14 May 2008

Reference: 2AM-JER0410

Nunavut Water Board
1 Water Street
Box 119
Gjoa Haven, NU
X0B 1J0
Attention: Licensing Administrator

Dear Ms. Beaulieu

Re: 2007 Aquatic Effects Monitoring Report – Water Quality Addendum

On behalf of Tahera Diamond Corporation (Tahera), AMEC Earth & Environmental is pleased to provide the attached water quality assessment addendum report to the 2007 Aquatic Effects Monitoring report which will be submitted under separate cover. Tahera will provide printed copies shortly.

I trust you will find all in order. Please call the undersigned or Mr. Greg Missal should you have any questions.

Yours truly,

Bruce Ott
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c: G. Missal, M. Johnson, A. Coster: Tahera

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2007 Aquatic Effects Monitoring Report
Water Quality Assessment Addendum
Jericho Diamond Mine, Nunavut

Submitted to:

Tahera Diamond Corporation

Toronto, Ontario

Submitted by:

AMEC Earth & Environmental

A Division of AMEC Americas Ltd.

Burnaby, BC

May 2008

VE51295.3100

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1.0 Introduction

1.1 Background

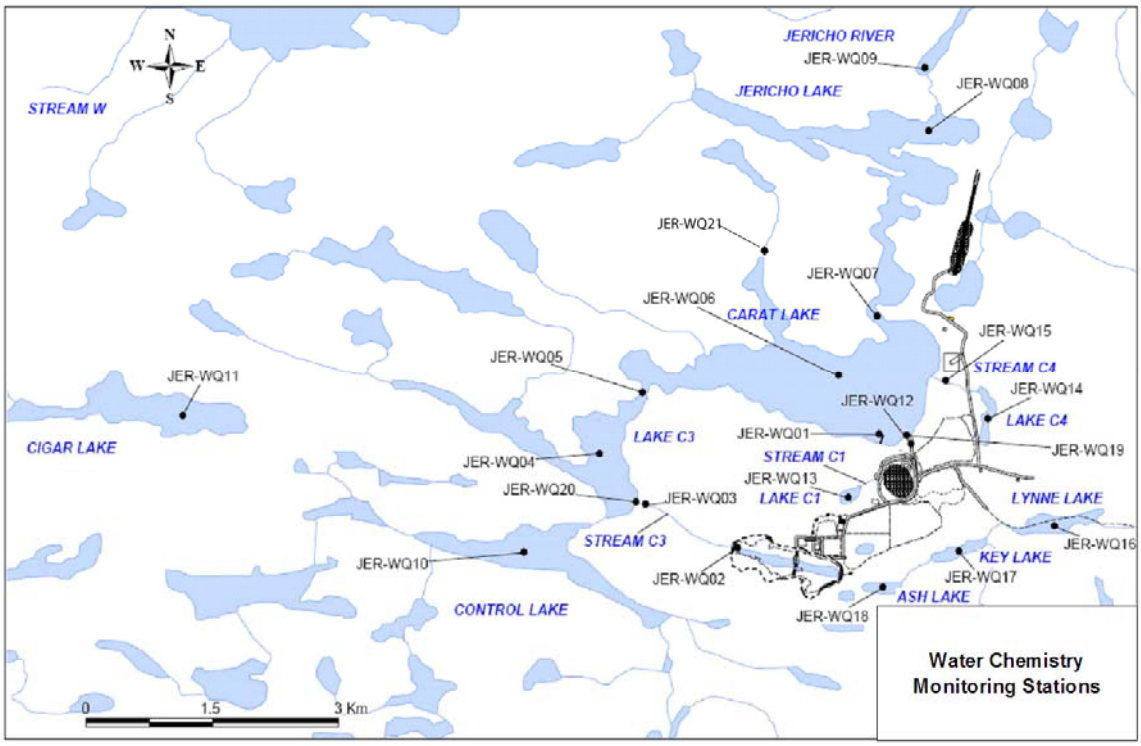
Tahera Diamond Corporation (Tahera) was issued a water license **NWB1JER0410** 22 December 2004 (subsequently changed to **2AMJER0410**) by Nunavut Water Board (NWB) for the Jericho Diamond Mine (Jericho). An annual aquatic effects monitoring report is provided pursuant to Water License Part K and Schedules K and L.

This water quality addendum provides an update assessment of water quality and effects from Jericho for 2007. Potential effects on water quality from mining the Jericho deposit were assessed as part of the Jericho Project Final Environmental Impact Statement to Nunavut Impact Review Board (NIRB) January 2003 (Tahera 2003) and elaborated upon for the water license application in 2004 (Tahera 2004). This update assesses water quality effects noted from monitoring of water chemistry prior to mining through 2007 in the context of predicted effects.

This addendum report should be read with the 2007 Aquatic Effects Monitoring report submitted under separate cover.

1.2 Monitoring Station Locations

The surveillance network program (SNP) established for Jericho includes a relatively large number of sites located upstream, the mine discharge point, downstream near the mine discharge point, and downstream at various distances from the mine discharge point. As well, two lakes and a stream that may be influenced by mine operations, one control lake in a separate drainage, and one stream not influenced by mine operations are included in the network. The latter stream was added by Jericho in 2007. Figure 1-1 provides a map of the SNP station locations.



Source: Mainstream Aquatics

Figure 1-1: SNP Station Locations

2.0 Discharge Limits and Environmental Guidelines

Table 2-1 compares mine effluent discharge limits, site specific water quality objectives, federal (CCME 2002) environmental quality guidelines for protection of freshwater aquatic life, and Canadian drinking water guidelines. Most mine water quality objectives default to CCME, with the few exceptions noted. Objectives and guidelines are guides to acceptable quality whereas discharge limits are legally binding standards the mine must meet.

Table 2-1: Water Quality Parameters Relevant to Jericho Operations

General Parameters		Discharge Limits		Site Specific Water Quality Objectives	Canadian Environmental Quality Guidelines	
		Average	Maximum		Freshwater Aquatic Life	Drinking water
pH	pH	6 - 8.8	6 - 8.8		6.5 - 9	
Total Dissolved Solids	mg/L	2000	4000	400		
Total Suspended Solids	mg/L	15	25			
Chloride (Cl)	mg/L	500	1000	150		
Ammonia as N	mg/L	6	12	0.59		
Nitrate (as N)	mg/L	28	56	13	13	
Nitrite (as N)	mg/L	2.5	5	0.25	0.06	
Total Phosphate as P	mg/L	0.2	0.4			
Aluminum (Al)-Total	mg/L	1.5	3	0.16	0.005 - 0.1	
Antimony (Sb)-Total	mg/L					0.006
Arsenic (As)-Total	mg/L	0.05	0.1	0.005	0.005	0.01
Barium (Ba)-Total	mg/L					1
Boron (B)-Total	mg/L					5
Cadmium (Cd)-Total	mg/L	0.0012	0.0024	0.00017	0.000017	0.005
Chromium (Cr)-Total	mg/L	0.087	0.17	0.0089	0.001	0.05
Copper (Cu)-Total	mg/L	0.02	0.04	0.004	0.002 - 0.004	
Iron (Fe)-Total	mg/L				0.3	
Lead (Pb)-Total	mg/L	0.01	0.02	0.001	0.001 - 0.007	0.01
Mercury (Hg)-Total	mg/L				0.000026	0.001
Molybdenum (Mo)-Total	mg/L	0.73	1.5	0.073	0.073	
Nickel (Ni)-Total	mg/L	0.05	0.1	0.025	0.025 - 0.15	
Selenium (Se)-Total	mg/L				0.001	0.01
Silver (Ag)-Total	mg/L				0.0001	
Uranium (U)-Total	mg/L	0.5	1	0.02		0.02
Zinc (Zn)-Total	mg/L	0.25	0.5	0.03	0.03	
Aluminum (Al)-Dissolved	mg/L	1	2			

Discharge limits were based on an analysis of the receiving environment assimilation capacity and the probable minimum concentrations the mine could achieve in effluent discharge. The assimilation capacity assessment was based on dynamic modelling of the first lake reached by the stream into which effluent was to be discharged (Lake

C3)[1]. Predicted effluent discharge concentrations were calculated using scaled up laboratory test results by SRK (Tahera 2004); a summary of predictions provided in the water license application is attached to this report as Appendix A.

[1] For additional information, see Water License Application, Appendix V (Tahera 2004).

3.0 Water Chemistry Assessment

3.1 Program Scope

The water chemistry assessment presented in this report is based on the parameters regulated by the Jericho water license, listed in Table 2-1, with the exceptions of fecal coleforms, oil and grease, and biochemical oxygen demand. The limits for these parameters are listed in Table 3-1. They are not discussed further in this report because discharge limits were never approached and these parameters were not measured in the receiving environment, other than the freshwater intake for the mine.

Table 3-1: Water License Limits Not Listed in Table 2-1

Parameter	Maximum	Average
Fecal coleform	20 CFU/100 mL	10 CFU/100 mL
Oil and grease	5 mg/L	3 mg/L
BOD_5	25 mg/L	15 mg/L

This section treats both spatial (between station) and temporal (over the time span of available water chemistry data) distribution of data. Data are summarized in tables and graphs, as appropriate to the parameters being discussed. For spatial variation, stations are grouped in logical units as follows (Table 3-2):

Table 3-2: Station Groupings for Spatial Variation Comparisons

Location	Station	Monitoring Purpose
Cigar Lake	JER-WQ11	Separate drainage basin control
Control Lake	JER-WQ10	Upstream drainage basin control
Lake C3 S basin	JER-WQ04	1st receiving lake, near field
Lake C3 Outlet	JER-WQ05	1st receiving lake, near field
Carat Lake Centre	JER-WQ06	2nd receiving lake, mid field
Carat Lake Water Intake	JER-WQ01	Freshwater supply
Carat Lake Outlet	JER-WQ07	2nd receiving lake, mid field
Jericho Lake	JER-WQ08	3rd receiving lake, far field
Jericho River	JER-WQ09	Downstream on IOL
PKCA West Dam	JER-WQ02	Mine effluent discharge
Stream C3 – mouth	JER-WQ03	Effluent discharge stream
Lake C1	JER-WQ13	Mine influenced, near field lake
Stream C1 – mouth	JER-WQ12	Mine influenced, near field stream
Lake C4	JER-WQ14	Mine influenced, mid field lake
Stream C4	JER-WQ15	Mine influenced, mid field stream
Stream C6 – control	JER-WQ21	Control stream outside mine influence
Ash Lake	JER-WQ16	Separate drainage, possible mine
Key Lake	JER-WQ17	influence
Lynne Lake	JER-WQ18	

Summary statistics for spatial variation are based on all data available. Table 3-3 lists the years of data available for each of the stations listed in Table 3-2; duplicate data, collected for QA purposes, were not analyzed.

Table 3-3: Years Water Chemistry Data Collected

Station	Data Period
JER-WQ11	1995 - 1999, 2005 - 2007
JER-WQ10	2005 - 2007
JER-WQ04	1999, 2005 - 2007
JER-WQ05	1995 - 1998, 2005 - 2007
JER-WQ06	1995 - 1998, 2005 - 2007
JER-WQ01	2005 - 2007
JER-WQ07	1995 - 1999, 2005 - 2007
JER-WQ08	1995 - 1999, 2005 - 2007
JER-WQ09	2005 - 2007
JER-WQ02	1999, 2005 - 2007
JER-WQ03	2005 - 2007
JER-WQ13	1995 - 1996, 2005 - 2007
JER-WQ12	2005 - 2007
JER-WQ14	2005 - 2007
JER-WQ15	2005 - 2007
JER-WQ21	2007
JER-WQ16	1996, 2005 - 2007
JER-WQ17	1996, 2005 - 2007
JER-WQ18	1996, 2005 - 2007

Water chemistry data spans from 1995 through 2007; all data were analyzed except in cases where historical detection limits were so high as to distort results. As well, because many parameter concentrations are very low, frequently patterns of temporal distribution are driven by changes in detection limits over time rather than changes in actual concentration at a particular station; where this was assessed to be the case it is noted.

Raw data used in this assessment are attached in Appendix B. All these data have been previously presented in reports to NIRB and NWB and are provided here for convenience of reference.

3.2 Field Methods

Water is collected using a Kemerer sampling bottle (similar to Van Dorn bottle) from approximately one metre below the water surface or lower ice surface in winter and early spring. Water samples are collected monthly during the summer (June through September), December and April (from under ice). Clean transfer methods are employed: a technician using latex gloves exclusively handles water sampling and a separate field crew operate the boat or snow machine and ice auger. Bottles prepared and supplied by the laboratory are filled, preservatives added as required and the water samples shipped immediately to the analysis laboratory per procedures detailed in the mine's General Monitoring and QA/QC Plans. A YSI model 556 multi-probe is used to measure temperature, pH, conductivity, dissolved oxygen (concentration and per cent saturation), and oxidation-reduction potential in the field

per requirements of the mine's water license. Field measurements together with laboratory analyses are reported monthly to NWB and collated in an annual data report for the Board.

3.3 Total Dissolved Solids

3.3.1 Spatial Variation

Table 3-4 provides the spatial variation found for total dissolved solids. The discharge maximum for mine effluent is 4000 mg/L.

Table 3-4: Spatial Variation of Total Dissolved Solids

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	25	2	11	11	14	30	5.9	0.5	20%
Control Lake	JER-WQ10	13	<10	13	13	14	30	6.5	0.5	23%
Lake C3 S basin	JER-WQ04	17	<10	12	15	18	40	9.3	0.6	24%
Lake C3 Outlet	JER-WQ05	19	2	11	11	16	19	4.8	0.4	16%
Carat Lake Centre	JER-WQ06	23	4	10	11	14	17	4.1	0.4	13%
Carat Lake Water Intake	JER-WQ01	2	<10	10	10	13	15	7.1	0.7	50%
Carat Lake Outlet	JER-WQ07	23	<10	11	12	14	32	5.5	0.5	9%
Jericho Lake	JER-WQ08	25	<10	12	12	14	40	7.0	0.6	16%
Jericho River	JER-WQ09	13	<10	15	16	19	40	10.4	0.7	31%
PKCA West Dam	JER-WQ02	36	<10	116	124	200	231	70.3	0.6	6%
Stream C3 - mouth	JER-WQ03	10	<10	27	49	69	173	52.8	1.1	20%
Lake C1	JER-WQ13	19	<10	37	31	42	66	18.4	0.6	16%
Stream C1 - mouth	JER-WQ12	9	13	44	49	74	101	29.4	0.6	0%
Lake C4	JER-WQ14	10	<10	19	20	26	36	9.4	0.5	10%
Stream C4	JER-WQ15	9	<10	16	19	21	48	13.2	0.7	22%
Stream C6 - control	JER-WQ21	3	11	15	14	16	17	3.1	0.2	0%
Ash Lake	JER-WQ16	8	<10	13	14	16	22	5.6	0.4	13%
Key Lake	JER-WQ17	7	<10	11	11	14	16	3.7	0.3	14%
Lynne Lake	JER-WQ18	8	8	10.5	12	13	24	5.2	0.4	0%

3rd Qrt: third quartile SD: standard deviation CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

A number of measures of central tendency are listed in the table together with ranges. Variability in data is shown by the standard deviation and the coefficient of variation which provides a measure of variation corrected for the numerical values of the data and thus allows a comparison of the variability of numerically different data – the lower the coefficient of variation, the less variable the data. Evident from the table is that TDS values on average were highly variable and thus the predictive value of the means is generally low. Another source of unknowns are values less than detection (<MDL). For the statistical analyses in this report, less than detection values were set at one half the detection limit, but of course, the values could be anywhere from close to zero to just below detection. As well, with data that spanned the full range of collection time, detection limits often varied, up to more than an order of magnitude in

some cases, which introduced yet another uncertainty. Statistical summaries and trends therefore must be viewed as approximations, or best guesses. However, the analyses do provide some direction for environmental management and are still valuable.

Water in contact with processed kimberlite is relatively high (against regional water bodies) in total dissolved solids (TDS) (essentially major ions, principally chloride and sulphate). As expected the highest mean TDS is the mine discharge, followed by the discharge stream. Lake C1 and Stream C1 are also elevated above background. Although no mine discharge or direct runoff to these water bodies occurs, they are both close to mining activities and are influenced largely from airborne particulates from the mine. Lake C4 and Stream C4 also show influence from the mine, but to a lesser extent than C1 water bodies.

The mean effluent discharge TDS from the processed kimberlite containment area (PKCA) polishing pond is over 17 times less than the allowable maximum discharge and is therefore well below the discharge criterion. As well, based on receiving water body results downstream of Streams C3 and C1, TDS does not appear to be elevated significantly.

3.3.2 Temporal Variation

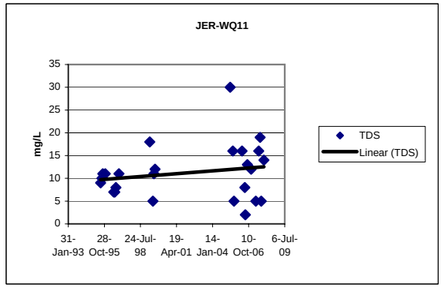
Temporal variation of TDS is shown for the stations analyzed on Figure 3-1. Evident from the figure is that there is a general trend of slightly increasing TDS regionally independent of the mine. The reason for this trend is not apparent from the data. Imposed on this regional trend is a more marked increase over time in TDS at JER-WQ2 (sampled for baseline as Long Lake). This more marked temporal increase is reflected to a lesser extent at JER-WQ3 at the mouth of Stream C3. Stream C3 base flows dilute the PKCA discharge to ½ to ⅓ the effluent concentration, depending on season. There is no apparent effect on TDS in Lake C3 (JER-WQ4) or downstream.

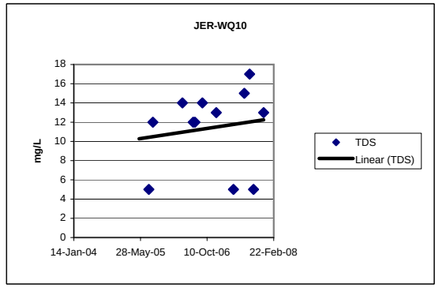
Likewise, TDS is also elevated after mine start up in Lake C1 (JER-WQ13) and Stream C1 (JER-WQ12) but is not apparent in Carat Lake at the closest station (JER-WQ1). Similarly, the increase in TDS after mine start up at Lake C4 (JER-WQ14) and Stream C4 (JER-WQ15) is not apparent in Carat Lake. The lakes measured in the Lynne Lake drainage system south of the mine were not affected by mine operation with respect to TDS.

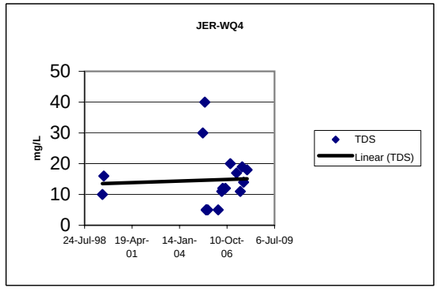
Although elevated somewhat above background, current TDS levels are below those that are know to cause effects (approximately 400 mg/L [AMEC 2004; attached to this report as Appendix C]) and thus no management actions are required at this time.

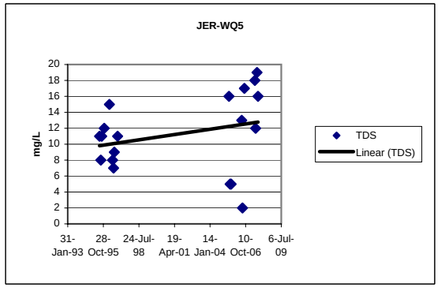
3.4 Total Suspended Solids

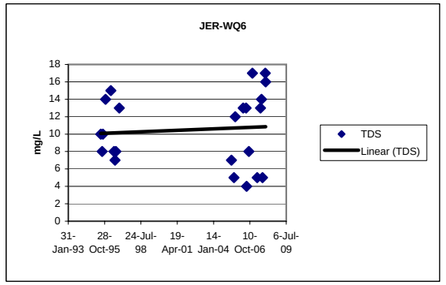
Total suspended solids in discharge were well below discharge criteria, created no measurable increases in Stream C3 which receives effluent, and are therefore not discussed further in this report.

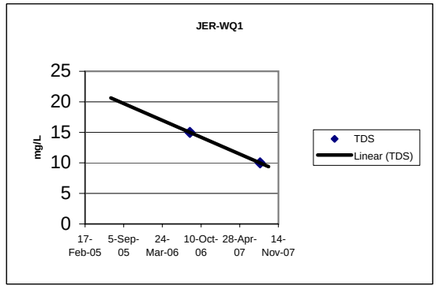


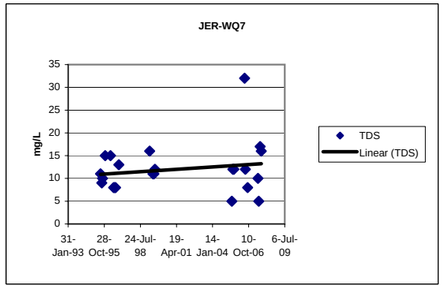


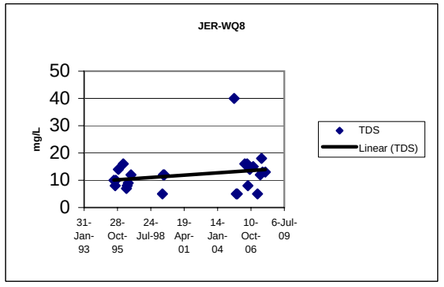


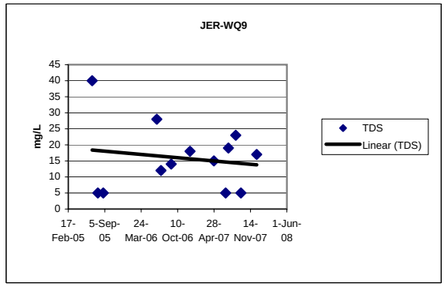


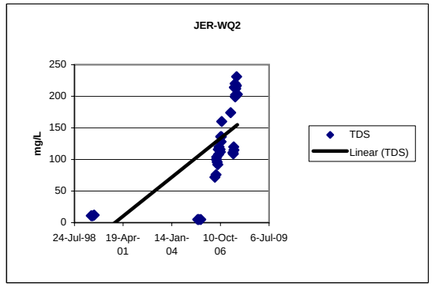


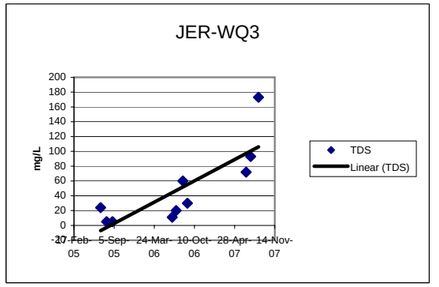


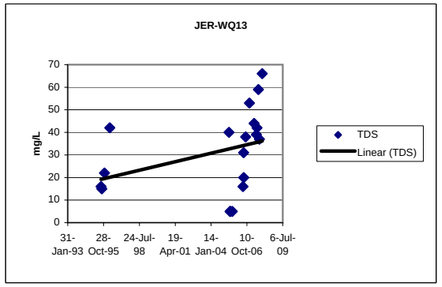


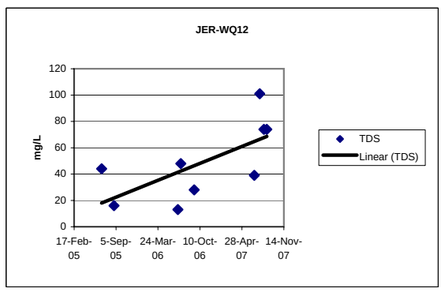


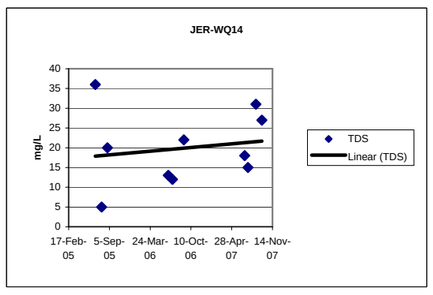


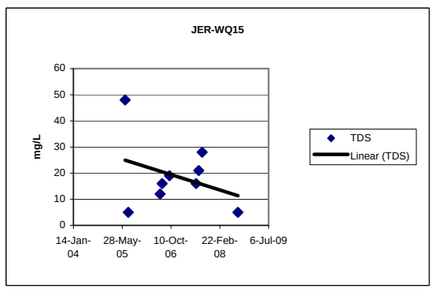


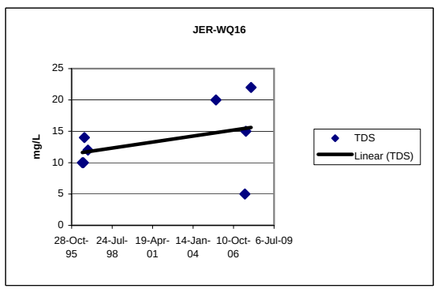


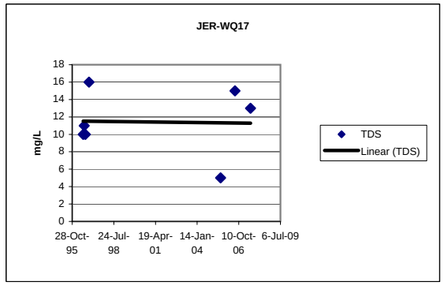












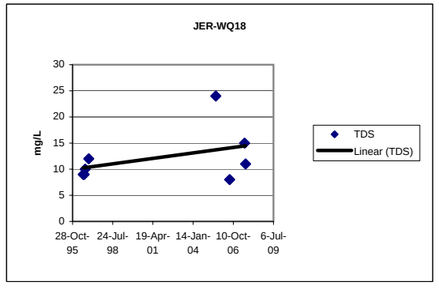


FIGURE 3-1 TDS TEMPORAL VARIATION

3.5 Ammonia

Ammonia is a by-product of blasting with nitrogen based explosives (ammonium nitrate in the case of Jericho) and would therefore be expected to be elevated in any mine water receiving runoff or seepage from ore and waste. Ammonia is also toxic to aquatic organisms at relatively low concentrations and is therefore a parameter of management concern at most mines.

3.5.1 Spatial Variation

The average concentration of ammonia at SNP stations is listed in Table 3-5. The allowable discharge maximum for mine effluent is 12 mg/L. Third quartile and maximum concentrations listed are a measure of the influence of mining operations for stations downstream of effluent discharge.

