Corporation is in violation of subsection 5.(1)(c) of the Metal Mining Liquid Effluent Regulations (MMLER), made pursuant to the Fisheries Act, and subsection 36(3) of the Fisheries Act.

THE FACTS

On May 2, 1995, I inspected the Vangorda Creek drainage at Vangorda Mine and the final discharge from the Cross Valley Pond at Faro Mine. The results from the grab water samples collected during the inspection (attached) indicate that there were elevated concentrations of total suspended material (TSM), ie:

.../2



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- 990 milligrams per litre (mg/l) at an unnamed drainage on the northeast side of the Vangorda Haul Road, about 20 meters upstream of the confluence with the discharge from the Vangorda Creek Diversion Flume and the discharge from the Water Treatment Plant Pipeline (see attached diagram),
- 60 mg/l at Vangorda Mine sample station V2, and
- 140 mg/l at Faro Mine sample station X5.

Since Vangorda Mine and Faro Mine are subject to the MMLER and the above substance in the effluents exceeded the maximum authorized concentration in a grab sample authorized by subsection 5.(1)(c) of the MMLER, I have reasonable grounds to believe that Anvil Range Mining Corporation is in violation of the MMLER and the Fisheries Act.

THE LAW

Subsection 5.(1)(c) of the MMLER provides:

"Subject to these Regulations, the operator of a mine may deposit a deleterious substance prescribed by section 4 if (c) the concentration in a grab sample of each undiluted effluent of that substance described in an item of Part 1 of Schedule 1 does not exceed the concentration in column III of that item and the pH of the grab sample is not less than the value set out in column III of Part 2 of that schedule."

Schedule 1, Part 1, Column III of the MMLER provides:

AUTHORIZED LEVELS OF SUBSTANCES				
Item	Substance	Column I	Column II	Column III
		Maximum Authorized Monthly Arithmetic Mean Concentration	Maximum Authorized Concentration in a Composite Sample	Maximum Authorized Concentration in a Grab Sample
1	Arsenic	0.5 mg/l	0.75 mg/l	1.0 mg/l
2	Copper	0.3 mg/l	0.45 mg/l	0.6 mg/l
3	Lead	0.2 mg/l	0.3 mg/l	0.4 mg/l
4	Nickel	0.5 mg/l	0.75 mg/l	1.0 mg/l
5	Zinc	0.5 mg/l	0.75 mg/l	1.0 mg/l
6	Total Suspended Matter	25.0 mg/l	37.5 mg/l	50.0 mg/l
7	Radium 226	10.0 pCi/l	20.0 pCi/l	30.0 pCi/l

Note: The concentrations are given as total values with the exception of Radium 226 which is a dissolved value after filtration of the sample through a 3 micron filter.

.../3



- page 3 -

Subsection 36(3) of the Fisheries Act provides:

"Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water."

PENALTY

Subsection 40(2) of the Fisheries Act provides:

"Every person who contravenes subsection 36(1) or (3) is guilty of

(a) an offence punishable on summary conviction and liable, for a first offence, to a fine not exceeding three hundred thousand dollars and, for any subsequent offence, to a fine not exceeding three hundred thousand dollars or to imprisonment for a term not exceeding six months, or to both; or

(b) an indictable offence and liable, for a first offence, to a fine not exceeding one million dollars and, for any subsequent offence, to a fine not exceeding one million dollars or to imprisonment for a term not exceeding three years, or to both."

CONCLUSION

This warning is the minimum enforcement response to a violation of the Act. The warning, the alleged violation and the circumstances to which it refers will form part of the compliance history of Anvil Range Mining Corporation and its responsible officials and will be taken into account in the event of future violations.

This warning is also intended to serve notice that an inspector will be conducting further inspections for the purpose of verifying total compliance. Further enforcement action following this warning may be taken if the violations continue.

If you have any questions or wish to seek clarification, please contact me at (403) 667-3400.

Yours truly,



George Balmer
Head, Enforcement and Emergencies Section

.../4

Canada





- page 4 -

attachments (2)

cc: V.E. Niemela
Regional Director, Environmental Protection Branch
Environment Canada, Pacific & Yukon Region

Daniel Couture
A/Director, Office of Enforcement
Environment Canada, Ottawa

Ellen Fry
General Counsel, Legal Services
Environment Canada, Pacific & Yukon Region

Dave Sherstone
Regional Manager, Water Resources
Department of Indian Affairs and Northern Development
Whitehorse

Al Von Finster
A/Chief of Habitat, Yukon & Northern B.C. Division
Department of Fisheries and Oceans, Whitehorse



Environment
Canada

Environnement
Canada

ACTION: Anvil Range Mining Corporation, Vangorda Mine and
Faro Mine

May 1 & 2, 1995

CTOR: George Balmer & Stephen Arrell
Enforcement & Emergencies Section
Environmental Protection Branch - Whitehorse

ATIONS: Metal Mining Liquid Effluent Regulations made
pursuant to the Fisheries Act

DESCRIPTION:

Date & Time	Location
95/05/01 @ 15:05	West Fork of Vangorda Creek, downstream of V6A five meters
95/05/01 @ 16:05	V5 - West Fork of Vangorda Creek, upstream of mine access road
95/05/01 @ 16:40	V8 - Vangorda Creek, near the bridge to Faro town water supply
95/05/01 @ 17:08	Vangorda Creek, upstream of the West Fork of Vangorda Creek approximately twenty meters
95/05/02 @ 09:55	V1 - Vangorda Creek, upstream from the mine and Blind Creek road
95/05/02 @ 10:30	V25 - Effluent from the pipeline from the Vangorda Water Treatment Plant
95/05/02 @ 10:45	Unnamed Drainage on the northeast side of the Vangorda Haul Road, about 20 meters upstream of the confluence with the discharge from the Vangorda Diversion Flume and the discharge from the Water Treatment Plant Pipeline
95/05/02 @ 11:23	V2 - Grum Creek, upstream of small bridge
95/05/02 @ 11:42	Vangorda Creek, upstream of Grum Creek approximately 20 meters
95/05/02 @ 13:05	X2 - North Fork Rose Creek, upstream of mine access road
95/05/02 @ 14:00	X13 - Combined seepage flows from the Cross Valley Dam
95/05/02 @ 14:20	X5 - Cross Valley Dam Decant
95/05/02 @ 15:50	Field Blank

Ecological Water & Wetland Eco Logo



Canada