Table 3-5: Spatial Variation of Ammonia

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	26	<0.005	0.007	0.013	0.014	0.05	0.015	1.181	54%
Control Lake	JER-WQ10	14	<0.005	0.011	0.020	0.025	0.05	0.017	0.866	29%
Lake C3 S basin	JER-WQ04	17	<0.005	0.019	0.021	0.043	0.05	0.019	0.893	53%
Lake C3 Outlet	JER-WQ05	20	<0.005	0.010	0.015	0.014	0.05	0.016	1.028	40%
Carat Lake Centre	JER-WQ06	24	<0.005	0.013	0.029	0.031	0.24	0.048	1.662	25%
Carat Lake Water Intake	JER-WQ01	3	<0.005	0.015	0.014	0.018	0.02	0.006	0.439	0%
Carat Lake Outlet	JER-WQ07	24	<0.005	0.010	0.014	0.017	0.05	0.015	1.073	42%
Jericho Lake	JER-WQ08	26	<0.005	0.012	0.016	0.020	0.05	0.015	0.959	38%
Jericho River	JER-WQ09	14	<0.005	0.010	0.020	0.031	0.05	0.018	0.919	36%
PKCA West Dam	JER-WQ02	37	<0.005	0.116	0.204	0.240	1.460	0.294	1.444	16%
Stream C3 - mouth	JER-WQ03	11	<0.005	0.010	0.020	0.035	0.050	0.020	1.003	55%
Lake C1	JER-WQ13	21	<0.005	0.020	0.029	0.043	0.088	0.020	0.699	24%
Stream C1 - mouth	JER-WQ12	10	<0.005	0.010	0.018	0.020	0.050	0.018	0.995	40%
Lake C4	JER-WQ14	11	0.009	0.012	0.024	0.045	0.050	0.019	0.779	27%
Stream C4	JER-WQ15	9	<0.005	0.022	0.028	0.050	0.050	0.018	0.661	44%
Stream C6 - control	JER-WQ21	3	0.01	0.012	0.015	0.017	0.021	0.006	0.385	0%
Ash Lake	JER-WQ16	8	0.0025	0.015	0.019	0.026	0.050	0.015	0.779	25%
Key Lake	JER-WQ17	7	0.0025	0.020	0.022	0.028	0.050	0.016	0.738	29%
Lynne Lake	JER-WQ18	8	0.0067	0.015	0.018	0.019	0.050	0.014	0.765	13%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

Ammonia data are highly variable as shown by the coefficient of variation; standard deviations are often near or greater than the means; the number of data less than detection was also quite variable with no particular pattern. The highest mean concentration of ammonia was the PKCA polishing pond where discharge takes

place. All other stations were much lower and this is likely due to the unstable nature of ammonia which oxidizes readily to nitrate and thus is not a particularly good indicator of the spatial influence of mine discharge.

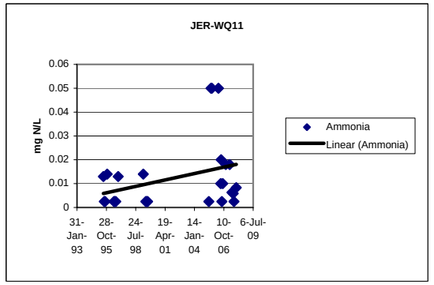
The mean concentration of ammonia in PKCA discharge in 2006 and 2007 was 50 times lower than the maximum allowable concentration indicating there is no issue with ammonia in PKCA supernatant water at this time.

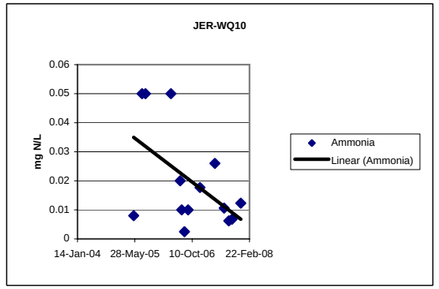
3.5.2 Temporal Variation

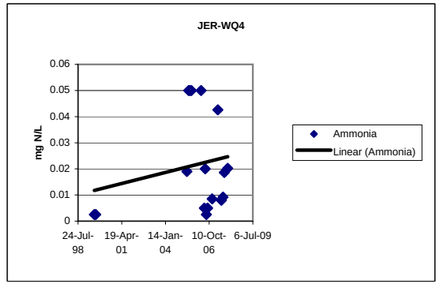
Temporal variation comparisons are provided in Figure 3-2. Trends for all but JER-WQ1 and JER-WQ2 are largely driven by detection limits. In 2005 the laboratory provided a detection limit of 0.10 mg/L for ammonia which was much higher than the 0.005 mg/L detection limit of earlier and later samples. Thus, with ammonia concentrations typically much below 0.10, trends are masked. Variability in ammonia concentrations increased markedly at JER-WQ2 once discharge commenced. Variability was also increased at JER-WQ3. All together the data do not provide useful indications of trends in ammonia concentration.

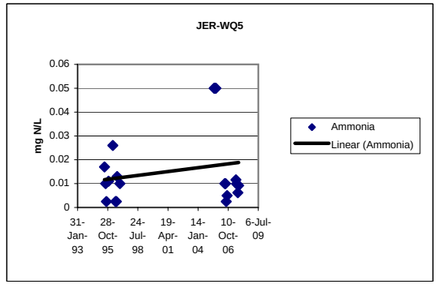
3.6 Nitrate

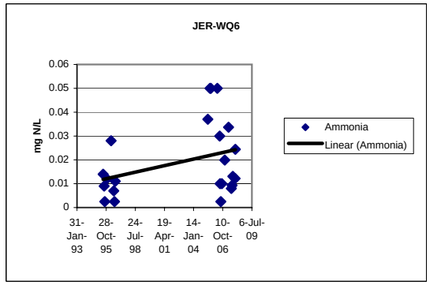
Nitrate is also a by product of blasting and, while soluble and therefore mobile, is a better indication of spatial extent of mine influence than ammonia. Nitrate is utilized by plants and therefore is not conservative but, as phosphate is limiting in the freshwater aquatic environment at Jericho, nitrate is likely not fully utilized by plants.

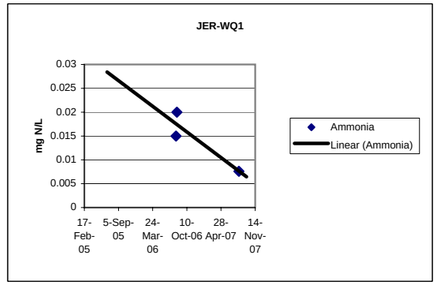


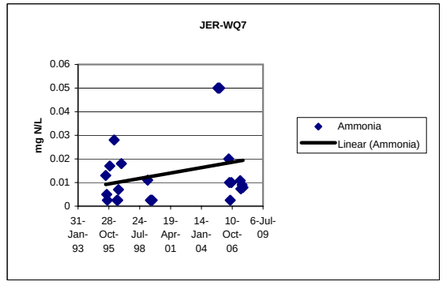


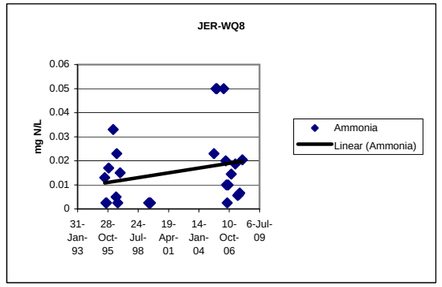


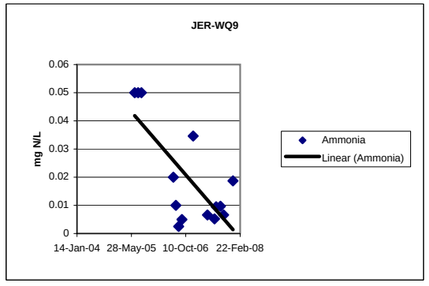


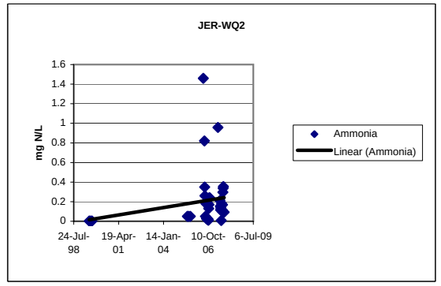


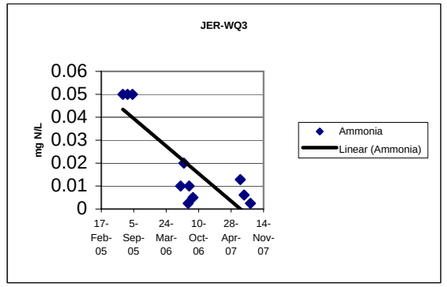


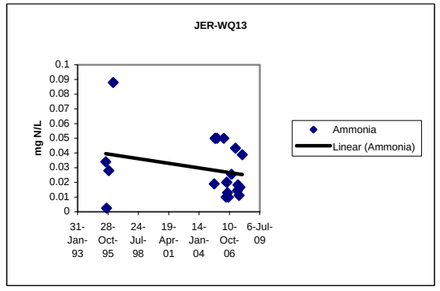


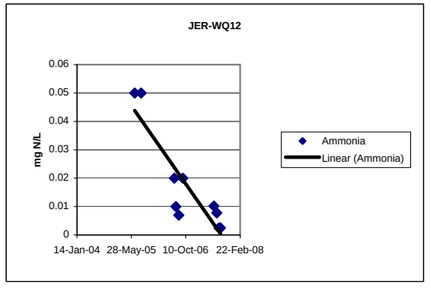


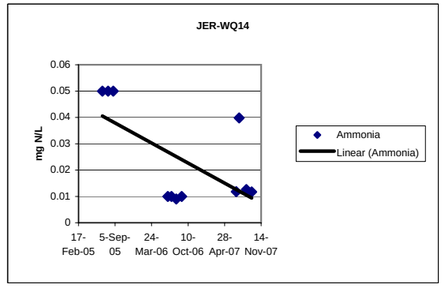


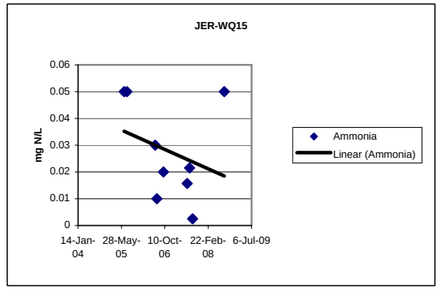


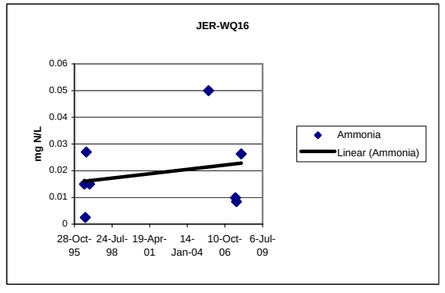


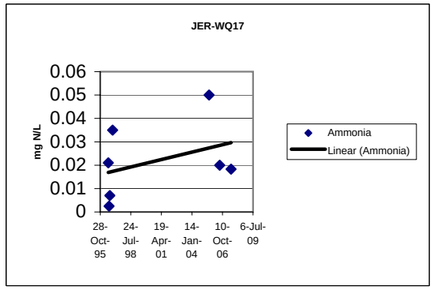












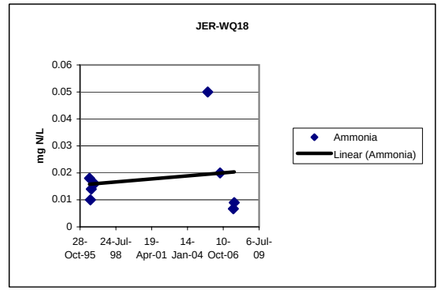


FIGURE 3-2 NH3 TEMPORAL VARIATION

3.6.1 Spatial Variation

Table 3-6 list spatial variation found at SNP stations.

Table 3-6: Spatial Variation of Nitrate

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	27	<0.005	0.003	0.011	0.018	0.060	0.013	1.246	74%
Control Lake	JER-WQ10	13	<0.005	0.025	0.019	0.025	0.026	0.009	0.468	62%
Lake C3 S basin	JER-WQ04	17	<0.005	0.025	0.082	0.067	0.313	0.103	1.263	47%
Lake C3 Outlet	JER-WQ05	21	<0.005	0.025	0.055	0.054	0.280	0.079	1.439	38%
Carat Lake Centre	JER-WQ06	25	<0.002	0.025	0.027	0.039	0.092	0.025	0.928	40%
Carat Lake Water Intake	JER-WQ01	2	<0.05	0.053	0.053	0.066	0.080	0.039	0.741	0%
Carat Lake Outlet	JER-WQ07	25	<0.005	0.024	0.118	0.025	2.500	0.496	4.195	40%
Jericho Lake	JER-WQ08	27	<0.005	0.007	0.011	0.021	0.042	0.011	0.968	63%
Jericho River	JER-WQ09	13	0.0106	0.025	0.036	0.033	0.153	0.037	1.021	38%
PKCA West Dam	JER-WQ02	36	<0.005	7.65	8.31	15.60	17.80	5.97	0.72	8%
Stream C3 - mouth	JER-WQ03	10	<0.05	1.43	3.04	4.44	12.70	4.07	1.34	30%
Lake C1	JER-WQ13	20	<0.005	0.450	0.753	1.233	2.590	0.828	1.100	10%
Stream C1 - mouth	JER-WQ12	9	<0.05	1.220	1.488	2.320	3.970	1.281	0.861	11%
Lake C4	JER-WQ14	10	<0.005				<0.05			80%
Stream C4	JER-WQ15	9	0.0109	0.060	0.054	0.080	0.118	0.035	0.650	33%
Stream C6 - control	JER-WQ21	3	0.01	0.012	0.037	0.051	0.090	0.046	1.260	0%
Ash Lake	JER-WQ16	8	<0.005	0.029	0.037	0.068	0.077	0.031	0.827	25%
Key Lake	JER-WQ17	7	<0.005	0.007	0.024	0.034	0.080	0.032	1.337	29%
Lynne Lake	JER-WQ18	8	<0.005				0.025			75%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

As indicated by the coefficient of variation, nitrate concentrations were highly variable over the measurement period with the standard deviation often being greater than the mean; in the case of Carat Lake outlet over four times the mean. This indicates a low confidence in the mean and median estimates. However, the difference between PKCA discharge and background is great enough that the variability in the data does not mask the effects of the PKCA discharge at near field stations. The PKCA mean discharge was still over six times lower than the allowable maximum discharge. Nitrate is not particularly toxic and therefore the relatively high guideline concentration for freshwater aquatic life protection of 13 mg/L. Thus the PKCA mean nitrate discharge concentration was a little more than half the receiving environment guide.

Stream C3 at its mouth had the highest mean nitrate concentration after the PKCA discharge, which would be expected given the difference above background of the PKCA nitrate concentration. Nitrate was somewhat elevated in Lake C3 and Carat

Lake (Carat Lake outlet had one anomalous nitrate reading of 2.5 mg/L in August 1998, or well above the lake average concentration, which distorted the mean, whereas the median concentration was about at background). From Carat Lake downstream, nitrate concentrations dropped back to near background.

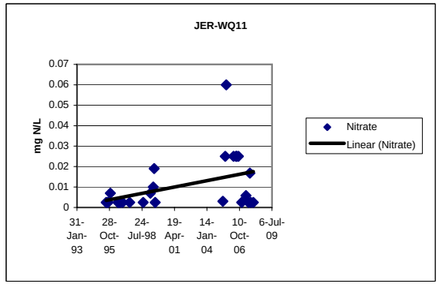
Lake C1 and Stream C1 show the influence of proximity to the mine with somewhat elevated concentrations of nitrate. Since there is no direct drainage from the mine site to these water bodies the most likely source was airborne dust from blasting, waste rock and stockpiled ore. However, nitrate concentrations were about 1/10th the guideline concentration and of no concern. Lake C4 nitrate concentrations were always below detection. Stream C4 has slightly elevated mean concentration of nitrate which showed some possible influence from mining activities. Visible dust does not carry that far away from the open pit, thus the source may have been fine suspended particulates carrying nitrogen from blasting. Ash, Key and Lynne lakes which could also be expected to be influenced by nitrate carried by wind from the mine site were near, or at, background concentrations indicating little or no influence from the mine blasting activities based on mean readings but do show effects at 3rd quartile and maximum readings.

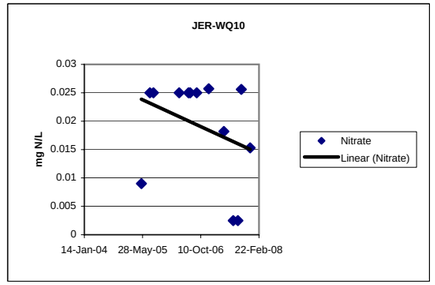
3.6.2 Temporal Variation of Nitrate

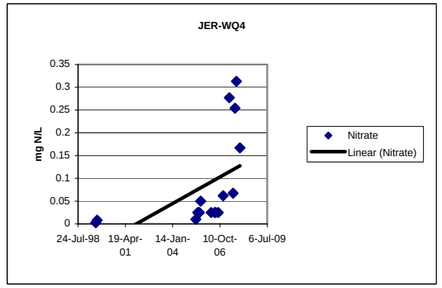
Figure 3-3 shows temporal variation of nitrate. Nitrate change with time at control sites (JER-WQ11 and JER-WQ10) appears to be random and not likely meaningful. Nitrate shows influence of the mine at near and mid field sites which is illustrated by the increase at JER-WQ2 (formerly Long Lake) once deposition of fine PK commenced in 2006 being mirrored at Stream C3 mouth (JER-WQ3), Lake C3 (JER-WQ4 and JER-WQ5), Carat Lake (JER-WQ6 and JER-WQ7) and Jericho Lake (JER-WQ8). The increase at Jericho Lake is less clear as there are as many low readings as high readings; in fact the mean concentration is at background.

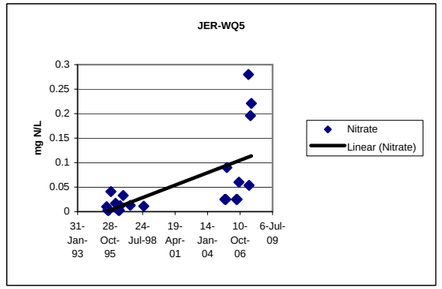
Likewise, Lake C1 (JER-WQ13) and Stream C1 (JER-WQ12) also show the influence of the mine on the nitrate concentration trend, likely, as previously commented, due to wind-blown dust. It appears Lake C4 was not influenced by the mine as nitrate concentrations have dropped over time whereas they have increased at Stream C4. As the major source of water for Stream C4 is Lake C4, it is unclear as to what has caused the increase in nitrate at this station.

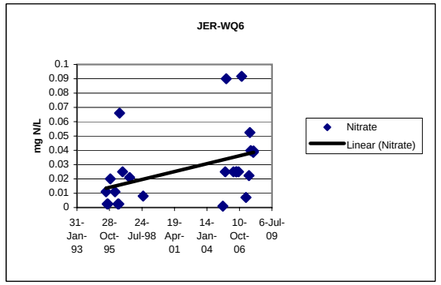
Some increase is also shown Ash, Key and Lynne lakes, again likely due to wind-blown dust.

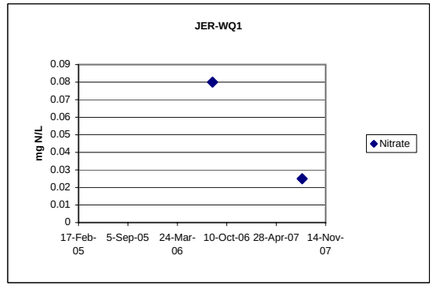


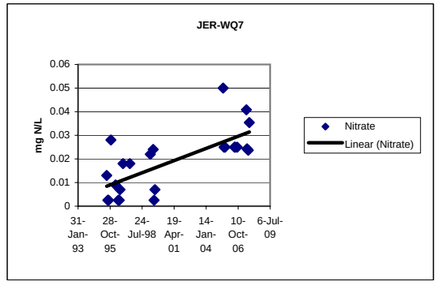


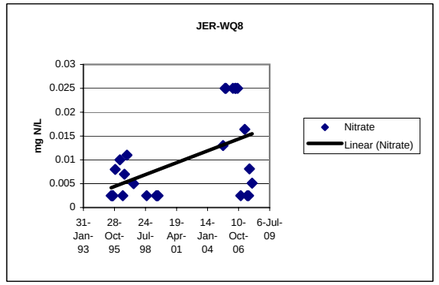


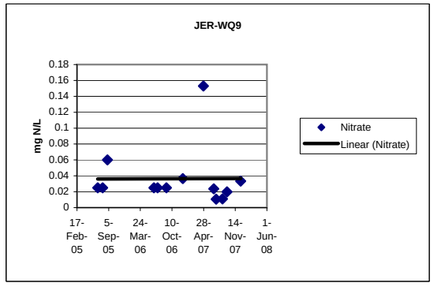


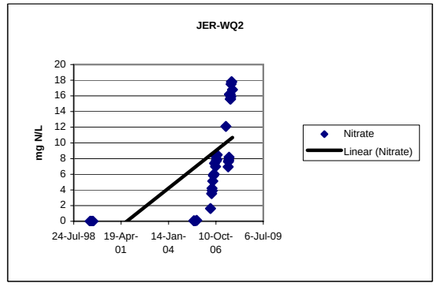


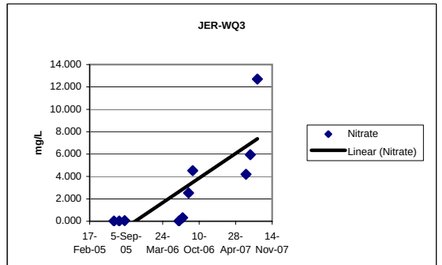


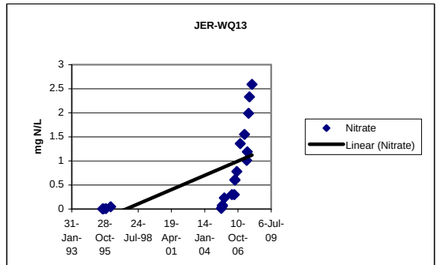


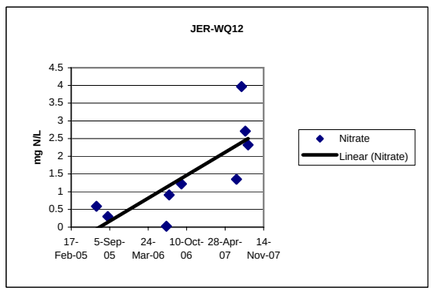


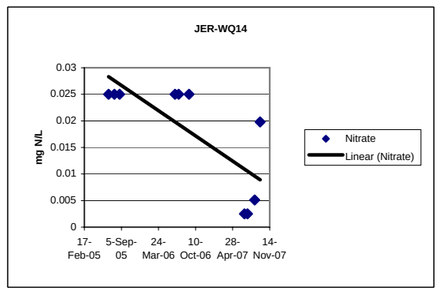


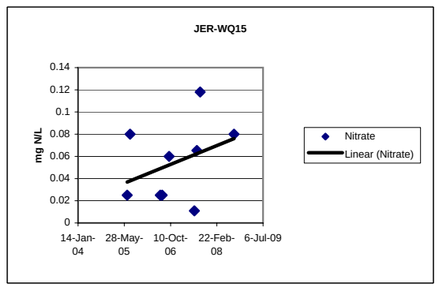


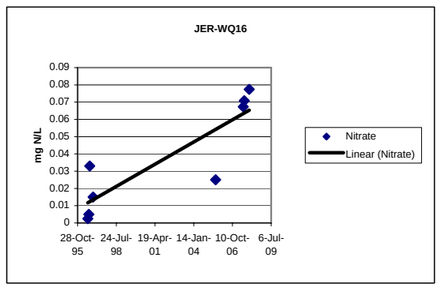


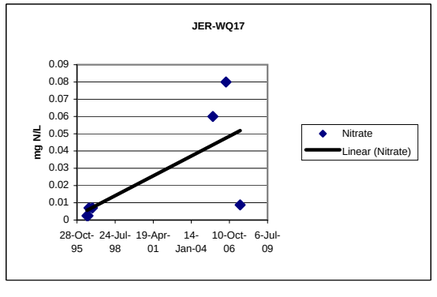












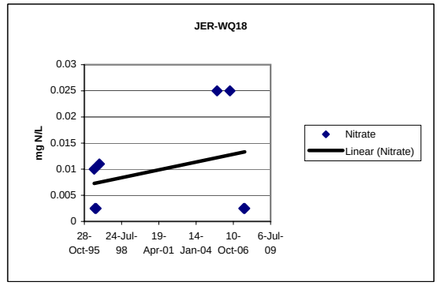


FIGURE 3-3 NO3 TEMPORAL VARIATION

While nitrate is showing an upward trend in water bodies near the mine, concentrations are very much below guidelines, no increase in algal growth is apparent, and therefore the increase in nitrate does not require corrective action at this time. However, the increase does demonstrate that careful management of explosives to limit fugitive loss of ammonium nitrate to the greatest extent possible is prudent. Once the mine resumes operation, explosives, waste rock and ore handling will be examined to determine whether any practical changes to reduce loss of ammonium nitrate or blasting residues is possible.

3.7 Nitrite

While nitrite is regulated by Jericho's water license, discharge concentrations are much below the allowable maximum (mean 0.69 mg/L vs. a maximum discharge limit of 5 mg/L). Further, nitrite is relatively short-lived in aerobic waters, oxidizing readily to nitrate, and is therefore a poor indicator of spatial or temporal influence of the mine.

3.8 Total Aluminum and Dissolved Aluminum

Mine discharge is regulated on both total and dissolved aluminum with maxima of 3 and 2 mg/L, respectively. A site-specific receiving environment objective for total aluminum of 0.16 mg/L was proposed based on the recognition that concentrations above the CCME guideline of 0.10 mg/L for pH $\geq$ 6.5 were exceeded naturally by area water bodies.

3.8.1 Spatial Variation of Aluminum

3.8.1.1 Total Aluminum

Table 3-7 lists the spatial variation of total aluminum.

Table 3-7: Spatial Variation of Total Aluminum

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	0.0055	0.0143	0.0157	0.0186	0.0380	0.0078	0.4962	4%
Control Lake	JER-WQ10	14	0.0113	0.0184	0.0195	0.0218	0.0331	0.0063	0.3246	0%
Lake C3 S basin	JER-WQ04	18	0.0092	0.02185	0.0241	0.0270	0.0494	0.0106	0.4410	0%
Lake C3 Outlet	JER-WQ05	22	0.0092	0.03	0.0318	0.0388	0.0620	0.0146	0.4582	0%
Carat Lake Centre	JER-WQ06	26	0.0104	0.021	0.0230	0.0270	0.0580	0.0108	0.4685	0%
Carat Lake Water Intake	JER-WQ01	15	0.0135				0.0600			0%
Carat Lake Outlet	JER-WQ07	26	0.01	0.026	0.0409	0.0325	0.3800	0.0700	1.7104	4%
Jericho Lake	JER-WQ08	28	0.0086	0.01995	0.0198	0.0260	0.0360	0.0076	0.3828	4%
Jericho River	JER-WQ09	14	0.0108	0.0204	0.0190	0.0217	0.0280	0.0060	0.3127	0%
PKCA West Dam	JER-WQ02	37	0.0065	0.0203	0.0339	0.0270	0.3280	0.0534	1.5731	0%
Stream C3 - mouth	JER-WQ03	11	0.0136	0.031	0.0292	0.0355	0.0543	0.0117	0.4016	0%
Lake C1	JER-WQ13	21	0.007	0.0293	0.0339	0.0414	0.0949	0.0202	0.5946	0%
Stream C1 - mouth	JER-WQ12	10	0.0154	0.04	0.0414	0.0569	0.0770	0.0208	0.5019	0%
Lake C4	JER-WQ14	11	0.017	0.0324	0.0329	0.0394	0.0500	0.0104	0.3154	0%

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Stream C4	JER-WQ15	9	0.0176	0.0344	0.0358	0.0389	0.0590	0.0125	0.3494	0%
Stream C6 - control	JER-WQ21	3	0.01	0.04	0.0290	0.0365	0.0369	0.0129	0.4452	0%
Ash Lake	JER-WQ16	8	0.0138	0.027	0.0388	0.0385	0.1220	0.0348	0.8968	0%
Key Lake	JER-WQ17	7	0.0278	0.041	0.0493	0.0427	0.1240	0.0335	0.6799	0%
Lynne Lake	JER-WQ18	8	0.01	0.0333	0.0366	0.0400	0.0760	0.0192	0.5238	13%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

Table 3-7 illustrates that total aluminum in PKCA discharge is not different from background concentrations and also that the concentrations were highly variable over time (coefficient of variation 1.57; only exceeded by Carat Lake outlet for variability). The mean discharge concentration was approximately 100 times lower than the maximum allowable discharge. This was as much due to the low total suspended solids in the discharge which was accomplished by construction of a filter divider dyke between the slurry cell and the polishing cell of the PKCA and the relatively large polishing cell allowing ample time for fine solids that did pass through the divider dyke to settle out of the water column before reaching the west end of the polishing cell.

3.8.1.2 Dissolved Aluminum

Table 3-8 lists the spatial variation of dissolved aluminum. As expected the pattern for dissolved aluminum is similar to that for total aluminum.

Table 3-8: Spatial Variation of Dissolved Aluminum

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	<0.005	0.0080	0.0082	0.0103	0.0220	0.0042	0.5147	18%
Control Lake	JER-WQ10	14	<0.005	0.0136	0.0151	0.0190	0.0280	0.0061	0.4038	7%
Lake C3 S basin	JER-WQ04	18	<0.005	0.0173	0.0180	0.0238	0.0440	0.0094	0.5196	6%
Lake C3 Outlet	JER-WQ05	22	<0.005	0.0180	0.0190	0.0218	0.0520	0.0103	0.5405	5%
Carat Lake Centre	JER-WQ06	26	<0.005	0.0145	0.0160	0.0200	0.0420	0.0086	0.5358	8%
Carat Lake Water Intake	JER-WQ01	13	<0.005	0.0130	0.0129	0.0180	0.0193	0.0052	0.4011	15%
Carat Lake Outlet	JER-WQ07	26	<0.005	0.0170	0.0182	0.0216	0.0330	0.0069	0.3781	4%
Jericho Lake	JER-WQ08	27	<0.005	0.0140	0.0151	0.0175	0.0350	0.0068	0.4479	0%
Jericho River	JER-WQ09	14	<0.005	0.0108	0.0113	0.0128	0.0270	0.0060	0.5332	14%
PKCA West Dam	JER-WQ02	35	<0.005	0.0050	0.0081	0.0095	0.0710	0.0119	1.4668	20%
Stream C3 - mouth	JER-WQ03	10	0.0113	0.0231	0.0224	0.0260	0.0350	0.0077	0.3420	0%
Lake C1	JER-WQ13	21	<0.005	0.0200	0.0220	0.0260	0.0600	0.0156	0.7072	10%
Stream C1 - mouth	JER-WQ12	9	<0.005	0.0210	0.0216	0.0240	0.0490	0.0141	0.6520	11%
Lake C4	JER-WQ14	11	<0.005	0.0220	0.0227	0.0267	0.0410	0.0091	0.3993	0%
Stream C4	JER-WQ15	9	0.0100	0.0250	0.0251	0.0310	0.0430	0.0098	0.3917	0%
Stream C6 - control	JER-WQ21	3	<0.0004	0.0003	0.0045	0.0067	0.0130	0.0074	1.6359	67%
Ash Lake	JER-WQ16	7	0.0102	0.0220	0.0248	0.0260	0.0590	0.0165	0.6637	0%

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Key Lake	JER-WQ17	7	0.0128	0.0270	0.0331	0.0320	0.0860	0.0244	0.7371	0%
Lynne Lake	JER-WQ18	7	0.0125	0.0250	0.0302	0.0390	0.0570	0.0157	0.5189	0%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

3.8.2 Temporal Variation of Aluminum

No patterns were evident for aluminum, as expected, as concentrations are near background at all SNP stations.

3.9 Total Arsenic

3.9.1 Spatial Variation of Total Arsenic

Table 3-9 lists the spatial variation found for total arsenic.

Table 3-9: Spatial Variation of Total Arsenic

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	0.00005	0.00015	0.00015	0.00020	0.00030	0.00006	0.40053	32%
Control Lake	JER-WQ10	14	0.00010	0.00020	0.00020	0.00021	0.00030	0.00004	0.21209	29%
Lake C3 S basin	JER-WQ04	18	0.00010	0.00020	0.00020	0.00021	0.00030	0.00004	0.19684	33%
Lake C3 Outlet	JER-WQ05	22	0.00005	0.00020	0.00017	0.00020	0.00030	0.00006	0.35760	32%
Carat Lake Centre	JER-WQ06	26	0.00005	0.00018	0.00044	0.00020	0.00665	0.00128	2.89194	35%
Carat Lake Water Intake	JER-WQ01	15	0.00010	0.00010	0.00013	0.00017	0.00019	0.00004	0.28475	60%
Carat Lake Outlet	JER-WQ07	26	0.00005	0.00018	0.00016	0.00020	0.00030	0.00006	0.39918	38%
Jericho Lake	JER-WQ08	28	0.00005	0.00019	0.00017	0.00020	0.00030	0.00006	0.37292	32%
Jericho River	JER-WQ09	14	0.00010	0.00018	0.00017	0.00020	0.00024	0.00005	0.26750	43%
PKCA West Dam	JER-WQ02	37	0.00010	0.00042	0.00053	0.00051	0.00500	0.00078	1.47774	16%
Stream C3 - mouth	JER-WQ03	11	0.00010	0.00021	0.00028	0.00028	0.00070	0.00019	0.68516	27%
Lake C1	JER-WQ13	21	0.00005	0.00019	0.00018	0.00020	0.00040	0.00009	0.51299	48%
Stream C1 - mouth	JER-WQ12	10	0.00010	0.00020	0.00021	0.00028	0.00030	0.00007	0.32413	30%
Lake C4	JER-WQ14	11	0.00010	0.00020	0.00021	0.00023	0.00040	0.00008	0.38193	45%
Stream C4	JER-WQ15	9	0.00010	0.00016	0.00015	0.00020	0.00020	0.00005	0.30406	67%
Stream C6 - control	JER-WQ21	3	0.00012	0.00012	0.00013	0.00014	0.00015	0.00002	0.13323	0%
Ash Lake	JER-WQ16	8	0.00010	0.00018	0.00017	0.00019	0.00020	0.00003	0.19098	13%
Key Lake	JER-WQ17	7	0.00010	0.00020	0.00019	0.00021	0.00024	0.00004	0.22739	29%
Lynne Lake	JER-WQ18	8	0.00010	0.00020	0.00018	0.00020	0.00021	0.00004	0.19593	25%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

Arsenic concentrations in water were very low and there are no apparent differences among stations. The mean concentration in the PKCA discharge was only slightly higher than Carat Lake which was higher than the first receiving water body (Stream C3). Total arsenic mean concentration in the PKCA discharge was 189 times lower than the maximum allowable discharge concentration.

3.9.2 Temporal Variation of Total Arsenic

Most SNP sites showed no temporal variation in total arsenic or an apparent decrease caused by a lowering of the laboratory method detection limit in more recent analyses. The one exception in the data set was Lake C1 (JER-WQ13) which showed an increase (shown in Figure 3-4).

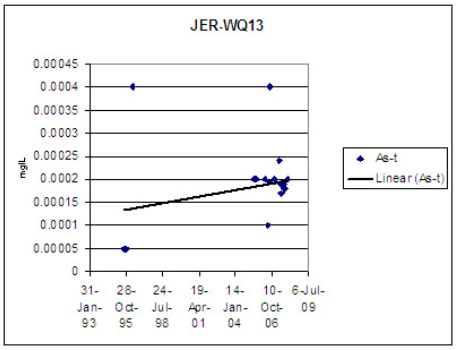


Figure 3-4: Temporal Variation of Total Arsenic in Lake C1

The high values shown are high detection limits. The increase is likely due to wind-blown dust from waste rock (there is essentially no arsenic in Jericho kimberlite). Concentrations shown are well below the CCME freshwater guideline of 0.005 mg/L and thus are of no concern.

Ash, Key and Lynne lakes, as well as Lake C4 showed a decreasing temporal trend in total arsenic for the aforementioned reason and thus arsenic in wind blown dust does not appear to be influencing those water bodies. Of the lakes mentioned, Lake C1 is the closest to the waste rock dump and open pit.

3.10 Total Cadmium

Cadmium was below detection in most samples and is not above crustal averages in the kimberlite or host rock.

3.11 Total Chromium

3.11.1 Spatial Variation

Table 3-10 lists the spatial variation of total chromium.

Table 3-10: Spatial Variation of Total Chromium

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	<0.0001				0.0075			75%
Control Lake	JER-WQ10	14	<0.0001	0.0003	0.0004	0.0005	0.0015	0.0004	0.9037	71%
Lake C3 S basin	JER-WQ04	18	<0.0001	0.0003	0.0004	0.0005	0.0017	0.0004	0.9195	78%

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Lake C3 Outlet	JER-WQ05	22	<0.0001	0.0003	0.0019	0.0018	0.0075	0.0029	1.5094	73%
Carat Lake Centre	JER-WQ06	26	<0.0001	0.0003	0.0017	0.0010	0.0075	0.0027	1.5782	73%
Carat Lake Water Intake	JER-WQ01	15	0.0001	0.0005	0.0009	0.0014	0.0043	0.0011	1.2269	60%
Carat Lake Outlet	JER-WQ07	26	<0.0001	0.0003	0.0018	0.0014	0.0075	0.0027	1.5170	69%
Jericho Lake	JER-WQ08	28	<0.0001				0.0075			79%
Jericho River	JER-WQ09	14	<0.0002	0.0003	0.0006	0.0005	0.0022	0.0006	1.0248	71%
PKCA West Dam	JER-WQ02	37	<0.0005	0.0003	0.0014	0.0010	0.0102	0.0025	1.7035	62%
Stream C3 - mouth	JER-WQ03	11	<0.0005	0.0005	0.0012	0.0011	0.0063	0.0018	1.5040	55%
Lake C1	JER-WQ13	21	<0.0005	0.0005	0.0019	0.0015	0.0075	0.0027	1.3949	71%
Stream C1 - mouth	JER-WQ12	10	<0.0005				0.0014			80%
Lake C4	JER-WQ14	11	<0.0005	0.0003	0.0006	0.0005	0.0024	0.0007	1.1412	73%
Stream C4	JER-WQ15	9	<0.0005				0.0008			89%
Stream C6 - control	JER-WQ21	3	<0.0005				<0.0005			100%
Ash Lake	JER-WQ16	8	0.00005				0.00045			75%
Key Lake	JER-WQ17	7	0.0001	0.0003	0.0004	0.0004	0.001	0.0003	0.8729	43%
Lynne Lake	JER-WQ18	8	0.0001	0.0003	0.0003	0.0003	0.0011	0.0003	0.9690	50%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

There is no spatial pattern apparent from the data; many chromium concentrations were at or below the method detection limited. The mean PKCA discharge concentration was 121 times below the maximum allowable discharge concentration. Coefficients of variation were also very high suggesting large variation in the data and uncertainty in the summary statistics.

3.12 Total Copper

3.12.1 Spatial Variation

Table 3-11 lists the spatial variation of total copper. Total copper exhibited no pattern of spatial variation. The PKCA mean discharge was not higher than background and 17 times lower than the maximum allowable discharge. In fact, mean concentration was well below the site specific receiving environment objective for total copper. As with chromium variability was very high.

Table 3-11: Spatial Variation of Total Copper

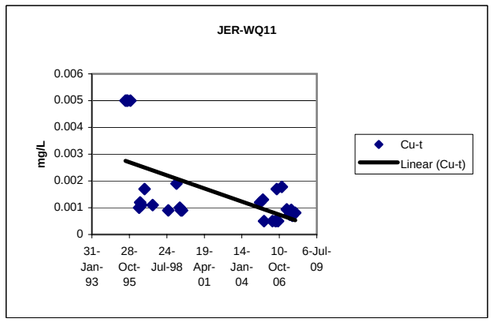
Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	<0.001	0.0010	0.0016	0.0017	0.0050	0.0015	0.9313	32%
Control Lake	JER-WQ10	14	<0.001	0.0007	0.0008	0.0008	0.0020	0.0004	0.5394	43%
Lake C3 S basin	JER-WQ04	18	<0.001	0.0010	0.0014	0.0013	0.0044	0.0012	0.8349	22%
Lake C3 Outlet	JER-WQ05	22	<0.001	0.0010	0.0018	0.0016	0.0050	0.0018	0.9979	50%
Carat Lake Centre	JER-WQ06	26	<0.001	0.0010	0.0017	0.0015	0.0050	0.0017	0.9655	38%
Carat Lake Water Intake	JER-WQ01	15	<0.001	0.0012	0.0013	0.0015	0.0033	0.0009	0.7057	40%
Carat Lake Outlet	JER-WQ07	26	<0.001	0.0012	0.0020	0.0016	0.0076	0.0020	0.9662	35%

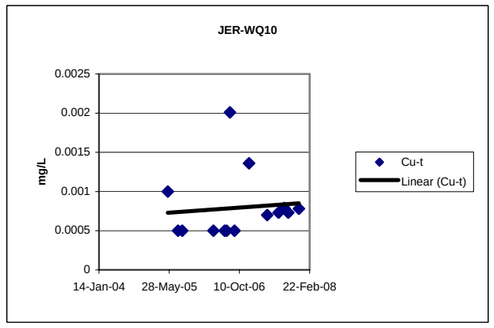
Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Jericho Lake	JER-WQ08	28	<0.001	0.0010	0.0020	0.0016	0.0094	0.0022	1.1012	36%
Jericho River	JER-WQ09	14	<0.001	0.0008	0.0009	0.0013	0.0017	0.0004	0.4736	36%
PKCA West Dam	JER-WQ02	37	<0.001	0.0017	0.0019	0.0024	0.0057	0.0014	0.7072	16%
Stream C3 - mouth	JER-WQ03	11	<0.001	0.0010	0.0009	0.0011	0.0019	0.0004	0.4788	36%
Lake C1	JER-WQ13	21	<0.001	0.0018	0.0023	0.0024	0.0050	0.0014	0.6139	24%
Stream C1 - mouth	JER-WQ12	10	0.0012	0.0019	0.0020	0.0022	0.0031	0.0006	0.2876	0%
Lake C4	JER-WQ14	11	<0.001	0.0013	0.0015	0.0015	0.0053	0.0014	0.9184	36%
Stream C4	JER-WQ15	9	<0.001	0.0009	0.0010	0.0013	0.0017	0.0005	0.5106	44%
Stream C6 - control	JER-WQ21	3	0.0011	0.0014	0.0014	0.0015	0.0016	0.0002	0.1707	0%
Ash Lake	JER-WQ16	8	0.0011	0.0013	0.0014	0.0016	0.0023	0.0004	0.2955	0%
Key Lake	JER-WQ17	7	0.00138	0.0015	0.0017	0.0019	0.0027	0.0005	0.2886	0%
Lynne Lake	JER-WQ18	8	<0.001	0.0012	0.0012	0.0014	0.0022	0.0006	0.4743	25%

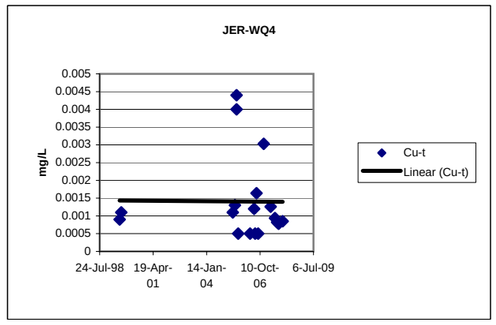
Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

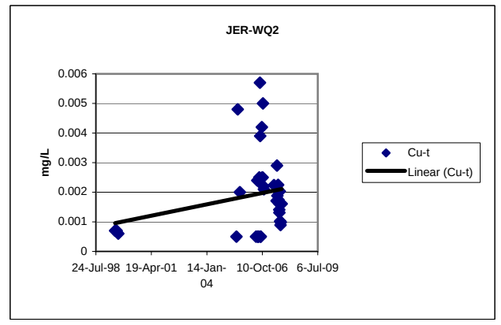
3.12.2 Temporal Variation of Total Copper

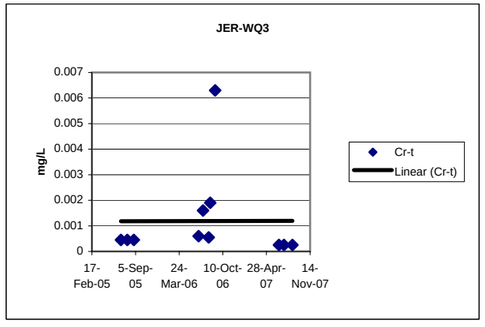
Figure 3-5 shows temporal variation in total copper at SNP stations. As expected because of the lack of pattern in spatial variation, there are also no meaningful trends in temporal variation. Apparent trends are due as much to detection limit changes as to actual changes in copper concentrations. Variability in concentration increased at JER-WQ2 when discharge commenced and the apparent upward temporal trend is an artefact of the variation. As previously discussed concentrations at all stations are well within freshwater environmental guidelines.

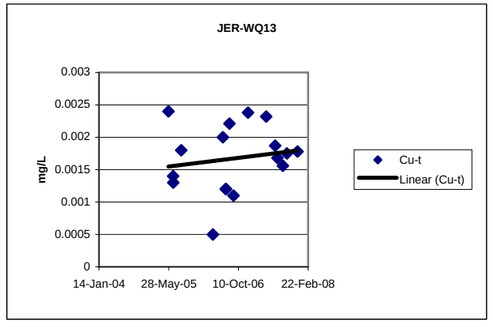


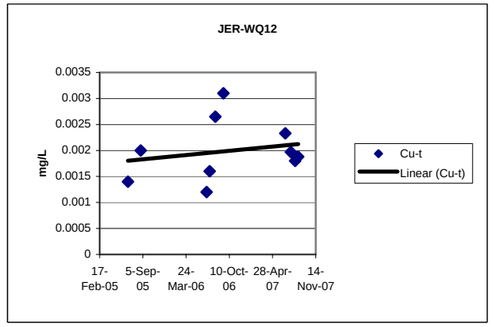


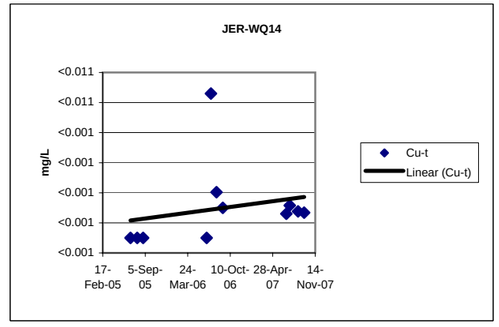


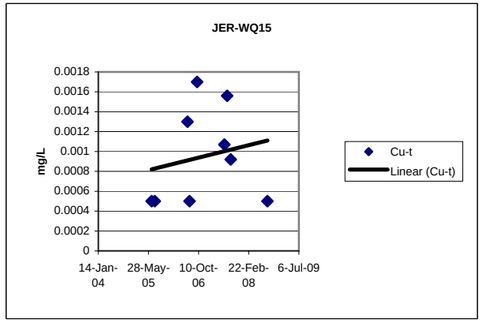


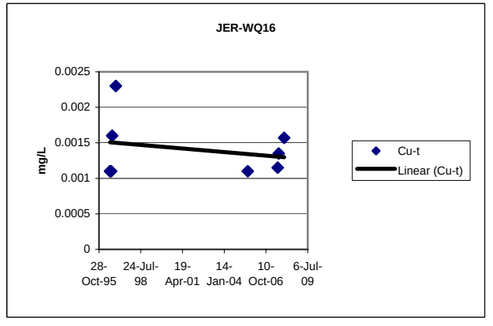


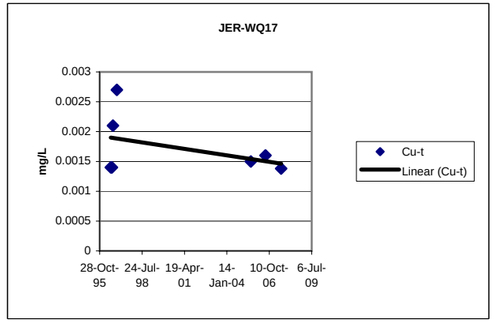












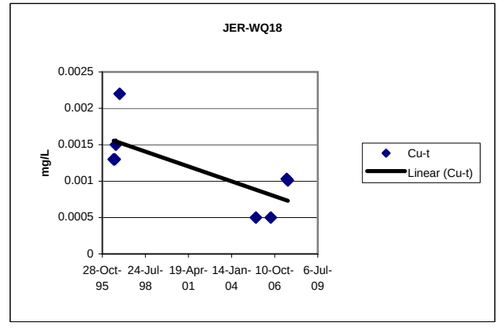


FIGURE 3-5 CU-t TEMPORAL VARIATION

3.13 Total Lead

Lead was near or below detection in SNP samples and is not above crustal averages in the deposit or host rock.

3.14 Total Molybdenum

Table 3-12 lists spatial variation of total molybdenum. Molybdenum was below detection on most samples except water bodies close to the mine.

Table 3-12: Spatial Variation of Total Molybdenum

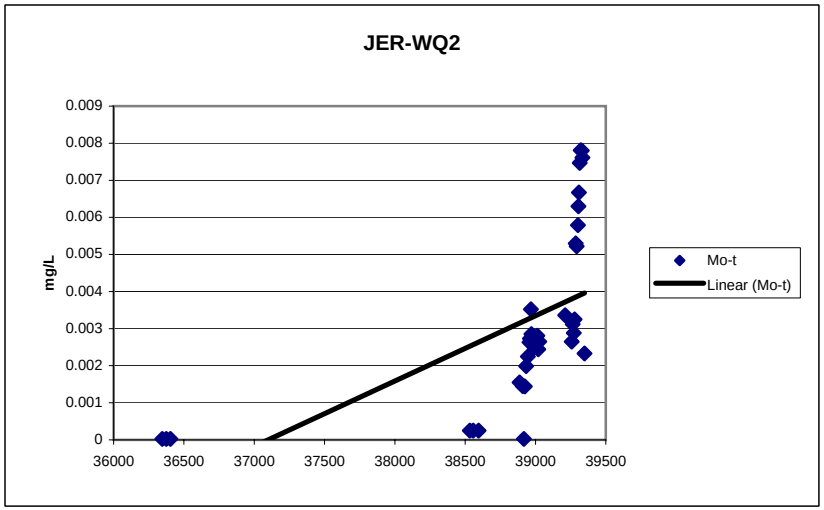
Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	<0.00005				<0.0005			93%
Control Lake	JER-WQ10	14	<0.00005				<0.0005			86%
Lake C3 S basin	JER-WQ04	18	<0.00005				<0.0005			94%
Lake C3 Outlet	JER-WQ05	22	<0.00005				<0.0005			95%
Carat Lake Centre	JER-WQ06	26	<0.00005				<0.0005			92%
Carat Lake Water Intake	JER-WQ01	15	<0.00005				<0.0005			87%
Carat Lake Outlet	JER-WQ07	26	<0.00005				<0.0005			96%
Jericho Lake	JER-WQ08	28	<0.00005				<0.0005			96%
Jericho River	JER-WQ09	14	<0.00005				<0.0005			93%
PKCA West Dam	JER-WQ02	37	<0.00005	0.00265	0.00309	0.00352	0.00781	0.00235	0.75906	19%
Stream C3 - mouth	JER-WQ03	11	<0.00005	0.00025	0.00041	0.00037	0.00167	0.00050	1.21600	45%
Lake C1	JER-WQ13	21	<0.00005	0.00012	0.00019	0.00025	<0.0005	0.00017	0.89538	52%
Stream C1 - mouth	JER-WQ12	10	<0.00005	<0.00005	0.00027	0.00036	0.000587	0.00017	0.61384	30%
Lake C4	JER-WQ14	11	<0.00005				<0.0005			91%
Stream C4	JER-WQ15	9	<0.00005				<0.00005			100%
Stream C6 - control	JER-WQ21	3	<0.00005				<0.00005			100%
Ash Lake	JER-WQ16	8	<0.00005				<0.00005			100%
Key Lake	JER-WQ17	7	<0.00005				<0.00005			100%
Lynne Lake	JER-WQ18	8	<0.00005				<0.00005			100%

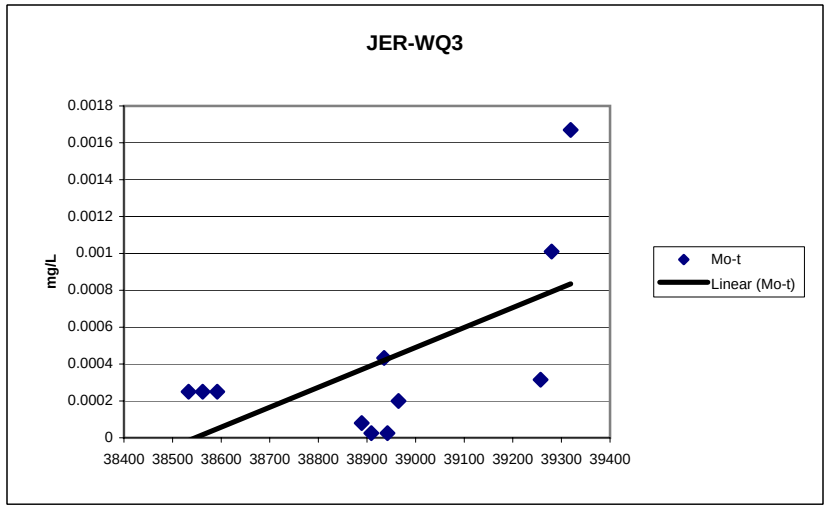
Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

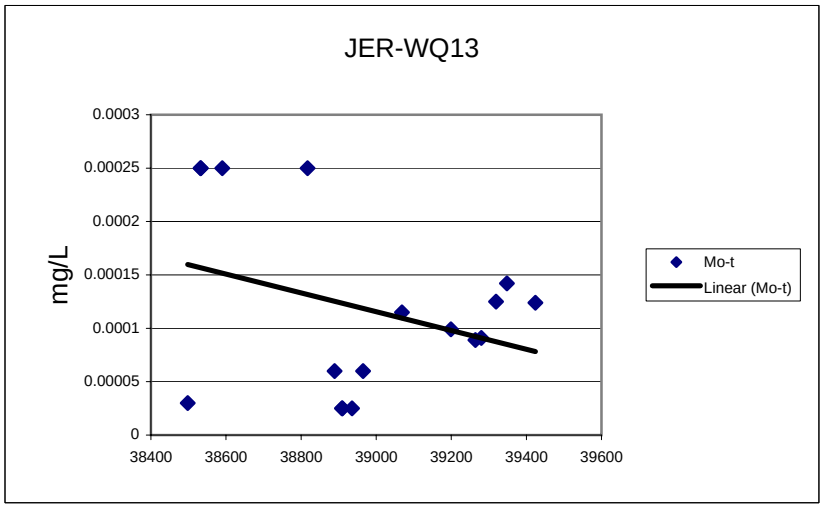
Total molybdenum was slightly elevated in PKCA discharge and in the downstream receiving water body but dropped below detection beyond that (in Lake C3). Total molybdenum was also slightly elevated in Lake C1 and in Stream C1 flowing from the lake, but less so in the latter water body. None of the observed concentrations are a concern and the PKCA mean discharge was 485 times lower than the maximum allowable discharge concentration. Variability in sample results was again high.

3.14.1 Temporal Variation of Total Molybdenum

Figure 3-6 shows temporal variation in total molybdenum for stations above detection.







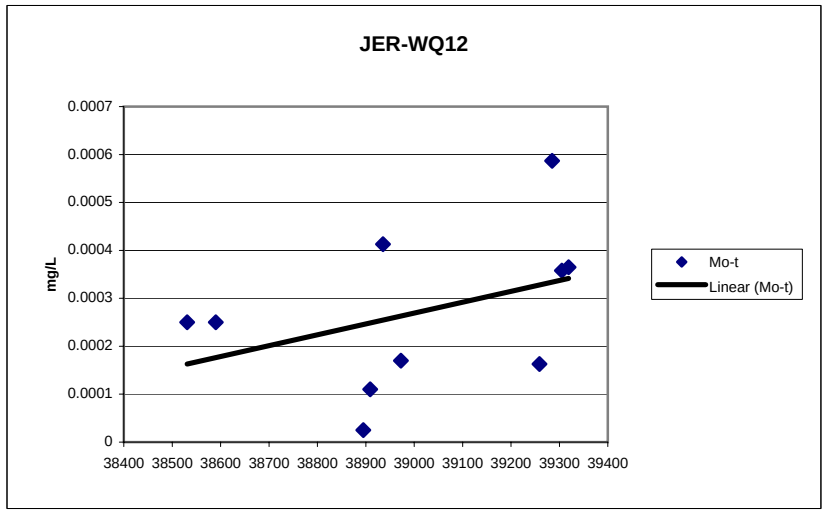


FIGURE 3-6 Mo-t TEMPORAL VARIATION

All stations show an increasing trend through time; the apparent decreasing trend of total molybdenum concentration for Lake C1 is due to higher detection limits used in the historic samples. No concerns with these concentrations are indicated as all are well below the freshwater guide of 0.073 mg/L for total molybdenum.

3.15 Total Nickel

3.15.1 Spatial Variation of Total Nickel

Table 3-13 lists spatial variation for total nickel.

Table 3-13: Spatial Variation of Total Nickel

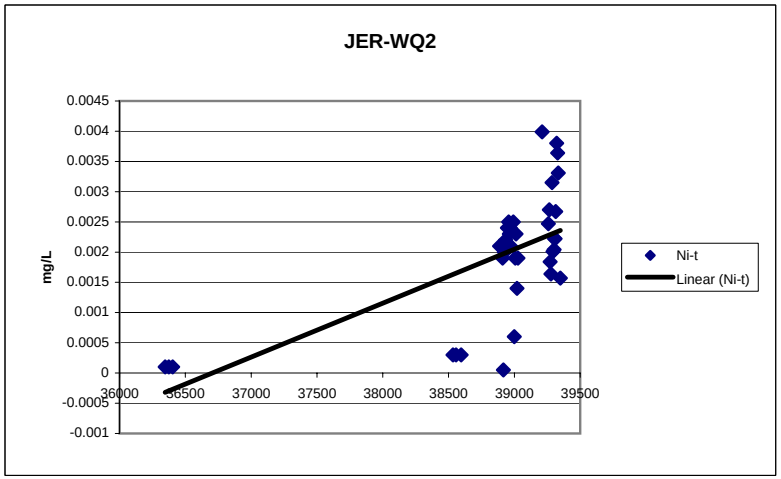
Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	0.0001	0.0003	0.0003	0.0003	0.0010	0.0002	0.5845	43%
Control Lake	JER-WQ10	14	0.0002	0.0003	0.0004	0.0004	0.0013	0.0003	0.7282	43%
Lake C3 S basin	JER-WQ04	18	0.0003	0.0003	0.0003	0.0003	0.0007	0.0001	0.3311	56%
Lake C3 Outlet	JER-WQ05	22	0.0002	0.0003	0.0003	0.0004	0.0005	0.0001	0.2837	55%
Carat Lake Centre	JER-WQ06	26	0.0001	0.0003	0.0004	0.0005	0.0008	0.0002	0.4407	54%
Carat Lake Water Intake	JER-WQ01	15	0.0002	0.0003	0.0003	0.0003	0.0007	0.0001	0.4183	47%
Carat Lake Outlet	JER-WQ07	26	0.0002	0.0004	0.0004	0.0005	0.0012	0.0002	0.4710	42%
Jericho Lake	JER-WQ08	28	0.0002	0.0003	0.0005	0.0004	0.0030	0.0006	1.1829	39%
Jericho River	JER-WQ09	14	0.0003	0.0003	0.0003	0.0003	0.0005	0.0001	0.3029	64%
PKCA West Dam	JER-WQ02	37	<0.0001	0.0021	0.0019	0.0025	0.0040	0.0011	0.5560	8%
Stream C3 - mouth	JER-WQ03	11	<0.0005	0.0006	0.0005	0.0007	0.0008	0.0002	0.3808	36%
Lake C1	JER-WQ13	21	0.0003	0.0006	0.0006	0.0009	0.0011	0.0003	0.4289	38%
Stream C1 - mouth	JER-WQ12	10	0.0003	0.0009	0.0009	0.0012	0.0016	0.0005	0.5086	20%
Lake C4	JER-WQ14	11	0.0003	0.0003	0.0004	0.0004	0.0008	0.0002	0.5321	64%
Stream C4	JER-WQ15	9	<0.0001	0.0003	0.0003	0.0003	0.0006	0.0001	0.4601	67%
Stream C6 - control	JER-WQ21	3	<0.0003				<0.0003			100%
Ash Lake	JER-WQ16	8	0.0002	0.0004	0.0004	0.0005	0.0006	0.0002	0.4096	25%
Key Lake	JER-WQ17	7	0.0003	0.0004	0.0004	0.0004	0.0005	0.0001	0.2339	29%
Lynne Lake	JER-WQ18	8	0.0003	0.0003	0.0004	0.0004	0.0006	0.0001	0.3442	25%

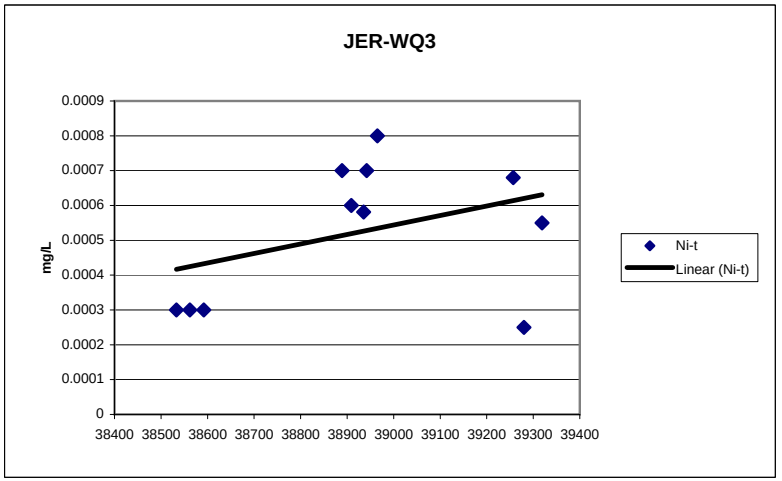
Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

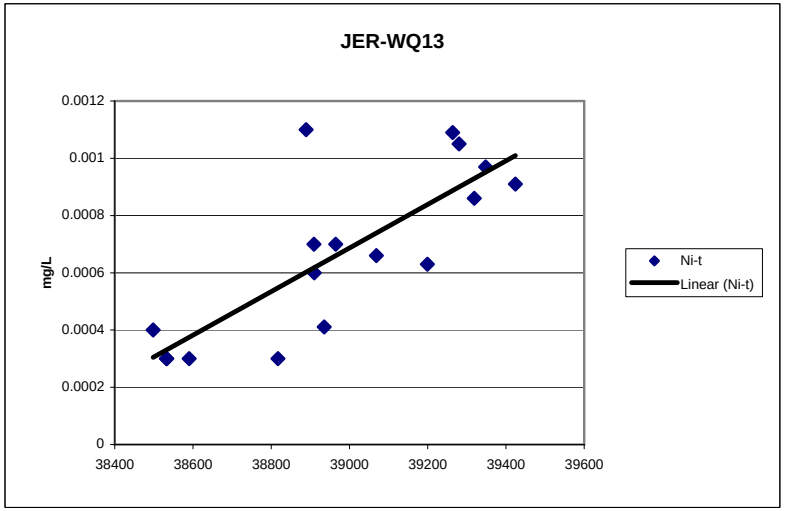
The PKCA discharge (JER-WQ2) and Stream C1 (JER-WQ12) were above background; all other stations are at background concentrations for total nickel. Between one quarter and one half of samples were below detection including historical samples at JER-WQ2 (Long Lake). The mean discharge concentration at JER-WQ2 was 53 times less than the maximum allowable discharge concentration. All concentrations, including the PKCA discharge, were well below the freshwater guideline of 0.025 mg/L total nickel for soft waters.

3.15.2 Temporal Variation of Total Nickel

Figure 3-7 shows temporal variation of total nickel for water bodies at or near the mine site.







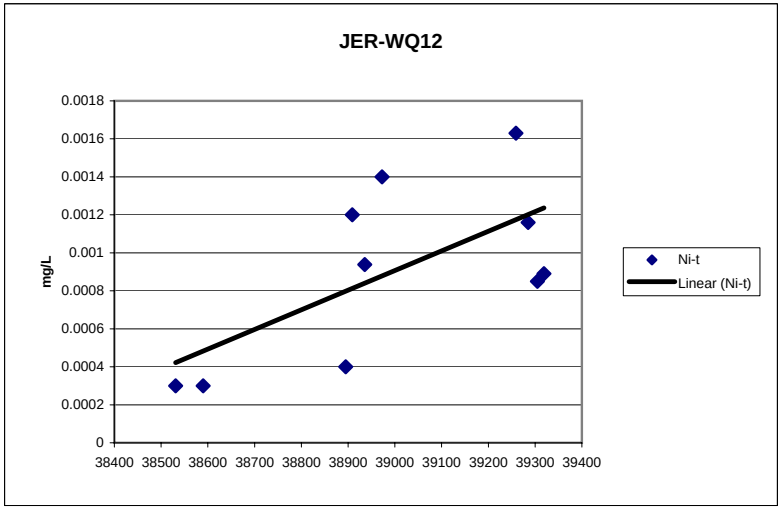


FIGURE 3-7 Ni-t TEMPORAL VARIATION

Temporal trends were all upward at the stations assessed. Lakes C4, Ash, Key and Lynne, while relatively close to the mine site and small, did not show any increase in nickel, indicating wind blown dust from the mine did not carry enough nickel to affect these water bodies. This may have been due to the fact that only the kimberlite contains nickel above crustal average and not the host rock which has a much larger volume and surface area to mine disturbance subject to wind erosion. The concentrations found are not of any environmental concern.

3.16 Total Uranium

Uranium is found at slightly elevated concentrations (above crustal average) in pegmatites which form a small fraction of the host rock at Jericho. Uranium was not found to be elevated in water samples collected prior to mining at Jericho. Nonetheless, concerns were expressed at NIRB and NWB hearings about the potential for uranium leaching from host rock at Jericho into the environment. There are no guidelines for uranium to protect freshwater aquatic life. The Canadian drinking water guide for uranium is 0.02 mg/L. Uranium is regulated in PKCA discharge at a maximum allowable concentration of 1 mg/L which has never been approached in discharges from the PKCA polishing pond.

3.16.1 Spatial Variation of Total Uranium

Table 3-14 lists the spatial variation for total uranium found at Jericho. Mean uranium was above background in the PKCA discharge, Stream C3, Lake C1 and Stream C1 but still well below the drinking water guideline. The mean total uranium concentration in PKCA discharge was 18 times lower than the drinking water guide and over 900 times lower than the maximum allowable discharge. All other stations were at or below average background.

Table 3-14: Spatial Variation of Total Uranium

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	22	0.00007	0.00012	0.00014	0.00017	0.00025	0.00006	0.40709	14%
Control Lake	JER-WQ10	14	0.00008	0.00014	0.00015	0.00016	0.00024	0.00003	0.23356	0%
Lake C3 S basin	JER-WQ04	17	0.00009	0.00014	0.00015	0.00018	0.00028	0.00005	0.30722	0%
Lake C3 Outlet	JER-WQ05	18	0.00011	0.00015	0.00017	0.00023	0.00027	0.00006	0.32508	17%
Carat Lake Centre	JER-WQ06	22	0.00009	0.00015	0.00017	0.00020	0.00028	0.00006	0.32589	14%
Carat Lake Water Intake	JER-WQ01	15	0.00010	0.00015	0.00017	0.00018	0.00031	0.00005	0.32160	0%
Carat Lake Outlet	JER-WQ07	20	0.00010	0.00016	0.00017	0.00021	0.00025	0.00005	0.28612	15%
Jericho Lake	JER-WQ08	23	0.00007	0.00013	0.00014	0.00016	0.00025	0.00005	0.34855	13%
Jericho River	JER-WQ09	14	0.00008	0.00013	0.00013	0.00013	0.00021	0.00004	0.27751	0%
PKCA West Dam	JER-WQ02	35	0.00003	0.00123	0.00110	0.00136	0.00222	0.00050	0.45507	3%
Stream C3 - mouth	JER-WQ03	11	0.00003	0.00007	0.00008	0.00009	0.00022	0.00005	0.66437	18%
Lake C1	JER-WQ13	21	0.00021	0.00069	0.00083	0.00096	0.00265	0.00064	0.76502	10%
Stream C1 - mouth	JER-WQ12	10	0.00016	0.00085	0.00086	0.00135	0.00165	0.00055	0.63336	0%
Lake C4	JER-WQ14	11	0.00014	0.00021	0.00022	0.00024	0.00027	0.00004	0.16910	0%

Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Stream C4	JER-WQ15	9	0.00015	0.00021	0.00021	0.00023	0.00026	0.00004	0.17608	0%
Stream C6 - control	JER-WQ21	3	0.00009	0.00012	0.00011	0.00012	0.00013	0.00002	0.20489	0%
Ash Lake	JER-WQ16	5	0.00003	0.00008	0.00007	0.00009	0.00009	0.00002	0.35559	0%
Key Lake	JER-WQ17	4	0.00003	0.00006	0.00010	0.00012	0.00028	0.00012	1.13358	25%
Lynne Lake	JER-WQ18	5	0.00005	0.00009	0.00010	0.00010	0.00017	0.00004	0.44734	0%

Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

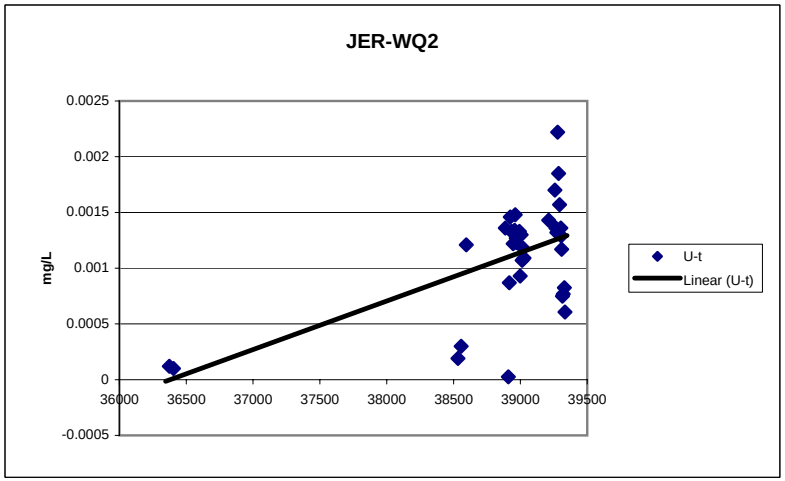
3.16.2 Temporal Variation of Total Uranium

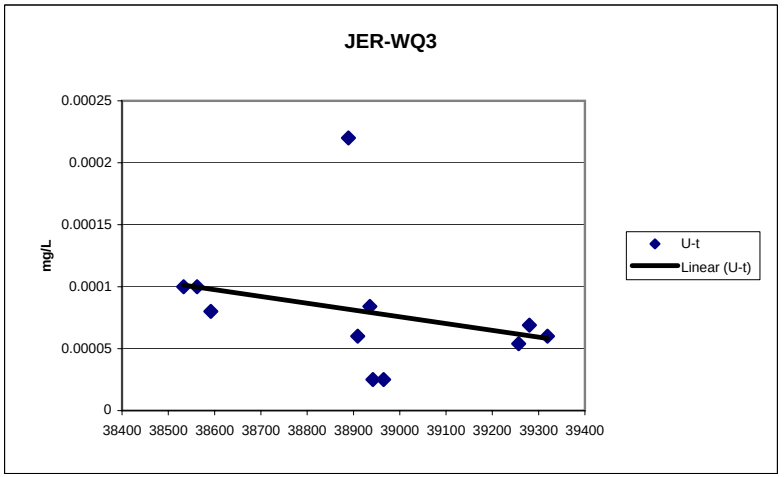
Figure 3-8 shows temporal variation of total uranium at the four stations that were above background (JER-WQ2, JER-WQ3, JER-WQ13 and JER-WQ12). All four sites show an increasing trend in total uranium concentration except Stream C3 at the mouth (JER-WQ3) where the trend is slightly down (in fact likely level). Variability in concentrations also increased markedly at stations with an historical database. The temporal trend shows that the uranium in Jericho host rock has an influence, albeit small, on the concentration of uranium in discharge. Wind blown dust off the waste rock dump also appears to be having a small influence on uranium concentrations in Lake C1 and Stream C1, but not other water bodies in the project area.

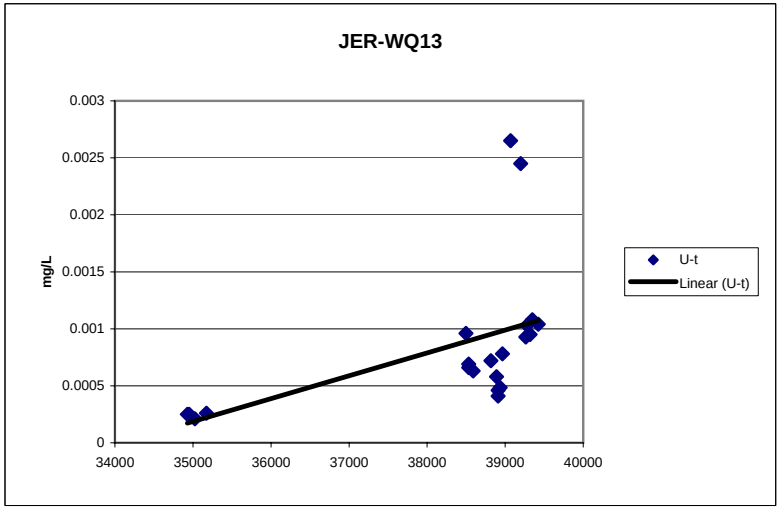
3.17 Total Zinc

3.17.1 Spatial Variation of Total Zinc

Table 3-15 lists spatial variation of total zinc. The mean concentration of total zinc increased somewhat at JER-WQ2 once discharge commenced. This was reflected in a similar increase in zinc concentration at the mouth of Stream C3. Total zinc concentrations also increased above background in Streams C1 and C4 but not in either Lakes C1 or C4. Other stations were at background concentrations. The mean total zinc discharge concentration at JER-WQ2 was 116 times lower than the maximum allowable discharge concentration and over seven times lower than the freshwater guide.







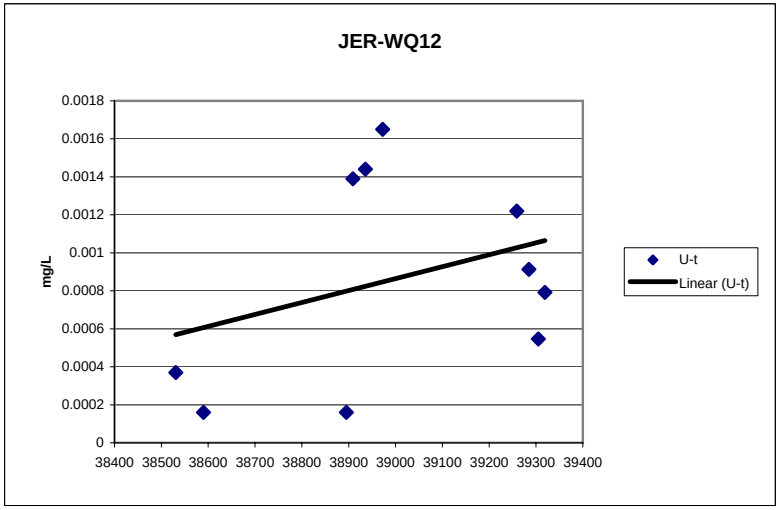


FIGURE 3-8 U-t TEMPORAL VARIATION

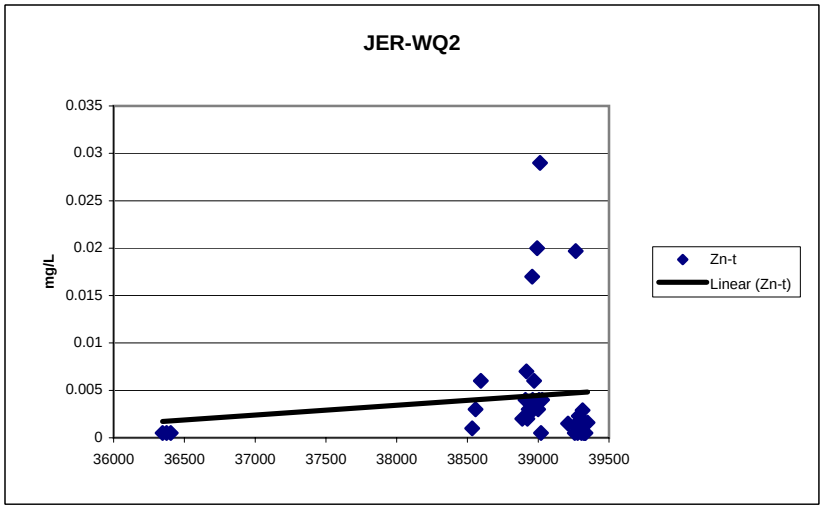
Table 3-15: Spatial Variation of Total Zinc

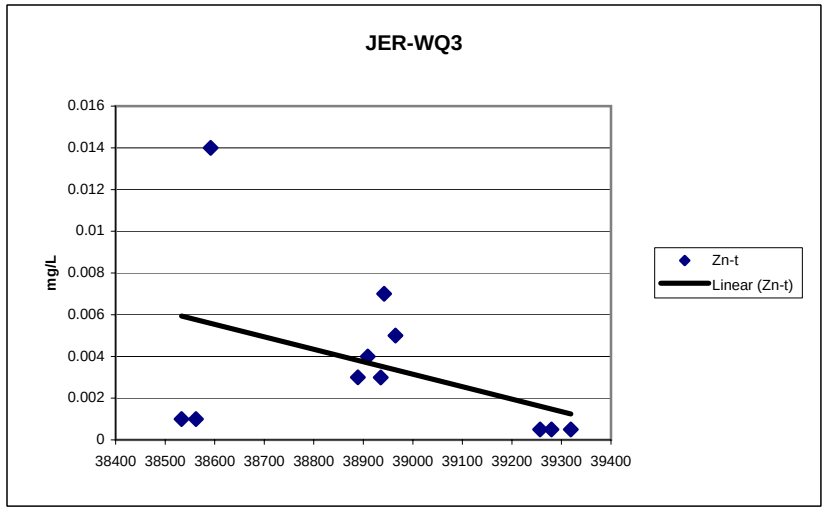
Location	SNP Stn	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Cigar Lake	JER-WQ11	28	<0.001	0.0017	0.0025	0.0026	0.0210	0.0038	1.5282	46%
Control Lake	JER-WQ10	14	<0.001	0.0011	0.0027	0.0030	0.0130	0.0035	1.3044	36%
Lake C3 S basin	JER-WQ04	18	<0.001	0.0012	0.0017	0.0020	0.0050	0.0015	0.8475	50%
Lake C3 Outlet	JER-WQ05	22	<0.001	0.0020	0.0025	0.0025	0.0081	0.0021	0.8264	41%
Carat Lake Centre	JER-WQ06	26	<0.001	0.0016	0.0024	0.0025	0.0190	0.0037	1.4946	62%
Carat Lake Water Intake	JER-WQ01	15	<0.001	0.0020	0.0038	0.0035	0.0190	0.0048	1.2614	20%
Carat Lake Outlet	JER-WQ07	26	<0.001	0.0020	0.0023	0.0029	0.0120	0.0025	1.0898	62%
Jericho Lake	JER-WQ08	28	<0.001	0.0010	0.0016	0.0025	0.0060	0.0014	0.8531	71%
Jericho River	JER-WQ09	14	<0.001	0.0016	0.0022	0.0023	0.0106	0.0025	1.1490	36%
PKCA West Dam	JER-WQ02	37	<0.001	0.0020	0.0043	0.0040	0.0290	0.0064	1.4929	30%
Stream C3 - mouth	JER-WQ03	11	<0.001	0.0030	0.0036	0.0045	0.0140	0.0041	1.1312	45%
Lake C1	JER-WQ13	21	<0.001	0.0017	0.0024	0.0025	0.0100	0.0024	0.9843	57%
Stream C1 - mouth	JER-WQ12	10	<0.001	0.0036	0.0039	0.0050	0.0070	0.0017	0.4412	10%
Lake C4	JER-WQ14	11	<0.001	0.0010	0.0020	0.0022	0.0080	0.0022	1.0794	55%
Stream C4	JER-WQ15	9	<0.001	0.0010	0.0056	0.0050	0.0350	0.0112	1.9909	56%
Stream C6 - control	JER-WQ21	3	<0.001	0.0005	0.0023	0.0032	0.0058	0.0031	1.3500	67%
Ash Lake	JER-WQ16	8	<0.001	0.0010	0.0015	0.0012	0.0057	0.0018	1.1678	50%
Key Lake	JER-WQ17	7	<0.001	0.0010	0.0012	0.0016	0.0030	0.0010	0.7895	57%
Lynne Lake	JER-WQ18	8	<0.001	0.0012	0.0017	0.0022	0.0050	0.0016	0.9221	50%

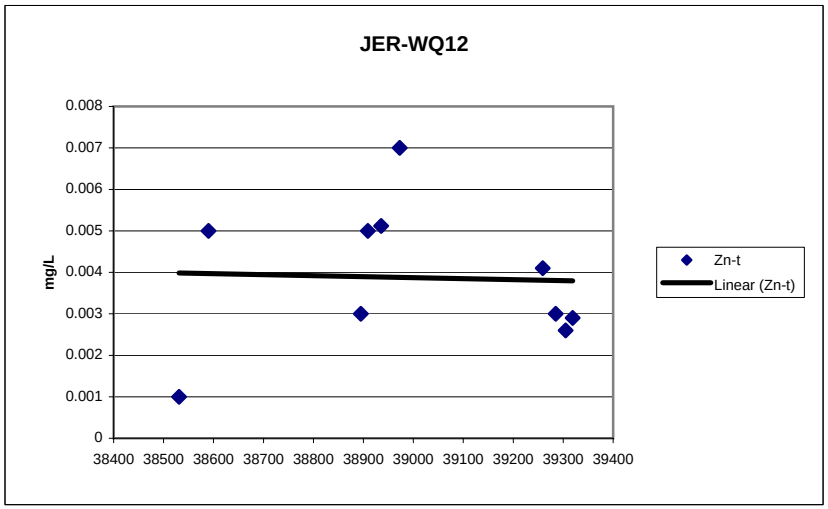
Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

3.17.2 Temporal Variation of Total Zinc

Figure 3-9 shows temporal variation for total zinc at stations where increases occurred after mine development. All stations figured showed an increase in zinc concentrations in 2006, but a reduction after that in 2007. Because only linear trends are shown, this is not apparent in the trend lines. The reason for the spike and drop is not apparent from the data or mine operations, as nothing was different in 2006 from 2007. However, the present zinc concentrations are not a concern at the mine.







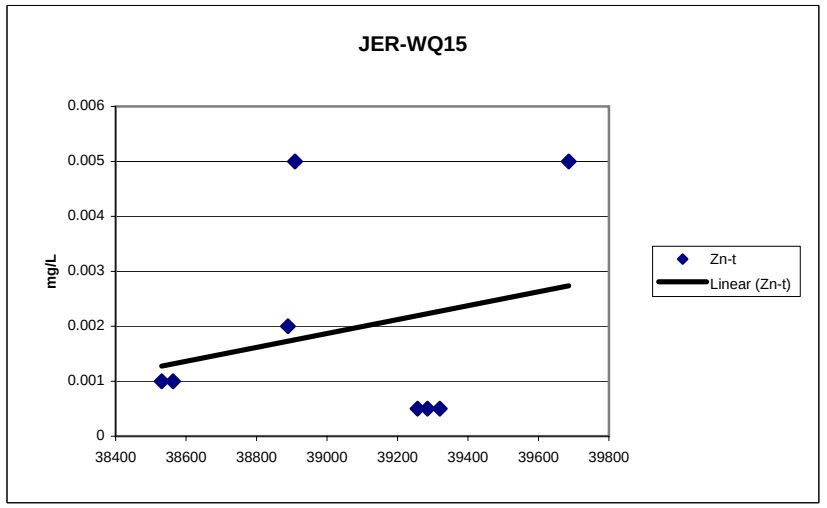


FIGURE 3-9 Zn TEMPORAL VARIATION

4.0 Pit Sump Water Quality

Tahera committed to monitor trends in pit sump water quality over the life of the mine to determine whether predictions of elevated copper and uranium in pit water when the pit overflows were correct. This section discusses results from commencement of open pit development through the end of 2007.

Table 4-1 lists the variation in key parameters. Loadings from the pit sump to the PKCA were small compared with the diamond plant and thus the discharge concentrations at JER-WQ2 were not influenced measurably by pit sump water additions to the PKCA. Water was always pumped to the slurry cell and not the polishing cell.

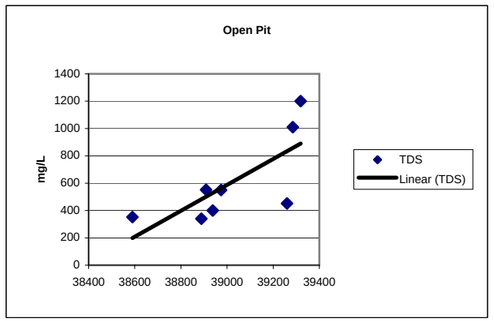
Table 4-1: Variation in Key Pit Sump Parameters

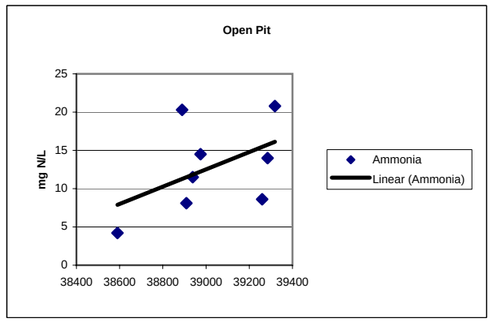
Parameter	PKCA Discharge	n	Min	Median	Mean	3rd Qrt	Max	SD	CV	%<MDL
Total Dissolved Solids	4000	8	340	501	607	667	1200	321	0.530	0
Ammonia	12	8	4.2	12.75	12.75	15.95	20.8	5.85	0.459	0
Nitrate	56	8	17.9	57.0	64.1	72.6	121	30.96	0.483	0
Total Chromium	0.17	8	0.0007	0.0024	0.0038	0.0045	0.0124	0.0038	1.000	0
Total Copper	0.04	8	0.0060	0.0148	0.0160	0.0225	0.0307	0.0091	0.567	0
Total Molybdenum	1.5	8	0.003	0.0161	0.0222	0.0274	0.0672	0.0208	0.937	0
Total Nickel	0.1	8	0.0056	0.0333	0.0331	0.0390	0.0768	0.0225	0.678	0
Total Uranium	1.0	8	0.0060	0.0613	0.0682	0.1225	0.1310	0.0530	0.778	0
Total Zinc	0.5	8	0.0020	0.0038	0.0066	0.0120	0.0150	0.0055	0.825	0

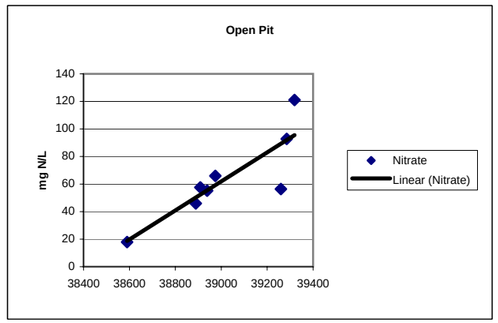
Min: minimum 3rd Qrt: third quartile Max: maximum CV: coefficient of variation (SD/mean) %<MDL: % less than method detection

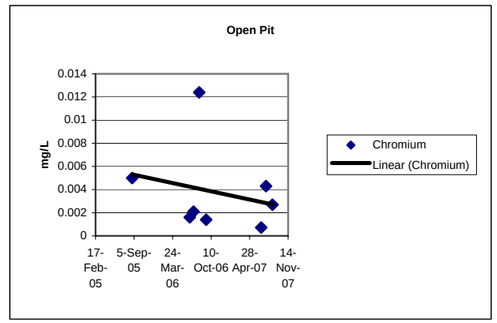
The mean concentrations of ammonia and nitrate were just above the PKCA maximum allowed discharge concentration. All other parameters were below, or well below, the maximum allowed discharge concentration. Of course, pit sump water was pumped to the PKCA and not released directly to the environment.

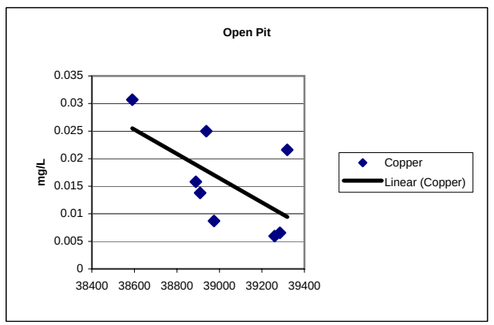
Temporal variation in the above parameters during open pit mining from 2005 at start of construction through the end of 2007 are shown in Figure 4-1. Total dissolved solids, ammonia, nitrate, molybdenum and nickel have increased since the start of mining; chromium, copper, uranium and zinc have decreased. The increases are explainable by the increase in the size of the pit and concomitant area for leaching to occur. The decreases may be a result of the decrease in concentration of those metals in ore and host rock as the pit deepened. Results tentatively suggest that copper and uranium may not be problematic at the time the pit overflows, but that additional confirmatory monitoring will be required to confirm trends. Other than TDS, ammonia and nitrate, none of the parameters were at concentrations of concern for direct release to the environment.

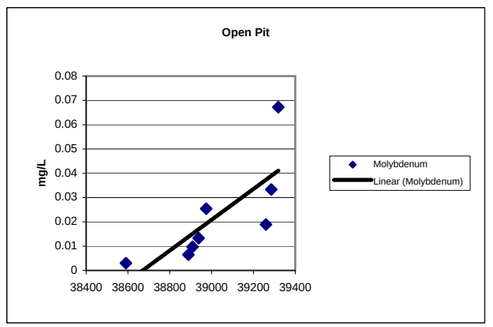


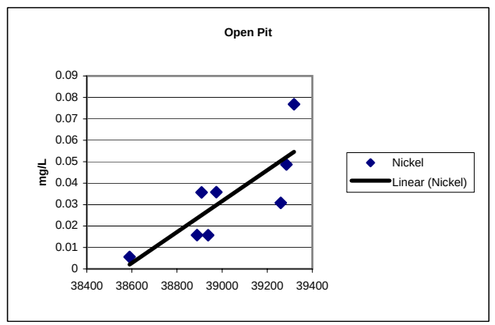


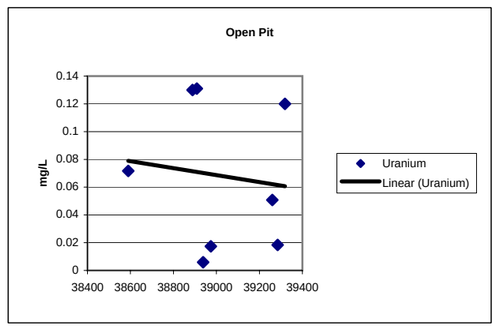












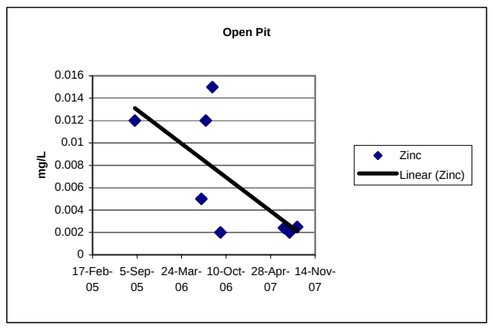


FIGURE 4-1 TEMPORAL VARIATION OF OPEN PIT KEY PARAMETERS

References

AMEC. 2004. Review of Total Dissolved Solids in Proposed Discharge from the Jericho Diamond Project. Attachment N5 of Tahera Diamond Corporation Water License Application, Appendix U.

Tahera Diamond Corporation. 2003. Jericho Final Environmental Impact Statement. Submitted to Nunavut Impact Review Board, January 2003.

Tahera Diamond Corporation. 2004. Water License Application submitted to Nunavut Water Board, August 2004.

APPENDIX A

Table 4.1 Provisional Discharge Criteria

Parameter mg/L, or specified	Carat Lake Background Conc. (mg/L)	Aquatic Thresholds (mg/L)	**Provisional Discharge Limits for Jericho based on 10:1 minimum dilutions (mg/L)**		Predicted PKCA Discharge Concentrations (mg/L)		Are the discharge limits acheivable?	Other Licences in the North (mg/L)						Comparison			Conclusions/Suggested Modifications
								Diavik		Recent Ekati		Snap Lake		Diavik	Ekati	Snap	
			grab	**avg**	Max Source Conc.	Avg Source Conc.		grab	avg	grab	avg	grab	avg				
pH	6.63		**6-9**	**6-9**	8.2	8.2	yes	6-9	6-9	6-9	6-9	6-9	6-9				Consistent with other licenses in the North
Total Dissolved Solids	11	400	**7780**	**3890**	1635	1074	yes	na	na	na	na	350	na	na	na	na	**Unknown potential for acute toxicity, therefore propose lower value of 4000 mg/L (grab) and 2000 mg/L (average). These would still be achievable.**
Total Suspended Solids	1.4		**25****	**15****	7	6.3	yes	25**	15**	25	15	14**	7**	same	same	higher	Consistent with other licenses in the North
Chloride - Cl	3.36	150	**2933**	**1466**	647	487	yes							na	na	na	**Potential for toxic effects above 1000 mg/L, therefore propose 1000 mg/L grab and 500 mg/L average**
Ammonia - N (total)	0.009	0.59	**12**	**6**	2.9	1.8	yes	4	2	4	2	20	na	higher	higher	lower	Value is midway between other sites and protective.
Nitrate - as N	0.18	3	**56**	**28**	7.4	5.0	yes					56	28	na	na	same	Consistent with Snap Lake, reasonable and achievable.
Nitrite - as N	0.001	0.25	**5.0**	**2.5**	0.23	0.16	yes	2	1	2	1	2	1	higher	higher	higher	Limits at other mines would still be achievable.
Phosphorus - P	0.0077		**0.4**	**0.2**	0.09	0.09	yes	0.4	0.2	0.4	0.2	0.086	0.043	same	same	higher	Consistent with other licenses in the North
Aluminum - Al	0.052	0.16	**2.2**	**1.1**	0.90	0.49	yes*	3	1.5	3	1.5	2	1	lower	lower	higher	**Although these values would be protective, for consistency with Ekati/Diavik Licenses, we propose a slightly more lenient value of 3 mg/L (grab), 1.5 mg/L (average) because the aluminum is most likely to be in particulate form and bound to silicates.**
Arsenic - As	0.00016	0.005	**0.1**	**0.05**	0.0021	0.0013	yes	0.1	0.050	0.1	0.05	0.04	0.02	same	same	higher	Should be easily achievable at these or lower Snap Lake values
Cadmium - Cd	0.00005	0.00017	**0.0024**	**0.0012**	0.0011	0.0008	yes*	0.003	0.0015	0.003	0.0015	0.002	0.001	lower	lower	higher	May be challenging to meet, but acceptable at these levels.
Chromium - Cr	0.0002	0.0089	**0.17**	**0.087**	0.0099	0.0047	yes	0.040	0.020	0.003	0.0015	0.04	0.02	higher	higher	higher	Should be achievable at these values, even for kimberlite particulates.
Copper - Cu	0.0020	0.004	**0.04**	**0.02**	0.021	0.020	yes*	0.040	0.020	0.040	0.020	0.020	0.010	same	same	higher	May be challenging to meet, but acceptable at these levels.
Lead - Pb	0.00005	0.001	**0.02**	**0.01**	0.0040	0.0038	yes	0.020	0.010	0.020	0.010	0.009	0.005	same	same	higher	Achievable, and consistent with Diavik and Ekati water licenses
Molybdenum - Mo	0.00005	0.073	**1.5**	**0.73**	0.14	0.075	yes	na	na	na	na	na	na	na	na	na	Achievable and reasonable.
Nickel - Ni	0.0005	0.025	**0.5**	**0.25**	0.062	0.042	yes	0.10	0.050	0.10	0.050	0.10	0.05	higher	higher	higher	Proposed values are achievable, reasonable and protective. Values in other licenses could be challenging to meet
Uranium - U	0.0002	0.02	**0.4**	**0.2**	0.68	0.12	No	na	na					na	na	na	**Concentrations only apply to human drinking water supplies that are used on a regular and sustained basis. Therefore the much higher dilutions in Carat Lake should be considered. At dilutions of 25, discharges could be 1 mg/L (grab) and 0.5 mg/L (average). These would be achievable, and would ensure a 2 to 4 times safety factor for the camp drinking water supply.**
Zinc - Zn	0.002	0.03	**0.56**	**0.28**	0.034	0.015	yes	0.02	0.01	0.02	0.01	0.02	0.01	higher	higher	higher	Proposed limit is protective and achievable, although a somewhat lower value could also be acceptable. However, values in the other northern licenses are below CCME guidelines, are overly protective, and could be difficult to achieve.

Notes: 1. Background concentrations are from the Baseline Summary Report in the EIS (Tahera 2000). However, the background chromium concentration was re-evaluated using data with appropriate detection limits

* Although these values would be acheivable, they may be challenging. Provision for amending these values following site specific studies should be considered

** These values are proposed for the operations period. Water licences for Diavik and Snap Lake included a provision for limits of 100 mg/L (grab) and 50 mg/L (average) TSS during the construction period. Similar consideration is requested for Jericho.

APPENDIX B

JER-WQ1

Sample ID	Units	PKCA Discharge Criteria	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1
Date Sampled			30-Jun-05	31-Jul-05	31-Aug-05	27-Jun-06	12-Jul-06	12-Jul-06	7-Aug-06	9-Aug-06	13-Aug-06	11-Sep-06	2-Jul-07	30-Jul-07	11-Aug-07	27-Aug-07	24-Sep-07
Time Sampled											Inspector Samples		09:00	08:30		06:45	07:00
Lab Sample ID						Jun-02	Jun-00	Jun-99	L420594-14	Jun-11	Jun-27	06-11252	L525299-5	L535988-3	L543213-3	L546749-17	L557895-13
Hardness (as CaCO3)	mg/L										<6		5.74	7.5	5.43	6.05	5.45
Conductivity	uS/cm										17		-	-	15.2	-	-
pH	pH	6.0 - 8.8									6.78		-	-	6.82	-	-
Total Dissolved Solids	mg/L	4000									15		-	-	<15	-	-
Total Suspended Solids	mg/L	25	<2	<2	<2	<2	<2	<2		<2		<2	28.2	<3	<3	<3	<3
Turbidity	NTU				2	2	2	2		1	1	1	-	-	0.55	-	-
Ammonia as N	mg/L	12							0.015		0.02		-	-	0.0076	-	-
Acidity (as CaCO3)	mg/L		4								2		-	-	1.3	-	-
Alkalinity, Bicarbonate (as CaCO3)	mg/L										7		-	-	4.6	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L										<1		-	-	<1.0	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L										<1		-	-	<1.0	-	-
Alkalinity, Total (as CaCO3)	mg/L										6		-	-	4.6	-	-
Chloride (Cl)	mg/L	1000									0.4		-	-	<0.5	-	-
Fjuoride (F)	mg/L										0.06						
Sulfate (SO4)	mg/L										1.6		-	-	1.10	-	-
Nitrate (as N)	mg/L	56									0.08		-	-	0.0250	-	-
Nitrite (as N)	mg/L	5.0									<0.05		-	-	<0.001	-	-
Total Kjeldahl Nitrogen	mg N/L												-	-		-	-
Ortho Phosphate as P	mg/L										<0.20		-	-	<0.0010	-	-
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005	<0.005								-	-	<0.0020	-	-
Total Phosphate as P	mg/L	0.4	<0.05	0.062	0.089								-	-	0.0034	-	-
Aluminum (Al)-Total	mg/L	3.0	0.055	0.021	0.06	0.0342	0.0278	0.0301	0.0203	0.0262	0.0208	0.0210	0.0305	0.0211	0.0170	0.0191	0.0135
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.0000054	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000167	<0.0002	<0.0002	<0.0002	0.00019	0.00017	0.00017	0.00016	0.00017
Barium (Ba)-Total	mg/L		<0.005	<0.005	<0.005	0.00201	0.00168	0.00167	0.00163	0.00152	0.00188	0.00187	0.00209	0.00198	0.00180	0.00172	0.00162
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.0000032	<0.0001	<0.0001	0.0002	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L												<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.001	<0.001	<0.001	0.0808	<0.001	<0.001	0.002	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	0.0000038	<0.00002	<0.00002	0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.14	1.19	1.38	1.11	0.88	0.86	1.03	1.42	1.14	1.04	1.34	1.93	1.18	1.38	1.22
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	<0.0005	0.0013	0.0016	0.000138	0.0019	0.0015	0.0043	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.0000195	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	<0.001	0.0012	0.0029	<0.001	<0.001	<0.001	0.00146	0.0021	<0.001	<0.001	0.00145	0.00325	0.00087	0.00158	0.00117
Iron (Fe)-Total	mg/L		0.11	0.05	0.07	0.13	<0.10	<0.10	0.0129	<0.10	<0.10	<0.10	0.041	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.0001	0.0001	0.0004	<0.00005	<0.00005	<0.00005	0.0000132	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000101
Lithium (Li)-Total	mg/L						<0.005	<0.005	0.00146	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.59	0.58	0.61	<0.50	0.22	0.21	0.459	0.61	0.56	0.54	0.593	0.622	0.606	0.646	0.595
Manganese (Mn)-Total	mg/L		0.009	0.008	0.004	<0.010	<0.010	<0.010	0.00202	<0.010	<0.01	<0.010	0.0102	0.00223	0.00324	0.00185	0.00152
Mercury (Hg)-Total	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	0.00005	<0.00005	<0.00005	0.0000235	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	<0.0006	0.0002	0.0003	0.0003	0.000294	0.0002	0.0007	0.0003	0.00054	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.285	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50

JER-WQ1

Sample ID	Units	PKCA Discharge Criteria	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1
Date Sampled			30-Jun-05	31-Jul-05	31-Aug-05	27-Jun-06	12-Jul-06	12-Jul-06	7-Aug-06	9-Aug-06	13-Aug-06	11-Sep-06	2-Jul-07	30-Jul-07	11-Aug-07	27-Aug-07	24-Sep-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.26	0.19	0.26	0.15	0.12	0.12	0.217	0.26	0.20	0.16	0.242	0.248	0.169	0.182	0.169
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.000007	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.8	0.6	0.8	<0.5	<0.5	<0.5	0.44	<0.5	<0.5	<0.5	0.54	0.55	0.53	0.54	0.55
Strontium (Sr)-Total	mg/L				0.0055	0.0044	0.0046	0.0050	0.00458	0.0046	0.0044	0.0052	0.00558	0.0100	0.00536	0.00546	0.00526
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000009	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	<0.0001	0.0000336	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L						<0.0005	<0.0005	0.000426	<0.0005	<0.0005	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00016	0.00013	0.00018	0.00015	0.00010	0.00012	0.000147	0.00019	0.00014	0.00014	0.000309	0.000255	0.000148	0.000180	0.000143
Vanadium (V)-Total	mg/L		0.0002	0.0002	0.0004	<0.0005	<0.0005	<0.0005	0.0000706	0.0015	<0.0005	0.0028	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	0.019	0.002	0.003	0.004	0.00465	0.002	0.002	0.002	0.0023	0.0104	0.0011	<0.001	0.0025
Aluminum (Al)-Dissolved	mg/L	2.0	0.014	0.011	0.009	0.016	0.018	0.019	0.0193	0.019		0.013	0.0108	<0.01		<0.01	0.0084
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.0000053	<0.00005		<0.00005	<0.00010	<0.00010		<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	<0.0001	0.0002	<0.0001	0.0002	0.0002	0.000163	0.0002		<0.0001	0.00016	0.00019		0.00016	0.00016
Barium (Ba)-Dissolved	mg/L		0.004	<0.003	<0.003	<0.00005	0.00213	0.00219	0.00163	0.00164		0.00215	0.00189	0.00180		0.00167	0.00156
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0000032	<0.0001		<0.0001	<0.00050	<0.00050		<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L												<0.00050	<0.00050		<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		0.008	<0.004	<0.004	<0.001	0.001	0.001	0.0681	0.001		0.002	<0.010	<0.010		<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000023	<0.00002		0.00002	<0.000050	<0.000050		<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.2	1.12	1.39	1.13	1.06	1.02	1.03	1.35	0.7	0.45	1.31	1.93		1.37	1.22
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	0.000105	0.0008		0.0011	<0.00050	<0.00050		<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	0.0000181	0.00004		<0.00002	<0.00010	<0.00010		<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0037	0.0034	0.0026	<0.0001	0.0027	0.0053	0.00139	0.0022		<0.0001	0.00115	0.00206		0.00135	0.00103
Iron (Fe)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.10	<0.10	<0.10	0.0101	<0.10		<0.10	<0.030	<0.030		<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.00005	0.00009	0.0000107	<0.00005		0.00008	<0.000050	<0.000050		<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L						<0.0010	<0.0010	0.00121	<0.0010		<0.0010	<0.0050	<0.0050		<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.56	0.52	<0.50	0.55	0.44	0.44	0.445	0.51	0.3	0.38	0.599	0.653		0.636	0.586
Manganese (Mn)-Dissolved	mg/L		0.003	0.002	<0.001	<0.010	<0.010	<0.010	0.00201	<0.010		<0.010	0.000269	<0.000050		0.000051	0.000062
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005		<0.00005	<0.000050	<0.000050		<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.00005	0.00007	0.00012	0.0000228	<0.00005		0.00008	<0.000050	<0.000050		<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0003	0.0003	0.0006	<0.00005	0.00040	0.00034	0.000277	0.00025		0.00026	<0.00050	<0.00050		<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.283	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0006	<0.0001	<0.0006		<0.0006	<0.0010	<0.0010		<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.22	0.16	0.21	0.14	0.13	0.12	0.212	0.26		0.14	0.195	0.248		0.158	0.143
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000049	<0.00005		<0.00005	<0.000010	<0.000010		<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.44	<0.5	<0.5	<0.5	0.53	0.55		0.54	0.55
Strontium (Sr)-Dissolved	mg/L				0.0064	0.0043	0.0065	0.0060	0.00453	0.0048		0.0051	0.00543	0.00827		0.00544	0.00526
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	<0.00005	0.0000009	<0.00005		<0.00005	<0.00010	<0.00010		<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.0001	<0.00003	<0.0001		<0.0001	<0.00010	<0.00010		<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L						<0.0005	<0.0005	0.000367	<0.0005		<0.0005	<0.010	<0.010		<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00014	0.00009	0.00012	0.00013	0.00016	0.00018	0.000145	0.00019		0.00011	0.000272	0.000202		0.000146	0.000116
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	0.0003	0.0002	0.0000665	0.0005		0.0005	<0.0010	<0.0010		<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.003	<0.002	0.021	<0.001	0.004	0.007	0.0039	0.002		0.002	<0.0010	0.0076		<0.0010	<0.0010
Oil and Grease	mg/L	5.0											-	-	<1.0	-	-
Total Inorganic Carbon	mg/L										1.1		-	-	0.63	-	-
Total Organic Carbon	mg/L										3.0		-	-	2.80	-	-
BOD	mg/L	25									<2		-	-		<2	-

JER-WQ1

Sample ID	Units	PKCA Discharge Criteria	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1	JER-WQ1
Date Sampled			30-Jun-05	31-Jul-05	31-Aug-05	27-Jun-06	12-Jul-06	12-Jul-06	7-Aug-06	9-Aug-06	13-Aug-06	11-Sep-06	2-Jul-07	30-Jul-07	11-Aug-07	27-Aug-07	24-Sep-07
Fecal Coleform	CFU/100 mL	20	<1	<1	<1	<1	<1	<1		2	<1	<1	<1	<1		<1	<1
Field Water Temperature	deg C					5.17		12.39	15.4	15.22	14.33	9.87	5.14	11.84		8.58	3.95
Field Conductivity	uS/cm					12		11.3	8	13	12	9	19	20		13	13
Field DO	%												143.2	115		93.7	98.4
Field DO	mg/L					14.19		10.56		10.42	10.79	10.80	18.6	12.38		10.92	12.93
Field pH						6.45		5.86	7.9	5.3	5.63	5.52	7.15	7.54		7.75	7.19
Field ORP	mV					256.30		280.20		495.70	361.20	292.00	165.8	218.7		259.4	217.4
Ion Balance	Ratio										0.50						

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	CL-25	CL-25	CL-25	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			5-Jul-99	2-Aug-99	1-Sep-99	30-Jun-05	24-Jul-05	31-Aug-05	19-Jun-06	12-Jul-06	19-Jul-06	26-Jul-06	4-Aug-06	17-Aug-06	28-Aug-06	1-Sep-06	8-Sep-06
Time Sampled															No Nutrients Preservatives		Sample lid for the routine bottle was broken upon receipt at the lab. Therefore no routine parameters are available.
Lab Sample ID									Jun-93	Jun-01	Jun-28	Jun-09	Jun-25	06-10110	06-10468	06-10791	06-11251
Hardness (as CaCO3)	mg/L		5.85	5.96	6.02		6.1	7.2	30.2	36.9	39.6	35.8	46.5	57.7	59.4	57.9	
Conductivity	uS/cm		12	13	25	250	0.02	0.025	116	122	136	123	146	161	164	161	
pH	pH	6.0 - 8.8	6.44	6.79	7.93	5.75	6.69	6.77	7.64	7.63	7.53	7.59	7.65	7.16	7.71	7.46	
Total Dissolved Solids	mg/L	4000	11	11	12	<15.0	<15.0	<15.0	72	76	100	104	96	92	116	108	
Total Suspended Solids	mg/L	25	<3	<3	<3	<2	10	<2	4	4	<2	2	3	<2	<2	<2	
Turbidity	NTU					2	3	1	6	4	3	2	2	2	2	2	
Ammonia as N	mg/L	12	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	1.46	0.82	0.35	0.26	0.05	0.18	0.03	0.03	0.03
Acidity (as CaCO3)	mg/L					3	3	3	3	7	2	2	3	4	3	3	
Alkalinity, Bicarbonate (as CaCO3)	mg/L					12	10	15	39	40	40	38	41	44	47	50	
Alkalinity, Carbonate (as CaCO3)	mg/L				<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	
Alkalinity, Hydroxide (as CaCO3)	mg/L				<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	
Alkalinity, Total (as CaCO3)	mg/L		5	6	6	10	8	12	32	33	32	31	34	36	39	41	
Chloride (Cl)	mg/L	1000	<0.5	<0.5	0.6	0.7	0.9	1.2	3.2	4.8	5.3	5.5	5.8	6.2	6.9	7.2	
Fjuoride (F)	mg/L					0.04	0.06	0.02	0.08	0.09	0.09	0.08	0.10	0.12	0.10	0.10	
Sulfate (SO4)	mg/L		1	1	2	3.9	<0.5	0.5	3.6	5.1	6.2	5.4	7.2	8.4	8.0	8.3	
Nitrate (as N)	mg/L	56	0.008	<0.005	0.005	0.07	<0.05	0.11	1.62	3.53	4.20	3.90	5.13	5.83	5.95	6.02	
Nitrite (as N)	mg/L	5.0	0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.05	0.19	0.11	<0.05	0.09	<0.05	<0.05	<0.05	
Total Kjeldahl Nitrogen	mg N/L												0.7	0.6	0.7	0.6	
Ortho Phosphate as P	mg/L				<0.2	<0.2		<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Total Dissolved Phosphate As P	mg/L		0.003	0.003	<0.002	<0.005	<0.005	<0.005									
Total Phosphate as P	mg/L	0.4	0.007	0.004	0.003	0.02	0.02	0.055									
Aluminum (Al)-Total	mg/L	3.0	0.016	0.016	0.011	0.026	0.08	0.027	0.0889	0.0577	0.0200	0.0246	0.0224	0.0113	0.0376	0.0105	0.0143
Antimony (Sb)-Total	mg/L		<0.00005	<0.00005	<0.00005	0.0004	<0.0001	<0.0001	0.00033	0.00024	<0.00005	0.00025	0.00010	0.00064	0.00105	0.00124	0.00130
Arsenic (As)-Total	mg/L	0.10	0.0002	0.0001	0.0001	<0.0004	0.0004	<0.0004	0.0005	0.0006	<0.0002	<0.0002	0.0050	0.0005	0.0004	0.0009	<0.0002
Barium (Ba)-Total	mg/L		0.00145	0.00129	0.00101	<0.005	<0.005	<0.005	0.0126	0.0158	0.00010	0.00943	0.0215	0.0259	0.0280	0.0273	0.0372
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi)-Total	mg/L		<0.0005	<0.0005	<0.0005												
Boron (B)-Total	mg/L		<0.001	<0.001	<0.001	<0.010	<0.010	<0.010	0.009	0.012	0.005	0.009	0.015	0.020	0.017	0.018	0.016
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.00006	<0.00002	<0.00002
Calcium (Ca)-Total	mg/L		1.24	1.25	1.27	1.15	1.31	1.79	5.91	7.23	9.14	8.55	10.9	12.8	12.6	12.9	13.2
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0005	<0.0005	<0.0009	<0.0009	<0.0009	0.0010	0.0016	0.0008	0.0017	0.0033	0.0042	0.0066	0.0047	0.0102
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	0.00010	<0.00005	0.00011	0.00005	0.00016	0.00014	0.00015	0.00008
Copper (Cu)-Total	mg/L	0.04	0.0007	0.0007	0.0006	<0.001	0.0048	0.002	<0.001	0.0024	<0.001	<0.001	<0.001	0.0025	0.0057	0.0039	<0.001
Iron (Fe)-Total	mg/L		<0.03	<0.03	<0.03	0.02	0.15	0.03	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10
Lead (Pb)-Total	mg/L	0.02	0.00015	<0.00005	<0.00005	<0.0001	0.0003	<0.0001	0.00016	0.00012	<0.00005	0.00010	0.00005	0.00009	0.00040	0.00025	0.00008

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	CL-25	CL-25	CL-25	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			5-Jul-99	2-Aug-99	1-Sep-99	30-Jun-05	24-Jul-05	31-Aug-05	19-Jun-06	12-Jul-06	19-Jul-06	26-Jul-06	4-Aug-06	17-Aug-06	28-Aug-06	1-Sep-06	8-Sep-06
Lithium (Li)-Total	mg/L		<0.001	<0.001	<0.001					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (Mg)-Total	mg/L		0.7	0.7	0.7	0.61	0.7	0.81	3.32	3.55	4.56	4.28	5.56	5.90	6.43	6.62	7.16
Manganese (Mn)-Total	mg/L		0.00367	0.00152	0.00238	0.006	<0.01	0.003	0.02	<0.01	0.02	<0.01	0.02	0.02	0.03	0.02	0.014
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.0002	<0.000200	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	0.00155	0.00145	<0.00005	0.00144	0.00199	0.00225	0.00263	0.00273	0.00352
Nickel (Ni)-Total	mg/L	0.10	0.0001	0.0001	0.0001	<0.0006	<0.0006	<0.0006	0.0021	0.0019	<0.0001	0.0020	0.0022	0.0024	0.0025	0.0023	0.0024
Potassium (K)-Total	mg/L		<2	<2	<2	<0.5	<0.5	<0.5	2.5	2.5	3.0	2.7	3.6	3.5	3.8	3.9	4.1
Selenium (Se)-Total	mg/L		<0.001	<0.001	<0.001	<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	0.0020	0.0022
Silicon (Si)-Total	mg/L		0.32	0.21	0.22	0.18	0.2	0.16	1.24	1.14	1.29	1.02	1.23	1.17	1.25	1.06	1.11
Silver (Ag)-Total	mg/L		<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0019	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium (Na)-Total	mg/L		<2	<2	<2	1	1.3	1.5	4.7	4.7	5.6	9.1	6.2	5.0	5.0	5.3	5.6
Strontium (Sr)-Total	mg/L		0.0038	0.0039	0.0037			0.0049	0.0522	0.0638	<0.0005	0.0504	0.0826	0.0936	0.105	0.111	0.129
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin (Sn)-Total	mg/L		<0.0001	<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	0.0003	<0.0001
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01					0.0009	0.0045	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006
Uranium (U)-Total	mg/L	1.0			0.00012	0.0001	0.00019	0.0003	0.00121	0.00136	<0.00005	0.00087	0.00146	0.00133	0.00122	0.00134	0.00148
Vanadium (V)-Total	mg/L		<0.001	<0.001	<0.001	<0.0001	0.0004	0.0004	0.0007	<0.0005	<0.0005	0.0011	0.0012	0.0016	0.0019	0.0019	0.0042
Zinc (Zn)-Total	mg/L	0.50	<0.001	<0.001	<0.001	<0.002	0.003	0.006	0.002	0.004	0.007	0.002	0.003	0.003	0.017	0.004	0.003
Aluminum (Al)-Dissolved	mg/L	2.0	0.012	0.011	0.007	0.013	0.013	0.006	0.071	0.013	<0.002	0.016	0.005	0.009	0.008	0.003	
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	0.0003	0.00025	<0.00005	0.00027	<0.00005	0.00024	0.00033	0.00048	0.00045
Arsenic (As)-Dissolved	mg/L		0.0001	0.0001	0.0001	<0.0001	0.0001	0.0002	0.0007	0.0006	<0.0001	0.0004	0.0002	0.0002	0.0005	0.0008	<0.0001
Barium (Ba)-Dissolved	mg/L		0.0014	0.00128	0.00099	<0.003	<0.003	<0.003	0.0144	0.0261	<0.00005	0.00823	0.0198	0.0277	0.0283	0.0241	0.0358
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005												
Boron (B)-Dissolved	mg/L		<0.001	<0.001	<0.001	0.006	<0.004	<0.004	0.009	0.012	<0.001	0.010	0.016	0.022	0.016	0.012	0.017
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Calcium (Ca)-Dissolved	mg/L		1.23	1.2	1.23	1.26	1.4	1.79	6.1	8	8.7	7.4	10.2	12.8	13	12.7	11.4
Chromium (Cr)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	0.0006	<0.0003	<0.0003	0.0019	0.0013	0.0041	0.0062	0.0041	0.0073
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.00011	0.00009	<0.00002	0.00015	0.00003	0.00012	0.00017	0.00010	0.00010
Copper (Cu)-Dissolved	mg/L		0.0006	0.0006	0.0006	0.0061	0.0044	0.0027	0.0012	0.0049	<0.0001	0.0017	<0.0001	0.0026	0.0064	0.0018	<0.0001
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.01	0.12	<0.01	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L		0.00014	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	0.00008	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	0.00012	0.00014	0.00013
Lithium (Li)-Dissolved	mg/L		<0.001	<0.001	<0.001					0.0012	0.0010	<0.0010	0.0013	0.0016	0.0015	0.0019	0.0014
Magnesium (Mg)-Dissolved	mg/L		0.7	0.7	0.7	0.6	0.7	0.66	3.6	4.1	4.3	4.2	5.1	6.3	6.6	6.4	6.60
Manganese (Mn)-Dissolved	mg/L		0.00287	0.00138	0.00113	0.001	0.002	0.001	<0.010	<0.010	<0.010	<0.010	<0.010	0.019	0.019	0.015	<0.010
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.0002	<0.000200	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum (Mo)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.0003	<0.0003	<0.0003	0.00149	0.00165	<0.00005	0.00150	0.00196	0.00243	0.00208	<0.00005	0.00249
Nickel (Ni)-Dissolved	mg/L		0.0002	0.0001	<0.0001	0.0004	<0.0001	0.0003	0.00204	0.00182	<0.00005	0.00146	0.00156	0.00180	0.00191	0.00172	0.00196
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<0.5	<0.5	0.6	3.1	2.7	2.7	3.0	3.5	3.7	3.8	4.1	3.0
Selenium (Se)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon (Si)-Dissolved	mg/L		0.35	0.2	0.22	0.18	0.21	0.12	1.44	1.13	1.19	1.04	0.99	1.20	1.16	1.03	1.09
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	0.8	1.4	0.7	5.4	4.9	4.5	5.8	5.5	5.4	5.1	5.3	5.2
Strontium (Sr)-Dissolved	mg/L		0.0037	0.0038	0.0037			0.0062	0.0572	0.0744	<0.0001	0.0457	0.0853	0.0959	0.110	0.0895	0.113
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005
Tin (Sn)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Uranium (U)-Dissolved	mg/L				0.0001	0.0001	0.00013	0.00021	0.00102	0.00123	<0.00005	0.00068	0.00095	0.00139	0.00132	0.00108	0.00112

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	CL-25	CL-25	CL-25	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			5-Jul-99	2-Aug-99	1-Sep-99	30-Jun-05	24-Jul-05	31-Aug-05	19-Jun-06	12-Jul-06	19-Jul-06	26-Jul-06	4-Aug-06	17-Aug-06	28-Aug-06	1-Sep-06	8-Sep-06
Vanadium (V)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.0013	0.0006	<0.0001	0.0013	0.0020	0.0014	0.0012	0.0011	0.0027
Zinc (Zn)-Dissolved	mg/L		<0.001	0.001	<0.001	0.006	<0.002	0.007	<0.001	0.008	<0.001	<0.001	<0.001	0.001	0.001	0.001	0.003
Oil and Grease	mg/L	5.0					0.2		0.1	0.2			<0.1				
Total Inorganic Carbon	mg/L					2	2	4	5.2	5.3	4.2	3.9	4.6	8.9	8.8	9.5	
Total Organic Carbon	mg/L		3	3.7	2.4	2	3	4	3.6	3.9	3.6	3.8	3.6	4.2	3.9	4.0	
BOD	mg/L	25			<2	<2		<2	<2	3			<2				
Fecal Coleform	CFU/100 mL	20			<1	<1		<1	<1	<1			<1				
Field Water Temperature	deg C								13.84	14.17	14.10	12.98		13.24	11.02	9.58	9.13
Field Conductivity	uS/cm								119	121	121.3	117		159	167	171	135
Field DO	%																
Field DO	mg/L								7.98	8.52	10.55	12.09		10.62	9.37	12.36	12.22
Field pH									7.24	6.63	6.17	7.09		6.9	6.04	6.52	7.27
Field ORP	mV								175.40	265.40	457.00	181.70		215.00	519.00	363.30	396.10
Ion Balance	Ratio						0.98	0.74	1	0.87	0.85	0.90	0.92	0.99	0.96	0.92	

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	WQ-02	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			11-Sep-06	2-Oct-06	9-Oct-06	16-Oct-06	23-Oct-06	30-Oct-06	6-Nov-06	9-May-07	25-Jun-07	2-Jul-07	9-Jul-07	15-Jul-07	23-Jul-07	30-Jul-07	8-Aug-07	11-Aug-07
Time Sampled										10:00	09:00	09:30	07:00	09:00	08:40	08:50	07:00	00:00
Lab Sample ID			06-11255	06-12305	06-12517	06-12783	06-13328	06-13909	06-14152	L504848-1	L522053-4	L525299-6	L528110-1	L530246-3	L534134-8	L535988-4	L539594-1	L543213-2
Hardness (as CaCO3)	mg/L		58.6	63.3	68.9	69.2	72.7	77.6	78.3	95	55.7	57.6	62.3	61.3	96.3	96.4	89	81.8
Conductivity	uS/cm		176	197	206	213	212	222	228	288	173	171	187	192	298	297	293	289
pH	pH	6.0 - 8.8	7.73	7.75	7.63	7.39	7.44	7.33	7.50	7.58	7.58	7.68	7.81	7.71	7.82	7.87	7.88	7.82
Total Dissolved Solids	mg/L	4000	120	116	112	136	128	136	160	174	111	109	120	115	214	214	220	199
Total Suspended Solids	mg/L	25	2	<2	<2	11	2	<2	<2	<3	<3	8.2	<3	<3	<3	<3	<3	<3
Turbidity	NTU		2	2	2	18	2	2	2	1.49	3.03	4.03	1.40	0.49	0.68	0.69	0.70	0.82
Ammonia as N	mg/L	12	0.02	0.02	0.01	0.13	0.17	0.24	0.24	0.958	0.211	0.153	0.116	0.136	0.0076	0.181	0.113	0.102
Acidity (as CaCO3)	mg/L		4	3	4	2	2	<1	4	3.4	2.5	4.4	<1.0	1.4	1.6	1.1	1.5	<1.0
Alkalinity, Bicarbonate (as CaCO3)	mg/L		50	54	55	44	56	57	62	54.9	35.6	35.7	35.4	36.1	38.9	37.8	34.8	32.8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		41	44	45	36	46	47	50	54.9	35.6	35.7	35.4	36.1	38.9	37.8	34.8	32.8
Chloride (Cl)	mg/L	1000	7.2	7.2	8.8	9.0	9.4	9.2	9.8	14.4	7.48	6.88	7.11	7.42	11.6	11.7	11.7	13.3
Fjuoride (F)	mg/L		0.11	0.13	0.13	0.15	0.14	0.13	0.15									
Sulfate (SO4)	mg/L		8.5	8.9	10.0	10.6	11.3	11	10.6	19.9	12.7	12.0	12.0	12.9	20.8	20.5	21.5	21.8
Nitrate (as N)	mg/L	56	7.40	6.98	8.29	7.69	7.84	7.92	8.47	12.1	6.95	7.61	7.80	8.17	16.2	16.2	16.2	15.6
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.0899	0.0429	0.0627	0.0771	0.0773	0.156	0.158	0.134	0.120
Total Kjeldahl Nitrogen	mg N/L									-	-	-	-	-	-	-	-	-
Ortho Phosphate as P	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.0068	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L									0.0097	0.0030	0.0035	0.0031	0.0028	0.030	<0.0020	0.0027	0.0021
Total Phosphate as P	mg/L	0.4								0.0169	0.0148	0.0171	0.0106	0.0060	0.0058	0.0044	0.0153	0.0141
Aluminum (Al)-Total	mg/L	3.0	0.0160	0.0226	0.0181	0.328	0.0338	0.0288	0.0065	0.0213	0.0461	0.0727	0.0238	0.0152	0.0159	0.0101	0.0169	0.0203
Antimony (Sb)-Total	mg/L		0.00021	<0.00005	0.00032	0.00030	0.00055	0.00030	0.00033	0.00048	0.00030	0.00033	0.00031	0.00033	0.00046	0.00043	0.00044	0.00047
Arsenic (As)-Total	mg/L	0.10	<0.0002	0.0007	0.0004	0.0006	0.0006	0.0004	0.0006	0.00058	0.00033	0.00041	0.00041	0.00043	0.00051	0.00047	0.00045	0.00047
Barium (Ba)-Total	mg/L		0.0362	0.0418	0.0416	0.0359	0.0457	0.0388	0.0440	0.0653	0.0354	0.0365	0.0334	0.0324	0.0575	0.0550	0.0507	0.0543
Beryllium (Be)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L									<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		0.020	0.022	0.023	0.023	0.025	0.024	0.025	0.062	0.027	0.027	0.023	0.028	0.036	0.034	0.033	0.032
Cadmium (Cd)-Total	mg/L	0.0024	0.00002	0.00003	<0.00002	<0.00002	0.00007	<0.00002	0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		13.4	14.3	14	13.9	14.7	14.8	15.5	20.1	11.2	13.0	11.6	12.3	20.0	19.5	19.2	18.3
Chromium (Cr)-Total	mg/L	0.170	0.0091	0.0006	0.0008	<0.0005	0.0020	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		0.00009	0.00035	0.00015	0.00027	0.00019	0.00014	0.00008	0.00018	0.00016	0.00021	0.00013	0.00013	0.00021	0.00018	0.00017	0.00018
Copper (Cu)-Total	mg/L	0.04	<0.001	0.0042	0.0025	0.0025	0.0050	0.0022	0.0021	0.00224	0.00171	0.00290	0.00188	0.00205	0.00225	0.00174	0.00162	0.00141
Iron (Fe)-Total	mg/L		<0.10	<0.10	0.10	0.31	<0.10	<0.10	<0.10	0.050	0.067	0.100	0.059	0.034	0.034	<0.030	<0.030	0.037
Lead (Pb)-Total	mg/L	0.02	0.00011	0.00072	0.00005	0.00016	0.00062	<0.00005	0.00012	<0.00005	0.000070	0.000163	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000058

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	WQ-02	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			11-Sep-06	2-Oct-06	9-Oct-06	16-Oct-06	23-Oct-06	30-Oct-06	6-Nov-06	9-May-07	25-Jun-07	2-Jul-07	9-Jul-07	15-Jul-07	23-Jul-07	30-Jul-07	8-Aug-07	11-Aug-07
Lithium (Li)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		7.40	8.45	8.43	8.45	8.77	8.89	9.30	11.1	6.69	6.81	6.94	7.19	11.0	9.87	9.17	8.77
Manganese (Mn)-Total	mg/L		0.01	0.06	0.02	0.015	0.02	0.02	<0.01	0.0669	0.0460	0.0352	0.0185	0.0137	0.0124	0.00702	0.00899	0.00864
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	0.000061	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.00285	0.00250	0.00261	0.00260	0.00281	0.00244	0.00265	0.00336	0.00265	0.00312	0.00288	0.00325	0.00530	0.00522	0.00579	0.00630
Nickel (Ni)-Total	mg/L	0.10	0.0021	0.0025	0.0006	0.0019	0.0023	0.0014	0.0019	0.00399	0.00247	0.00270	0.00184	0.00164	0.00315	0.00201	0.00204	0.00222
Potassium (K)-Total	mg/L		4.2	4.8	5.1	5.0	5.4	5.3	5.7	10.2	5.80	5.78	5.41	5.66	8.28	8.27	8.88	8.80
Selenium (Se)-Total	mg/L		0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		1.12	1.07	1	1.81	1.06	1.11	1.04	2.17	1.25	1.07	0.968	0.964	1.54	1.60	1.55	1.79
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		5.8	6.1	6.4	7.0	6.8	7.3	7.6	13.8	7.93	7.92	7.87	8.14	12.0	12.1	13.2	13.6
Strontium (Sr)-Total	mg/L		0.119	0.139	0.141	0.138	0.156	0.197	0.210	0.260	0.159	0.161	0.149	0.157	0.319	0.300	0.327	0.359
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.00122	<0.00010	0.0281	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		<0.0005	0.0016	0.0008	0.0203	0.0019	0.0013	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00127	0.00123	0.00133	0.00093	0.00130	0.00107	0.00118	0.00109	0.00143	0.00170	0.00136	0.00132	0.00222	0.00185	0.00157	0.00136
Vanadium (V)-Total	mg/L		0.0044	<0.0005	<0.0005	0.0011	0.0008	0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.006	0.020	0.003	0.004	0.029	<0.001	0.004	0.0015	<0.001	0.0197	0.0013	<0.001	0.0023	0.0018	0.0016	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.018	0.002	<0.002	0.004	0.004	0.003	<0.002	0.0017	0.0062	0.0038	0.0096	0.0093	0.0059	<0.005	<0.006	-
Antimony (Sb)-Dissolved	mg/L		0.00040	0.00035	0.00029	0.00030	0.00040	0.00034	0.00037	0.00052	0.00031	0.00031	0.00032	0.00034	0.00045	0.00046	0.00046	-
Arsenic (As)-Dissolved	mg/L		<0.0001	0.0006	0.0005	0.0005	0.0006	0.0006	0.0006	0.00055	0.00030	0.00040	0.00038	0.00041	0.00048	0.00043	0.00045	6.20
Barium (Ba)-Dissolved	mg/L		0.0318	0.0405	0.0406	0.0329	0.0437	0.0406	0.0439	0.0660	0.0344	0.0332	0.0330	0.0326	0.0558	0.0552	0.0517	2.67
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Bismuth (Bi)-Dissolved	mg/L									<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Boron (B)-Dissolved	mg/L		0.015	0.022	0.021	0.020	0.026	0.025	0.023	0.066	0.027	0.025	0.028	0.028	0.035	0.035	0.034	-
Cadmium (Cd)-Dissolved	mg/L		0.00003	<0.00002	<0.00002	<0.00002	0.00004	<0.00002	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	-
Calcium (Ca)-Dissolved	mg/L		12.6	12.9	13.8	14.1	14.8	15.6	15.8	20.0	11.3	12.0	13.0	12.6	20.4	20.6	19.9	-
Chromium (Cr)-Dissolved	mg/L		0.0059	0.0007	<0.0003	0.0005	<0.0003	0.0009	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-
Cobalt (Co)-Dissolved	mg/L		0.00009	0.00012	0.00008	0.00009	0.00012	0.00012	0.00007	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	0.00016	0.00015	0.00013	-
Copper (Cu)-Dissolved	mg/L		0.0002	0.0028	0.0029	0.0019	0.0037	0.0025	0.0020	0.00195	0.00124	0.00158	0.00142	0.00186	0.00192	0.00134	0.00137	-
Iron (Fe)-Dissolved	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	-
Lead (Pb)-Dissolved	mg/L		0.00010	0.00006	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	-
Lithium (Li)-Dissolved	mg/L		0.0014	0.0015	0.0015	0.0012	0.0016	0.0017	0.0016	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-
Magnesium (Mg)-Dissolved	mg/L		6.6	7.5	8.4	8.26	8.7	9.4	9.4	11.0	6.68	6.71	7.24	7.28	11.0	10.9	9.52	-
Manganese (Mn)-Dissolved	mg/L		<0.010	0.020	<0.010	<0.010	0.011	0.016	<0.010	0.0644	0.000304	0.000415	0.000307	0.00889	0.000375	<0.00011	<0.00040	-
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	-
Molybdenum (Mo)-Dissolved	mg/L		0.00231	0.00270	0.00257	0.00254	0.00272	0.00235	0.00258	0.00365	0.00273	0.00283	0.00316	0.00327	0.00539	0.00540	0.00606	-
Nickel (Ni)-Dissolved	mg/L		0.00194	0.00163	0.00154	0.00137	0.00174	0.00173	0.00177	0.00456	0.00140	0.00130	0.00175	0.00153	0.00254	0.00181	0.00176	-
Potassium (K)-Dissolved	mg/L		3.9	4.2	5	5.0	5.3	5.8	5.8	10.4	5.80	5.50	5.79	5.72	8.30	8.48	9.23	-
Selenium (Se)-Dissolved	mg/L		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Silicon (Si)-Dissolved	mg/L		1.05	0.90	0.97	1.02	0.89	1.10	1.01	2.11	1.14	0.801	0.903	0.920	1.47	1.64	1.52	-
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	-
Sodium (Na)-Dissolved	mg/L		5.5	5.6	6.3	6.2	6.7	7.8	7.6	13.7	8.00	7.76	8.16	8.17	12.0	12.6	13.8	-
Strontium (Sr)-Dissolved	mg/L		0.105	0.136	0.142	0.136	0.157	0.214	0.218	0.271	0.160	0.159	0.166	0.159	0.316	0.335	0.340	-
Thallium (Tl)-Dissolved	mg/L		<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	-
Tin (Sn)-Dissolved	mg/L		<0.0001	0.0003	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00151	<0.00010	0.00886	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	-
Titanium (Ti)-Dissolved	mg/L		0.0009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Uranium (U)-Dissolved	mg/L		0.00115	0.00112	0.00129	0.00075	0.00129	0.00091	0.00113	0.00108	0.00121	0.00101	0.00142	0.00132	0.00220	0.00193	0.00155	-

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	WQ-02	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			11-Sep-06	2-Oct-06	9-Oct-06	16-Oct-06	23-Oct-06	30-Oct-06	6-Nov-06	9-May-07	25-Jun-07	2-Jul-07	9-Jul-07	15-Jul-07	23-Jul-07	30-Jul-07	8-Aug-07	11-Aug-07
Vanadium (V)-Dissolved	mg/L		0.0026	0.0008	0.0010	0.0008	<0.0001	0.0011	0.0008	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Zinc (Zn)-Dissolved	mg/L		0.005	0.004	0.003	0.001	0.017	0.004	<0.001	0.0012	<0.0010	<0.0010	0.0020	<0.0010	<0.0010	0.0012	<0.0010	-
Oil and Grease	mg/L	5.0			0.1					<1.0	-	<5.0	<1.0	8.27	8.60	<1.0	<1.0	<1.0
Total Inorganic Carbon	mg/L		8.8	8.8	9.2	9.0	11	10.7	12	8.18	8.48	7.88	8.26	3.42	3.31	7.80	7.18	-
Total Organic Carbon	mg/L		3.5	3.2	3.1	3.2	3.3	3.3	3.6	2.57	4.09	5.27	3.91	-	-	3.27	3.35	-
BOD	mg/L	25			<2					<5	<2	-	<2	-	-	<2	<2	-
Fecal Coleform	CFU/100 mL	20			<1					-	<1	<1	<1	-	-	<1	<1	-
Field Water Temperature	deg C		9.46	1.67					2.59	1.7	2.32	13.04	15.35	18.35	13.61	14.63	11.16	8.59
Field Conductivity	uS/cm		138	205					229	263	190	189	194	201	304	295	281	268
Field DO	%									82.8	101.2	129.6	154.1	130.4	97.7	105	98.7	126.3
Field DO	mg/L		11.68	12.96					11.46	11.48	13.48	13.60	15.4	12.24	10.13	10.57	10.11	14.72
Field pH			7.04	6.89					6.85	6.05	6.55	7.57	7.65	7.40	7.83	7.68	7.89	7.38
Field ORP	mV		262.10	644.70					504.10	310.5	181.8	153.3	184.7	233.8	113.4	196.0	313.0	152.5
Ion Balance	Ratio		0.87	0.91	0.91	1.01	0.94	1.02	0.96									

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			15-Aug-07	20-Aug-07	27-Aug-07	4-Sep-07	9-Sep-07	24-Sep-07
Time Sampled			09:00	07:30	06:20	09:00	18:35	06:30
Lab Sample ID			L543212-1	L545480-4	L546749-18	L549862-1	L552075-1	L557895-14
Hardness (as CaCO3)	mg/L		81.7	85.9	82.2	78.6	87.6	92
Conductivity	uS/cm		291	286	313	325	325	327
pH	pH	6.0 - 8.8	7.83	7.82	7.76	7.10	7.33	7.48
Total Dissolved Solids	mg/L	4000	202	212	216	217	231	203
Total Suspended Solids	mg/L	25	<3	<3	<3	<3	<3	<3
Turbidity	NTU		0.66	0.72	1.28	0.62	0.48	0.47
Ammonia as N	mg/L	12	0.113	0.169	0.297	0.338	0.354	0.0927
Acidity (as CaCO3)	mg/L		1.0	3.5	3.3	4.1	2.9	4.4
Alkalinity, Bicarbonate (as CaCO3)	mg/L		32.4	30.9	31.5	33.3	33.2	38.1
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		32.4	30.9	31.5	33.3	33.2	38.1
Chloride (Cl)	mg/L	1000	13.3	13.5	14.6	14.8	14.7	16.3
Fjuoride (F)	mg/L							
Sulfate (SO4)	mg/L		22.5	22.5	25.0	26.1	26.0	26.0
Nitrate (as N)	mg/L	56	15.6	15.9	17.5	17.8	17.8	16.8
Nitrite (as N)	mg/L	5.0	0.111	0.117	0.169	0.185	0.176	0.0315
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	-	-
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	0.0012	<0.0010	<0.0010	0.0011
Total Dissolved Phosphate As P	mg/L		0.0023	0.0028	0.0029	0.0021	0.0081	0.0021
Total Phosphate as P	mg/L	0.4	0.0050	0.0059	0.106	0.0035	0.0054	0.0066
Aluminum (Al)-Total	mg/L	3.0	0.0142	0.0128	0.0259	0.0248	0.0094	0.0094
Antimony (Sb)-Total	mg/L		0.00046	0.00048	0.00048	0.00045	0.00047	0.00028
Arsenic (As)-Total	mg/L	0.10	0.00046	0.00051	0.00050	0.00042	0.00041	0.00034
Barium (Ba)-Total	mg/L		0.0556	0.0607	0.0790	0.0770	0.0849	0.0678
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		0.032	0.034	0.039	0.037	0.037	0.032
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		18.5	20.0	20.5	20.3	21.9	21.4
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		0.00015	0.00015	0.00019	0.00015	0.00015	0.00017
Copper (Cu)-Total	mg/L	0.04	0.00131	0.00203	0.00102	0.00089	0.00099	0.00161
Iron (Fe)-Total	mg/L		<0.030	<0.030	0.045	0.052	0.033	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.00005	0.000100	0.000050	0.000171	<0.00005	0.000076

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			15-Aug-07	20-Aug-07	27-Aug-07	4-Sep-07	9-Sep-07	24-Sep-07
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		8.59	8.43	7.73	6.89	8.31	8.73
Manganese (Mn)-Total	mg/L		0.00639	0.00423	0.00531	0.00810	0.00748	0.0258
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.00667	0.00747	0.00781	0.00780	0.00761	0.00233
Nickel (Ni)-Total	mg/L	0.10	0.00222	0.00267	0.00380	0.00364	0.00331	0.00157
Potassium (K)-Total	mg/L		9.11	10.0	11.2	11.5	11.5	9.86
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		1.78	2.04	2.34	2.54	2.39	2.98
Silver (Ag)-Total	mg/L		<0.000010	0.000012	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		14.4	16.0	16.4	17.1	17.5	16.4
Strontium (Sr)-Total	mg/L		0.379	0.424	0.511	0.501	0.568	0.447
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		0.00409	0.0164	0.00211	0.00042	0.00548	<0.00010
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00129	0.00117	0.000749	0.000767	0.000825	0.000607
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0011	0.0029	<0.001	<0.001	<0.001	0.0016
Aluminum (Al)-Dissolved	mg/L	2.0	0.0045	0.0036	<0.002	<0.002	0.0077	0.0026
Antimony (Sb)-Dissolved	mg/L		0.00047	0.00048	0.00047	0.00048	0.00046	0.00027
Arsenic (As)-Dissolved	mg/L		0.00048	0.00048	0.00052	0.00041	0.00040	0.00031
Barium (Ba)-Dissolved	mg/L		0.0557	0.0608	0.0777	0.0767	0.0829	0.0671
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		0.033	0.034	0.038	0.036	0.036	0.033
Cadmium (Cd)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		18.4	20.3	20.3	20.2	21.5	22.0
Chromium (Cr)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		0.00012	0.00010	0.00011	0.00011	0.00014	0.00012
Copper (Cu)-Dissolved	mg/L		<0.0011	0.00130	<0.00080	<0.00070	0.00096	0.00204
Iron (Fe)-Dissolved	mg/L		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		8.66	8.54	7.63	6.81	8.22	9.02
Manganese (Mn)-Dissolved	mg/L		<0.00030	0.000181	0.000173	0.000188	0.00740	0.00201
Mercury (Hg)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		0.00683	0.00738	0.00770	0.00789	0.00745	0.00213
Nickel (Ni)-Dissolved	mg/L		<0.0020	0.00222	0.00297	0.00295	0.00323	0.00146
Potassium (K)-Dissolved	mg/L		9.28	10.2	11.2	11.5	11.4	10.0
Selenium (Se)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		1.78	2.05	2.30	2.47	2.38	2.95
Silver (Ag)-Dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		14.6	16.1	16.5	17.3	16.9	16.7
Strontium (Sr)-Dissolved	mg/L		0.380	0.428	0.510	0.503	0.556	0.441
Thallium (Tl)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		0.00149	0.0205	0.00244	0.00048	0.00375	<0.00010
Titanium (Ti)-Dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00126	0.00111	0.000715	0.000773	0.000772	0.000579

JER-WQ2

Sample ID	Units	PKCA Discharge Criteria	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ2
Date Sampled			15-Aug-07	20-Aug-07	27-Aug-07	4-Sep-07	9-Sep-07	24-Sep-07
Vanadium (V)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.0010	0.0011	<0.0010	<0.0010	<0.0010	0.0016
Oil and Grease	mg/L	5.0	<1.0	<1.0	<1.0	<1.0	-	<1.0
Total Inorganic Carbon	mg/L		6.18	6.59	6.37	5.95	5.28	7.69
Total Organic Carbon	mg/L		2.70	2.85	2.70	2.76	2.47	2.89
BOD	mg/L	25	<2	<2	<2	<2	-	<2
Fecal Coleform	CFU/100 mL	20	<1	<1	<1	<1	-	<1
Field Water Temperature	deg C		8.38	9.87	8.53	6.58	6.17	2.24
Field Conductivity	uS/cm		269	270	251	264	343	288
Field DO	%		124.1	95.1	99.0	---	67.7	73.9
Field DO	mg/L		14.56	11.26	11.60	---	8.37	10.13
Field pH			7.62	7.70	7.80	7.55	7.09	6.53
Field ORP	mV		160.7	138.1	245.8	151.5	143.4	231.5
Ion Balance	Ratio							

JER-WQ3

Sample ID	Units	PKCA Discharge Criteria	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3
Date Sampled			30-Jun-05	29-Jul-05	28-Aug-05	21-Jun-06	11-Jul-06	6-Aug-06	13-Aug-06	5-Sep-06	24-Jun-07	17-Jul-07	25-Aug-07
Time Sampled									Inspector Samples		15:17	00:00	13:30
Lab Sample ID						Jun-08	Jun-02	L420594-15	Jun-25	06-10854	L522053-1	L531523-11	L546749-5
Hardness (as CaCO3)	mg/L			8.9	9	11.8	10.1		19.4	32	28.1	46.8	70.8
Conductivity	uS/cm		22	23		16	34		84	106	98.9	166	245
pH	pH	6.0 - 8.8	5.75	6.54	7	6.75	7.08		7.07	7.21	7.09	7.26	7.54
Total Dissolved Solids	mg/L	4000	24	<15	<15	11	20		60	30	72.0	93.0	173
Total Suspended Solids	mg/L	25	<2	2	<2	<2	<2			<2	<3	<3	<3
Turbidity	NTU		2	2	2	1	2		1	<1	0.87	0.27	0.24
Ammonia as N	mg/L	12	<0.1	<0.1	<0.1	0.01	0.02	<0.005	0.01	<0.01	0.0128	0.0061	<0.005
Acidity (as CaCO3)	mg/L		2	4	2	4	<1		1	2	3.1	3.0	3.3
Alkalinity, Bicarbonate (as CaCO3)	mg/L		13	12	14	11	12		15	18	12.1	28.9	24.8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		11	10	11	9	10		12	15	12.1	28.9	24.8
Chloride (Cl)	mg/L	1000	0.9	0.8	1.6	0.7	2.6		5.5	6.7	5.87	7.46	12.8
Fjuoride (F)	mg/L		0.04	0.05	0.03	0.03	0.04		0.06	0.04			
Sulfate (SO4)	mg/L		2.6	<0.5	0.6	1.2	0.6		6.0	8.4	9.57	12.6	20.9
Nitrate (as N)	mg/L	56	<0.05	<0.05	0.06	<0.05	0.32		2.53	4.52	4.20	5.95	12.7
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	0.0023	0.0057	0.0062
Total Kjeldahl Nitrogen	mg N/L						<0.2			0.3	-	-	-
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.2	<0.20	<0.20		<0.20	<0.20	0.0013	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005	<0.005						0.0039	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	<0.02	<0.02	<0.02						0.0069	0.0020	0.0039
Aluminum (Al)-Total	mg/L	3.0	0.031	0.035	0.031	0.0543	0.0359	0.0251	0.0368	0.0192	0.0258	0.0136	0.0139
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.000128	<0.00005	<0.00005	0.00012	0.00019	0.00021
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	0.0007	<0.0002	0.0003	0.000266	<0.0002	0.0006	0.00022	0.00020	0.00021
Barium (Ba)-Total	mg/L		<0.005	<0.005	<0.005	0.00204	0.00319	0.00869	0.00874	0.0121	0.0110	0.0183	0.0266
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.000003	<0.0001	<0.0001	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L										<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	0.003	0.001	0.113	0.004	0.006	0.015	0.022	0.025
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	0.00002	<0.00002	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.25	1.95	1.9	1.02	1.98	6.19	4.44	6.89	5.37	9.49	14.6
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	0.0006	0.0016	0.00055	0.0019	0.0063	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.000108	0.00010	0.00006	<0.00010	<0.00010	0.00014
Copper (Cu)-Total	mg/L	0.04	<0.001	<0.001	<0.001	0.0011	0.0010	0.00185	0.0014	<0.001	0.00109	0.00097	0.00068
Iron (Fe)-Total	mg/L		<0.01	<0.10	0.11	<0.10	<0.10	0.0182	<0.10	<0.10	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.0001	<0.0001	0.0003	0.00006	<0.00005	0.000292	0.00011	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L						<0.005	0.00241	<0.005	<0.005	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.68	0.99	1.02	0.50	0.80	2.68	2.68	4.24	3.61	5.58	7.94
Manganese (Mn)-Total	mg/L		<0.002	<0.01	0.003	<0.01	<0.01	0.00173	<0.01	<0.01	0.000559	0.00136	0.00222
Mercury (Hg)-Total	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	0.00008	<0.00005	0.000433	<0.00005	0.00020	0.000315	0.00101	0.00167
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	<0.0006	0.0007	0.0006	0.000581	0.0007	0.0008	0.00068	<0.0005	0.00055
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	2.14	1.1	1.6	3.55	4.36	6.91

JER-WQ3

Sample ID	Units	PKCA Discharge Criteria	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3
Date Sampled			30-Jun-05	29-Jul-05	28-Aug-05	21-Jun-06	11-Jul-06	6-Aug-06	13-Aug-06	5-Sep-06	24-Jun-07	17-Jul-07	25-Aug-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	0.000216	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.27	0.48	0.45	0.21	0.48	1.06	0.75	0.92	0.681	0.573	1.30
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0000155	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		1	1.1	1.5	<0.5	1.6	5.21	3.7	4.4	5.97	7.57	12.8
Strontium (Sr)-Total	mg/L				0.0066	0.0042	0.0080	0.0303	0.0146	0.0247	0.0236	0.0908	0.157
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000102	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	<0.0000300	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L						<0.0005	0.000518	<0.0005	<0.0005	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.0001	0.0001	0.00008	0.00022	0.00006	0.0000841	<0.00005	<0.00005	0.000054	0.000069	0.000060
Vanadium (V)-Total	mg/L		<0.0001	0.0003	0.0001	<0.0005	<0.0005	0.000205	<0.0005	0.0018	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	0.014	0.003	0.004	0.00299	0.007	0.005	<0.001	<0.001	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.026	0.031	0.02	0.035	0.026	0.021		0.014	0.0251	0.0113	0.0146
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.000125		<0.00005	0.00014	0.00019	0.00022
Arsenic (As)-Dissolved	mg/L		0.0002	0.0001	0.0002	0.0002	0.0003	0.000257		0.0003	0.00022	0.00019	0.00023
Barium (Ba)-Dissolved	mg/L		<0.003	0.004	0.004	0.00286	0.00347	0.00864		0.0125	0.0109	0.0181	0.0271
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000003		<0.0001	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L					<0.001	0.001	0.094		0.002	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		0.004	<0.004	<0.004	<0.00005	<0.00005	0.0000353		<0.00002	0.015	0.022	0.026
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.6	2.3	6.13	3.8	6.3	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.4	1.9	1.90	<0.0003	0.0003	0.000449		0.0040	5.35	9.49	14.8
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.00002	0.00005	0.000106		0.00005	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	<0.00005	0.00007	<0.0001	0.0064	0.00179		0.0005	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0043	0.0044	<0.0010	<0.10	<0.10	0.0172		<0.10	0.00114	0.00092	<0.00070
Iron (Fe)-Dissolved	mg/L		0.01	0.03	0.06	0.00016	<0.00005	0.000279		<0.00005	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	0.00012		<0.0010	0.00188		<0.0010	0.000084	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L					2.5	1.1	2.61	2.4	4.0	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.7	1	1.02	<0.010	<0.010	0.00166		<0.010	3.59	5.60	8.18
Manganese (Mn)-Dissolved	mg/L		<0.001	0.003	<0.001	<0.00005	<0.00005	<0.00001		<0.00005	0.000357	0.000828	0.00136
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0002	<0.0001	0.00010	0.00008	0.000425		<0.00005	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	0.00021	0.00048	0.000527		0.00070	0.000347	0.00101	0.00176
Nickel (Ni)-Dissolved	mg/L		0.0004	0.0004	0.0004		<0.005	0.002		<0.01	0.00073	<0.00050	0.00059
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	2.12	1.1	1.7	3.53	4.39	7.09
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	0.000168		<0.0006	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.31	0.5	0.49	0.27	0.54	1.01		0.90	0.665	0.584	1.28
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000107		<0.00005	0.000020	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.9	1.2	1.5	<0.5	1.6	5.14	4.4	5.4	5.94	7.63	13.1
Strontium (Sr)-Dissolved	mg/L				0.0060	0.0046	0.0099	0.0299		0.0229	0.0236	0.0921	0.160
Thallium (Tl)-Dissolved	mg/L		<0.00002	0.00007	<0.00002	<0.00005	<0.00005	0.0000074		<0.00005	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.00003		<0.0001	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L						<0.0005	0.000515		<0.0005	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.0001	0.00013	0.00009	0.00013	0.00011	0.0000833		<0.00005	0.000050	0.000061	0.000053
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	0.0006	0.000185		0.0014	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.003	0.01	<0.002	<0.001	0.003	0.00246		0.006	<0.0010	<0.0010	<0.0010
Oil and Grease	mg/L	5.0									-	6.21	-
Total Inorganic Carbon	mg/L		1	4	2	0.1	0.7		3.0	3.5	2.50	2.85	4.84
Total Organic Carbon	mg/L		3	1	3	3.6	3.5		3.0	2.5	4.31	-	2.74
BOD	mg/L	25							<2			-	-

JER-WQ3

Sample ID	Units	PKCA Discharge Criteria	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3	JER-WQ3
Date Sampled			30-Jun-05	29-Jul-05	28-Aug-05	21-Jun-06	11-Jul-06	6-Aug-06	13-Aug-06	5-Sep-06	24-Jun-07	17-Jul-07	25-Aug-07
Fecal Coleform	CFU/100 mL	20							<1			-	-
Field Water Temperature	deg C					12.43	14.36	12.5	14.52	8.07	6.63	16.08	8.85
Field Conductivity	uS/cm					13	32	89	81	82	125	165	196
Field DO	%										152.8	90.4	-
Field DO	mg/L					11.24	9.60		11.04	10.57	15.24	8.79	-
Field pH						6.52	6.6	7.8	6.03	6.08	6.63	7.32	7.06
Field ORP	mV					192.50	333.60		404.10	255.00	123.1	148.8	231.1
Balance (+ions/-ions)	Ratio			1.03	1	1.02	0.89		0.86	0.93			

JER-WQ4

Sample ID	Units	PKCA Discharge Criteria	CL-28	CL-28	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4D	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4
Date Sampled			2-Aug-99	1-Sep-99	18-May-05	28-Jun-05	29-Jul-05	29-Jul-05	29-Aug-05	8-Apr-06	21-Jun-06	11-Jul-06	6-Aug-06	5-Sep-06	17-Dec-06	28-Apr-07	16-Jul-07	25-Aug-07
Time Sampled																17:24	09:40	13:15
Lab Sample ID										Jun-72	Jun-27	Jun-03	L420594-16	06-10848	L464346-3	L501255-10	L530246-1	L546749-4
Hardness (as CaCO3)	mg/L		6.87	6.38	7	<6	<6	<6	<6	<6.0	<6	<6		<6	8.17	9.79	5.48	6.64
Conductivity	uS/cm		16	22	19.6	16	13	12	15	23	13	14		14	21.8	27.0	13.4	19.5
pH	pH	6.0 - 8.8	6.57	7.18	7	5.32	7.14	6.81	6.26	6.87	6.66	6.80		6.91	6.74	7.12	6.86	6.90
Total Dissolved Solids	mg/L	4000	10	16	30	40	<15	<15	<15	<15	11	12		12	20	17.0	11.0	19.0
Total Suspended Solids	mg/L	25	<3	<3	<3	<2	<2		<2	3	<2	<2		<2	<2	<3	<3	<3
Turbidity	NTU				0.15	2	1	1	<1	2	1	2		1	0.63	0.22	0.41	0.51
Ammonia as N	mg/L	12	<0.005	<0.005	0.019	<0.1	<0.1		<0.1	<0.1	<0.01	0.02	<0.005	<0.01	0.0085	0.0426	0.0080	0.0092
Acidity (as CaCO3)	mg/L			<5		2	3		2	3	14	2		2	2.4	1.2	1.2	1.3
Alkalinity, Bicarbonate (as CaCO3)	mg/L				8	11	7	6	12	13	9	9		8	7.4	7.9	4.1	4.9
Alkalinity, Carbonate (as CaCO3)	mg/L			<5	<1	<1	<1		<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L			<5	<1	<1	<1		<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		5	6	6	9	5	5	10	11	7	8		7	7.4	7.9	4.1	4.9
Chloride (Cl)	mg/L	1000	<0.5	0.8	<1	0.3	0.2	0.2	0.2	0.5	0.4	0.2		0.5	<0.5	0.83	<0.5	0.69
Fjuoride (F)	mg/L					0.04	0.07	0.06	<0.02	0.05	0.03	0.03		0.04				
Sulfate (SO4)	mg/L		1	3	1.45	0.6	<0.5	<0.5	0.8	1.0	1.3	<0.5		1.7	1.83	2.04	1.06	1.59
Nitrate (as N)	mg/L	56	<0.005	0.008	0.01	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05		<0.05	0.0619	0.277	0.0674	0.254
Nitrite (as N)	mg/L	5.0	<0.001	<0.001	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	0.0010	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L											<0.2		0.3		-	-	-
Ortho Phosphate as P	mg/L				<0.001	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		0.003	<0.002		<0.005	<0.005	<0.005	<0.005						0.0029	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	0.004	0.003	0.005	<0.02	<0.02	<0.05	<0.02						0.0045	0.0045	0.0060	0.0039
Aluminum (Al)-Total	mg/L	3.0	0.027	0.03	0.0181	0.046	0.022	0.021	0.015	0.027	0.0494	0.0340	0.0255	0.0177	0.0217	0.0192	0.0223	0.0154
Antimony (Sb)-Total	mg/L		<0.00005	<0.00005	0.00007	0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000063	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.0002	0.0002	0.00022	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.0002	<0.0002	0.00018	0.0003	0.00025	0.00021	0.00017	0.00017
Barium (Ba)-Total	mg/L		0.00227	0.00213	0.00226	<0.005	<0.005	<0.005	<0.005	<0.005	0.00167	0.00175	0.00163	0.00171	0.00297	0.00322	0.00188	0.00182
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.0000046	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.0005	<0.0005												<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.001	<0.001	0.001	<0.010	<0.010	<0.010	<0.010	<0.010	0.003	<0.001	0.0581	0.002	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.00005	<0.00005	0.0000073	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.41	1.34	1.51	0.93	1.04	1.07	1	1.61	0.79	0.80	1.01	1.25	1.83	2.10	1.18	1.37
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0005	0.00012	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0005	0.0012	0.000204	0.0017	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000284	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.0009	0.0011	0.0011	0.0013	0.0044	0.004	<0.001	<0.001	0.0012	<0.001	0.00164	<0.001	0.00303	0.00126	0.00094	0.00082
Iron (Fe)-Total	mg/L		0.03	0.03	0.012	<0.01	<0.10	<0.10	0.02	<0.10	<0.10	<0.10	0.0237	<0.10	<0.030	<0.030	0.075	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.00005	<0.00005	<0.00005	<0.0001	0.0003	0.0003	<0.0001	0.0001	0.00008	<0.00005	0.0000719	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.001	<0.001								<0.005	0.00	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.8	0.7	0.799	<0.50	0.53	0.53	0.5	0.84	0.68	0.17	0.472	0.66	0.927	1.14	0.596	0.757
Manganese (Mn)-Total	mg/L		0.00271	0.00272	0.0025	<0.002	<0.01	<0.01	<0.002	<0.01	<0.01	<0.01	0.00261	<0.01	0.00311	0.00255	0.00292	0.00217
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00002	<0.0002	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	0.00011	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	0.0003	0.0003	0.00034	<0.0006	<0.0006	<0.0006	<0.0006	0.0007	0.0004	0.0004	0.000307	0.0003	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<2	<2	0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.314	<0.5	0.55	0.59	<0.50	<0.50

JER-WQ4

Sample ID	Units	PKCA Discharge Criteria	CL-28	CL-28	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4D	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4
Date Sampled			2-Aug-99	1-Sep-99	18-May-05	28-Jun-05	29-Jul-05	29-Jul-05	29-Aug-05	8-Apr-06	21-Jun-06	11-Jul-06	6-Aug-06	5-Sep-06	17-Dec-06	28-Apr-07	16-Jul-07	25-Aug-07
Selenium (Se)-Total	mg/L		<0.001	<0.001	<0.0001	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.32	0.65		0.29	0.2	0.21	0.2	0.39	0.17	0.14	0.264	0.23	0.451	0.420	0.234	0.141
Silver (Ag)-Total	mg/L		<0.00001	<0.00001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0000056	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<2	<2	0.67	0.7	0.6	0.6	0.8	<0.5	<0.5	<0.5	0.516	<0.5	0.85	1.05	0.62	0.78
Strontium (Sr)-Total	mg/L		0.006	0.0056	0.0068				0.0049	0.0077	0.0040	0.0047	0.00449	0.0054	0.00868	0.00954	0.00589	0.00715
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000008	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.0001	<0.0001								<0.0001	0.000052	<0.0001	<0.00010	0.00284	0.00743	0.00649
Titanium (Ti)-Total	mg/L		<0.01	<0.01								<0.0005	0.000409	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0		0.00019	0.00018	0.00015	0.00014	0.00012	0.00009	0.00020	0.00015	0.00011	0.00014	0.00014	0.000284	0.000210	0.000159	0.000123
Vanadium (V)-Total	mg/L		<0.001	<0.001	<0.00005	<0.0001	<0.0001	<0.0001	0.0002	0.0003	<0.0005	<0.0005	0.0000759	0.0015	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.001	<0.001	0.0015	<0.002	<0.002	<0.002	<0.002	0.003	0.005	0.005	0.00376	0.002	0.002	<0.001	0.0013	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.023	0.025	0.02	0.044	0.016	0.015	0.014	0.022	0.025	0.024	0.0242	0.012	0.0135	0.0114	0.0185	<0.007
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.00005	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.0000063	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	0.0002	<0.0004	0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0002	0.0002	0.000179	0.0003	0.00025	0.00020	0.00019	0.00017
Barium (Ba)-Dissolved	mg/L		0.00238	0.00207	0.0023	<0.003	0.003	0.003	<0.003	<0.003	0.00284	0.00202	0.00161	0.00084	0.0029	0.00325	0.00188	0.00173
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.0005	<0.0005	<0.00005											<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.001	<0.001	0.003	<0.004	<0.004	<0.004	<0.004	<0.004	<0.001	<0.001	0.05	<0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000073	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.46	1.35	1.5	1.04	1	1	0.92	0.7	<0.5	1.0	1.01	1.3	1.77	2.08	1.18	1.38
Chromium (Cr)-Dissolved	mg/L		<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	0.000204	0.0004	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.0000264	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0009	0.0009	0.0009	0.005	0.0035	0.0032	<0.0010	<0.0010	<0.0001	0.0031	0.00164	0.0002	0.00122	0.00111	0.00091	<0.00080
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	0.005	<0.01	0.01	<0.01	<0.01	<0.10	<0.10	<0.10	0.0231	<0.10	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	0.0000702	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.001	<0.001								<0.0010	0.00125	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.8	0.7	0.71	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5	0.4	0.47	0.6	0.909	1.12	0.613	0.774
Manganese (Mn)-Dissolved	mg/L		0.00258	0.00225	0.002	<0.001	<0.001	<0.001	<0.001	<0.010	<0.010	<0.010	0.00261	<0.010	<0.000050	0.000645	0.00141	<0.000050
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005		<0.0002	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.00005	<0.00005	0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	0.0000247	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0003	0.0003	0.0003	<0.0001	0.0002	0.0002	0.0002	<0.0001	<0.00005	0.00036	0.000284	0.00028	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<2	<2	0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.314	<0.5	0.55	0.59	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.37	0.65		0.31	0.19	0.19	0.19	0.42	0.25	0.14	0.261	0.23	0.434	0.408	0.238	0.130
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000004	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<2	<2	<1	0.7	0.6	0.6	0.7	0.6	<0.5	<0.5	0.508	0.6	0.83	1.03	0.62	0.80
Strontium (Sr)-Dissolved	mg/L		0.0062	0.0055	0.0079				0.0042	0.0079	0.0036	0.0062	0.00443	0.0042	0.00849	0.00948	0.00565	0.00720
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	0.0000008	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.0001	<0.0001	<0.0002							<0.0001	<0.00003	<0.0001	<0.00010	0.00171	0.00569	0.00422
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.0003							<0.0005	0.000304	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L			0.00018	0.0002	0.00014	0.0001	0.0001	0.0001	0.00017	0.00013	0.00014	0.000136	0.00011	0.000191	0.000173	0.000147	0.000102
Vanadium (V)-Dissolved	mg/L		<0.001	<0.001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	0.0002	0.0000759	0.0009	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.001	0.001	0.005	0.008	<0.002	<0.002	<0.002	0.002	<0.001	0.003	0.00329	0.002	0.0012	<0.0010	0.0013	<0.0010
Oil and Grease	mg/L	5.0														-	0.65	-
Total Inorganic Carbon	mg/L				1.5	<1	<1		1	<1	<0.1	<0.1		1.2	1.19	1.44	3.68	0.89
Total Organic Carbon	mg/L		4.5	3.6	3.3	3	4		2	3	2.9	2.7		2.6	4.57	3.81	-	3.54
BOD	mg/L	25														-	-	-

JER-WQ4

Sample ID	Units	PKCA Discharge Criteria	CL-28	CL-28	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4D	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4	JER-WQ4
Date Sampled			2-Aug-99	1-Sep-99	18-May-05	28-Jun-05	29-Jul-05	29-Jul-05	29-Aug-05	8-Apr-06	21-Jun-06	11-Jul-06	6-Aug-06	5-Sep-06	17-Dec-06	28-Apr-07	16-Jul-07	25-Aug-07
Fecal Coleform	CFU/100 mL	20														-	-	-
Field Water Temperature	deg C									1.54	11.72	14.01	16.6	9.12	0.5	4.12	16.31	8.43
Field Conductivity	uS/cm									22	11	10	6	11	22	27	15	15
Field DO	%															112.2	122.1	-
Field DO	mg/L									12.34	11.02	10.30		11.30	9.22	14.75	11.91	-
Field pH										5.19	7.08	5.71	7.7	6.2	6.36	6.83	6.49	6.82
Field ORP	mV									446.90	169.70	445.50		261.30	340	40	260.2	233.0
Balance (+ions/-ions)	Ratio				Low EC	0.65	0.98	1.06	1	0.43	0.36	0.63		0.75				

JER-WQ4

Sample ID	Units	PKCA Discharge Criteria	JER-WQ4	JER-WQ4
Date Sampled			23-Sep-07	08-Dec-07
Time Sampled			10:00	12:00
Lab Sample ID			L557895-4	L585854-6
Hardness (as CaCO3)	mg/L		7.55	7.14
Conductivity	uS/cm		21.6	18
pH	pH	6.0 - 8.8	7.46	6.76
Total Dissolved Solids	mg/L	4000	14.0	18
Total Suspended Solids	mg/L	25	<3	<3
Turbidity	NTU		0.38	0.25
Ammonia as N	mg/L	12	0.0186	0.0202
Acidity (as CaCO3)	mg/L		2.3	2.1
Alkalinity, Bicarbonate (as CaCO3)	mg/L		5.0	5.4
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		5.0	5.4
Chloride (Cl)	mg/L	1000	1.13	0.57
Fjuoride (F)	mg/L			
Sulfate (SO4)	mg/L		2.47	1.5
Nitrate (as N)	mg/L	56	0.313	0.167
Nitrite (as N)	mg/L	5.0	0.0013	<0.001
Total Kjeldahl Nitrogen	mg N/L		-	0.42
Ortho Phosphate as P	mg/L		<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	0.0027	0.0026
Aluminum (Al)-Total	mg/L	3.0	0.0124	0.0092
Antimony (Sb)-Total	mg/L		<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00018	0.00023
Barium (Ba)-Total	mg/L		0.00299	0.00193
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.57	1.45
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		0.00032	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.00078	0.00085
Iron (Fe)-Total	mg/L		0.051	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.00005	0.00009
Lithium (Li)-Total	mg/L		<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.836	0.809
Manganese (Mn)-Total	mg/L		0.0152	0.000934
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.50	<0.50

JER-WQ4

Sample ID	Units	PKCA Discharge Criteria	JER-WQ4	JER-WQ4
Date Sampled			23-Sep-07	08-Dec-07
Selenium (Se)-Total	mg/L		<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.227	0.143
Silver (Ag)-Total	mg/L		<0.000010	<0.000010
Sodium (Na)-Total	mg/L		1.11	0.76
Strontium (Sr)-Total	mg/L		0.00799	0.00779
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	0.00278
Titanium (Ti)-Total	mg/L		<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000109	0.000124
Vanadium (V)-Total	mg/L		<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0014	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.0063	0.007
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.00017	0.0002
Barium (Ba)-Dissolved	mg/L		0.00307	0.00198
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.62	1.5
Chromium (Cr)-Dissolved	mg/L		<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.00064	0.00082
Iron (Fe)-Dissolved	mg/L		<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.851	0.822
Manganese (Mn)-Dissolved	mg/L		0.00645	0.000196
Mercury (Hg)-Dissolved	mg/L		<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.201	0.121
Silver (Ag)-Dissolved	mg/L		<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		1.16	0.79
Strontium (Sr)-Dissolved	mg/L		0.00810	0.00781
Thallium (Tl)-Dissolved	mg/L		<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.00010	0.00344
Titanium (Ti)-Dissolved	mg/L		<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.000094	0.000107
Vanadium (V)-Dissolved	mg/L		<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.0014	0.0012
Oil and Grease	mg/L	5.0	-	-
Total Inorganic Carbon	mg/L		0.83	0.85
Total Organic Carbon	mg/L		3.03	3.06
BOD	mg/L	25	-	-

JER-WQ4

Sample ID	Units	PKCA Discharge Criteria	JER-WQ4	JER-WQ4
Date Sampled			23-Sep-07	08-Dec-07
Fecal Coleform	CFU/100 mL	20	-	-
Field Water Temperature	deg C		2.3	1.34
Field Conductivity	uS/cm		23	22
Field DO	%		108.2	108.4
Field DO	mg/L		14.83	15.29
Field pH			8.44	6.44
Field ORP	mV		146.6	158.3
Balance (+ions/-ions)	Ratio			

JER-WQ5

Sample ID	Units	PKCA Discharge Criteria	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5
Date Sampled			15-Jul-95	19-Aug-95	12-Sep-95	23-Nov-95	16-Apr-96	15-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	28-Jun-05	29-Jul-05	28-Aug-05	21-Jun-06
Time Sampled			13:30	10:24	14:11	12:15	17:18	14:30	11:55	11:40		17:50	10:50				M
Lab Sample ID																	Jun-28
Hardness (as CaCO3)	mg/L		4.11	4.24	4.22	5.82	6.75	4.19	4.43	4.47	6.64	4.26	4.98	<6	<6	<6	<6
Conductivity	uS/cm										6.05	12	11	18	14	12	14
pH	pH	6.0 - 8.8	6.33	6.77	6.75	6.76	6.48	6.5	6.89			5.9	6.38	5.45	5.58	6.30	6.65
Total Dissolved Solids	mg/L	4000	11	8	11	12	15	8	7	9	11			16	<15	<15	13
Total Suspended Solids	mg/L	25	<1	1	1	<1	<1	<1	5	1	1	2	<1	<2	<2	<2	<2
Turbidity	NTU											0.4	0.6	1	1	2	1
Ammonia as N	mg/L	12	0.017	0.01	<0.005	0.011	0.026	<0.005	<0.005	0.013	0.01			<0.1	<0.1	<0.1	0.01
Acidity (as CaCO3)	mg/L		2.3	2.4	3.1	5.5	1.8	<1	1.9	2	2			2	4	2	10
Alkalinity, Bicarbonate (as CaCO3)	mg/L		4.4	3.1	4.3	5.9	5.5	3.7	3.4	4.3	5			11	7	8	8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1		<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L												<1	<1		<1	<1
Alkalinity, Total (as CaCO3)	mg/L		4.4	3.5	4.3	5.9	5.5	3.7	3.4	4.3	5	4	4	9	6	7	7
Chloride (Cl)	mg/L	1000	0.9	<0.5	0.7	0.8	1.4	0.5	0.7	0.6	<0.5	1.2	<0.5	0.2	0.2	0.3	0.6
Fjuoride (F)	mg/L		0.14	0.02	0.02	0.03	0.04	0.03	0.03	0.04	0.03			0.04	0.05	0.02	0.03
Sulfate (SO4)	mg/L		<1	<1	2	<1	1.5	<1	<1	<1	1	2	<1	0.9	0.7	1.1	1.8
Nitrate (as N)	mg/L	56	0.01	<0.005	<0.005	0.041	0.017	<0.005	<0.005	0.012	0.033	0.013	0.011	<0.05	<0.05	0.09	<0.05
Nitrite (as N)	mg/L	5.0	0.001	0.001	<0.001	0.001	0.001	<0.001	0.001	0.002	0.001			<0.05	<0.05	<0.05	<0.05
Total Kjeldahl Nitrogen	mg N/L																
Ortho Phosphate as P	mg/L		<0.001	<0.001	<0.001	<0.001	0.004	0.001	0.002	0.001	<0.001		<0.2	<0.2		<0.2	<0.20
Total Dissolved Phosphate As P	mg/L		0.003	<0.001	0.002	<0.001	0.004	0.002	0.002	0.001	0.002		<0.005	<0.005		<0.005	
Total Phosphate as P	mg/L	0.4	0.005	0.004	0.004	<0.001	0.004	0.005	0.005	0.002	0.003			0.02	<0.02	<0.02	
Aluminum (Al)-Total	mg/L	3.0	0.036	0.038	0.032	0.023	0.027	0.028	0.039	0.062	0.041	0.023	0.014	0.057	0.032	0.02	0.0483
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0002	<0.0001	<0.0001	<0.00005
Arsenic (As)-Total	mg/L	0.10	0.0001	<0.0001	<0.0001	0.0001	0.0003	0.00019	0.00022	0.00022	0.0002	0.0002	0.0002	<0.0004	<0.0004	<0.0004	<0.0002
Barium (Ba)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00228	0.00223	0.00212	0.00262	0.00202	0.0014	<0.005	<0.005	<0.005	0.00156
Beryllium (Be)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Bismuth (Bi)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Boron (B)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	0.001	0.003	0.004	0.001	<0.001	<0.001	<0.010	<0.010	<0.010	0.003
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.0002	<0.0001	<0.00005
Calcium (Ca)-Total	mg/L		0.996	1.05	1.06	1.3	1.61	0.99	1.11	1.03	1.23	0.95	1.14	1.05	1.02	1.10	0.78
Chromium (Cr)-Total	mg/L	0.170	<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0003	0.0001	<0.0005	<0.0005	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005
Cobalt (Co)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005
Copper (Cu)-Total	mg/L	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.001	0.0013	0.001	0.0016	0.001	0.0009	<0.001	<0.001	<0.001	<0.001
Iron (Fe)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	0.03	0.03	0.03	0.03	<0.03	0.04	0.03	<0.10	0.01	<0.10
Lead (Pb)-Total	mg/L	0.02	0.001	<0.001	<0.001	<0.001	<0.001	0.00005	0.00017	<0.00005	0.00019	<0.00005	<0.00005	0.0005	<0.0001	<0.0001	<0.00005
Lithium (Li)-Total	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	<0.001	0.002	0.002	<0.001	<0.001	<0.001				
Magnesium (Mg)-Total	mg/L		0.444	0.452	0.44	0.633	0.67	0.431	0.462	0.5	0.63	0.44	0.6	0.54	0.51	0.55	<0.50
Manganese (Mn)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.00294	0.00229	0.00278	0.00342	0.00548	0.00284	<0.002	<0.01	<0.002	<0.01
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.0002	<0.0002	<0.0001	<0.00005
Molybdenum (Mo)-Total	mg/L	1.50	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0004	0.0003	0.0004	0.0003	0.0002	<0.0006	<0.0006	<0.0006	0.0004
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5
Selenium (Se)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0008	<0.0008	<0.0008	<0.0010

JER-WQ5

Sample ID	Units	PKCA Discharge Criteria	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5
Date Sampled			15-Jul-95	19-Aug-95	12-Sep-95	23-Nov-95	16-Apr-96	15-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	28-Jun-05	29-Jul-05	28-Aug-05	21-Jun-06
Silicon (Si)-Total	mg/L		0.278	0.252	0.227	0.431	0.33	0.23	0.23	0.39	0.71	0.37	0.3	0.26	0.19	0.24	0.18
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0001
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.9	0.5	0.8	<0.5
Strontium (Sr)-Total	mg/L		0.011	0.012	0.013	0.007	0.01	0.0091	0.0064	0.0057	0.0064	0.0051	0.0049			0.0054	0.0038
Thallium (Tl)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin (Sn)-Total	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0003	0.0003	0.0002	<0.0001	<0.0001	<0.0001				
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01				
Uranium (U)-Total	mg/L	1.0	<0.0005	<0.0005	<0.0005	0.00016	0.00015				0.00027		0.00026	0.00013	0.00017	0.00012	0.00015
Vanadium (V)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	0.0001	<0.001	<0.001	<0.001	0.0001	0.0002	0.0001	<0.0005
Zinc (Zn)-Total	mg/L	0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.002	0.001	0.002	0.001	0.001	<0.002	0.005	<0.002	0.002
Aluminum (Al)-Dissolved	mg/L	2.0	0.018	0.014	0.014	0.021	0.022	0.018	0.017	0.034	0.03	0.02	0.007	0.052	0.014	0.011	0.022
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (As)-Dissolved	mg/L		0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.00019	0.0002	0.00019	0.0002	0.0002	0.0002	0.0003	<0.0001	0.0002	0.0001
Barium (Ba)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00216	0.00202	0.0019	0.00244	0.00212	0.00142	<0.003	0.003	<0.003	0.00256
Beryllium (Be)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Boron (B)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	0.002	0.003	<0.001	<0.001	<0.001	<0.004	<0.004	<0.004	<0.001
Cadmium (Cd)-Dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00037	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Dissolved	mg/L		0.945	0.978	0.988	1.29	1.61	0.98	1.03	1.03	1.33	0.95	1.13	1.24	1.1	0.98	<0.5
Chromium (Cr)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0002	0.0002	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0003
Cobalt (Co)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00002
Copper (Cu)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.0009	0.001	0.001	0.0014	0.0019	0.0014	0.0049	0.0051	<0.0010	0.0015
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	0.02	<0.01	<0.01	<0.10
Lead (Pb)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	0.00017	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	0.00022
Lithium (Li)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	<0.001	0.001	0.002	<0.001	<0.001	<0.001				
Magnesium (Mg)-Dissolved	mg/L		0.426	0.436	0.427	0.631	0.66	0.419	0.452	0.463	0.66	0.46	0.5	0.56	0.5	<0.50	<0.5
Manganese (Mn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.00097	0.00046	0.00102	0.00158	0.00372	0.00108	<0.001	<0.001	<0.001	<0.010
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.0002	<0.0002	<0.0001	<0.00005
Molybdenum (Mo)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	<0.0003	<0.0003	<0.00005
Nickel (Ni)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0003	0.0003	0.0004	0.0003	0.0004	<0.0001	0.0002	0.0002	0.00005
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5
Selenium (Se)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0006
Silicon (Si)-Dissolved	mg/L		0.252	0.252	0.209	0.425	0.33	0.22	0.21	0.37	0.71	0.37	0.29	0.28	0.19	0.23	0.23
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.8	0.6	0.8	<0.5
Strontium (Sr)-Dissolved	mg/L		0.009	0.01	0.013	0.007	0.01	0.0091	0.0061	0.0056	0.0065	0.0052	0.0048			0.0043	0.0037
Thallium (Tl)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00005
Tin (Sn)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0003	0.0003	0.0002	0.0002	<0.0001	<0.0001				
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01				
Uranium (U)-Dissolved	mg/L		<0.0005	<0.0005	<0.00005	0.00015	0.00014				0.00025		0.00023	0.00014	0.00012	0.00012	0.00013
Vanadium (V)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0001
Zinc (Zn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.001	0.002	0.001	0.001	0.001	0.003	0.011	<0.002	<0.002	<0.001
Oil and Grease	mg/L	5.0															
Total Inorganic Carbon	mg/L													<1	1	2	<0.1
Total Organic Carbon	mg/L		4.3	2.8	2.4	3.7	4	3.8	3.1	0.62	4.4			3	3	2	2.7
BOD	mg/L	25															
Fecal Coleform	CFU/100 mL	20															

JER-WQ5

Sample ID	Units	PKCA Discharge Criteria	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	CL-03	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5
Date Sampled			15-Jul-95	19-Aug-95	12-Sep-95	23-Nov-95	16-Apr-96	15-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	28-Jun-05	29-Jul-05	28-Aug-05	21-Jun-06
Field Water Temperature	deg C																10.13
Field Conductivity	uS/cm																11
Field DO	%																
Field DO	mg/L																13.75
Field pH																	5.65
Field ORP	mV																201.00
Balance (+ions/-ions)	Ratio													0.71	0.93	1	0.33

JER-WQ5

Sample ID	Units	PKCA Discharge Criteria	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5
Date Sampled			11-Jul-06	6-Aug-06	5-Sep-06	24-Jun-07	16-Jul-07	25-Aug-07	23-Sep-07
Time Sampled			M	M	M	14:14	00:00	13:00	10:10
Lab Sample ID			Jun-04	L420594-17	06-10853	L522053-2	L531523-5	L546749-3	L557895-5
Hardness (as CaCO3)	mg/L		<6		<6	6.44	5.15	6.57	6.4
Conductivity	uS/cm		12		15	18.1	17.4	19.4	18.5
pH	pH	6.0 - 8.8	6.77		6.89	6.38	6.84	6.88	7.09
Total Dissolved Solids	mg/L	4000	<4		17	18.0	12.0	19.0	16.0
Total Suspended Solids	mg/L	25	<2		<2	<3	<3	<3	<3
Turbidity	NTU		2		1	1.15	0.51	0.39	0.43
Ammonia as N	mg/L	12	0.01	<0.005	<0.01	0.0116	0.0099	0.0062	0.0092
Acidity (as CaCO3)	mg/L		2		2	2.5	2.1	2.1	1.4
Alkalinity, Bicarbonate (as CaCO3)	mg/L		9		10	4.3	5.2	4.9	6.2
Alkalinity, Carbonate (as CaCO3)	mg/L		<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		8		8	4.3	5.2	4.9	6.2
Chloride (Cl)	mg/L	1000	0.2		0.5	0.63	<0.5	0.60	0.65
Fjuoride (F)	mg/L		0.03		0.04				
Sulfate (SO4)	mg/L		<0.5		2.0	1.60	1.06	1.50	1.74
Nitrate (as N)	mg/L	56	<0.05		0.06	0.280	0.0536	0.196	0.221
Nitrite (as N)	mg/L	5.0	<0.05		<0.05	<0.001	<0.001	<0.001	0.0013
Total Kjeldahl Nitrogen	mg N/L		<0.2		<0.2	-	-	-	-
Ortho Phosphate as P	mg/L		<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L					0.0021	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4				0.0059	0.0029	0.0031	0.0025
Aluminum (Al)-Total	mg/L	3.0	0.0566	0.0253	0.0177	0.0361	0.0199	0.0151	0.0092
Antimony (Sb)-Total	mg/L		<0.00005	0.0000073	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0002	0.00019	0.0002	0.00020	0.00019	0.00018	0.00018
Barium (Ba)-Total	mg/L		0.00168	0.0016	0.00155	0.00289	0.00171	0.00177	0.00157
Beryllium (Be)-Total	mg/L		<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L					<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.001	0.012	0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		0.80	0.994	1.29	2.95	1.06	1.39	1.35
Chromium (Cr)-Total	mg/L	0.170	0.0012	0.000125	0.0020	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.00005	0.0000267	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	<0.001	0.00151	<0.001	0.00096	0.00080	0.00089	0.00074
Iron (Fe)-Total	mg/L		<0.10	0.0231	<0.10	0.039	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.005	0.00091	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.17	0.454	0.66	0.780	0.579	0.773	0.731
Manganese (Mn)-Total	mg/L		<0.01	0.00285	<0.01	0.00565	0.00272	0.00231	0.00157
Mercury (Hg)-Total	mg/L		<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00005	0.000086	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	0.0003	0.000323	0.0003	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.5	0.343	<0.5	0.57	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

JER-WQ5

Sample ID	Units	PKCA Discharge Criteria	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5
Date Sampled			11-Jul-06	6-Aug-06	5-Sep-06	24-Jun-07	16-Jul-07	25-Aug-07	23-Sep-07
Silicon (Si)-Total	mg/L		0.14	0.252	0.28	0.332	0.213	0.149	0.149
Silver (Ag)-Total	mg/L		<0.0001	0.0000047	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<0.5	0.511	<0.5	1.21	0.56	0.80	0.76
Strontium (Sr)-Total	mg/L		0.0046	0.00451	0.0054	0.00823	0.00523	0.00684	0.00692
Thallium (Tl)-Total	mg/L		<0.00005	0.0000011	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.0001	<0.0000300	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		0.0008	0.000294	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00011	0.000138	0.00014	0.000160	0.000152	0.000132	0.000109
Vanadium (V)-Total	mg/L		<0.0005	0.0000732	0.0014	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.007	0.00811	0.002	0.0058	0.0011	0.0020	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.018	0.0196	0.014	0.0230	0.0201	<0.006	0.0061
Antimony (Sb)-Dissolved	mg/L		<0.00005	0.000007	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	0.00019	0.0003	0.00019	0.00017	0.00017	0.00016
Barium (Ba)-Dissolved	mg/L		0.00701	0.00157	0.00132	0.00245	0.00162	0.00156	0.00152
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L					<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.001	0.0111	<0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	0.0000125	0.00002	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.0	0.991	1.3	1.33	1.11	1.37	1.37
Chromium (Cr)-Dissolved	mg/L		<0.0003	0.000121	0.0011	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00002	0.0000267	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0027	0.00151	0.0010	0.00091	0.00088	<0.00080	0.00076
Iron (Fe)-Dissolved	mg/L		<0.10	0.0218	<0.10	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	0.000091	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.0010	0.00084	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.4	0.447	0.6	0.754	0.579	0.762	0.723
Manganese (Mn)-Dissolved	mg/L		<0.010	0.00278	<0.010	0.00189	0.000855	<0.000050	0.000165
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		0.00020	0.0000424	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.00025	0.000305	0.00024	0.00051	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	0.335	<0.5	0.53	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.14	0.246	0.29	0.286	0.219	0.131	0.127
Silver (Ag)-Dissolved	mg/L		<0.00005	0.0000026	<0.00005	0.000013	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<0.5	0.51	0.7	0.81	0.58	0.79	0.76
Strontium (Sr)-Dissolved	mg/L		0.0060	0.00447	0.0053	0.00673	0.00530	0.00680	0.00685
Thallium (Tl)-Dissolved	mg/L		<0.00005	0.000001	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.0001	<0.00003	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L		<0.0005	0.000292	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00014	0.000134	0.00011	0.000156	0.000127	0.000101	0.000089
Vanadium (V)-Dissolved	mg/L		0.0002	0.0000717	0.0007	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.002	0.00374	0.005	<0.0010	<0.0010	<0.0010	0.0011
Oil and Grease	mg/L	5.0				-	0.65	-	-
Total Inorganic Carbon	mg/L		<0.1		1.3	0.65	3.32	0.89	0.85
Total Organic Carbon	mg/L		2.7		2.4	3.85	-	3.55	3.22
BOD	mg/L	25					-	-	-
Fecal Coleform	CFU/100 mL	20					-	-	-

JER-WQ5

Sample ID	Units	PKCA Discharge Criteria	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5	JER-WQ5
Date Sampled			11-Jul-06	6-Aug-06	5-Sep-06	24-Jun-07	16-Jul-07	25-Aug-07	23-Sep-07
Field Water Temperature	deg C		14.21	16.5	8.97	6.68	17.96	8.01	2.08
Field Conductivity	uS/cm		11	6	11	32	16	15	17
Field DO	%					222.4	103.5	-	106.7
Field DO	mg/L		9.65		11.10	22.18	9.71	-	14.7
Field pH			6.02	7.7	6.39	6.57	7.15	7.06	8.46
Field ORP	mV		361.80		247.70	114.3	170.9	243.0	155.6
Balance (+ions/-ions)	Ratio		0.67		0.67				

JER-WQ6

Sample ID	Units	PKCA Discharge Criteria	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	JER-WQ6	JER-WQ6	JER-WQ6
Date Sampled			15-Jul-95	19-Aug-95	12-Sep-95	23-Nov-95	16-Apr-96	14-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	18-May-05	29-Jul-05	30-Aug-05
Time Sampled			12:00	11:27	13:37	11:35	16:55	14:03	16:45	13:19	11:17	18:12	10:40			
Lab Sample ID																
Hardness (as CaCO3)	mg/L		4.17	4.35	4.44	6	6.84	4.39	4.94	4.58	6.58	4.14	4.83	6	<6	<6
Conductivity	uS/cm										6.59	12	9	17.3	13	13
pH	pH	6.0 - 8.8	6.35	6.64	6.8	6.77	6.61	6.5	6.85	6.83		6.03	6.33	7.1	6.75	6.25
Total Dissolved Solids	mg/L	4000	10	8	10	14	15	8	7	8	13			7	<15	12
Total Suspended Solids	mg/L	25	<1	<1	2	<1	<1	1	3	1	1	<1	<1	<3	<2	<2
Turbidity	NTU											0.4	0.5	0.15	2	2
Ammonia as N	mg/L	12	0.014	0.009	<0.005	0.012	0.028	0.007	<0.005	0.011	0.24			0.037	<0.1	<0.1
Acidity (as CaCO3)	mg/L		1.7	3	1.9	3.5	1.8	1	1	2	2		<5		2	2
Alkalinity, Bicarbonate (as CaCO3)	mg/L		4.9	3.6	4.2	5.7	5.4	4	3.2	4.2	6			6	7	8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1	<1	<1		<5	<1		<1
Alkalinity, Hydroxide (as CaCO3)	mg/L												<5	<1		<1
Alkalinity, Total (as CaCO3)	mg/L		4.9	4.2	4.2	5.7	5.4	4	3.2	4.2	6	4	4	5	6	7
Chloride (Cl)	mg/L	1000	0.9	<0.5	0.7	0.8	1.3	0.6	0.7	0.8	0.8	1.3	<0.5	<1	0.2	0.3
Fluoride (F)	mg/L		0.03	0.02	0.02	0.03	0.04	0.03	0.03	0.04	0.04				0.05	<0.02
Sulfate (SO4)	mg/L		<1	<1	1.3	1.9	1.5	<1	<1	<1	1	<1	<1	1.27	<0.5	0.8
Nitrate (as N)	mg/L	56	0.011	<0.005	<0.005	0.02	0.011	<0.005	<0.005	0.066	0.025	0.021	0.008	<0.002	<0.05	0.09
Nitrite (as N)	mg/L	5.0	0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	0.001			<0.006	<0.05	<0.05
Total Kjeldahl Nitrogen	mg N/L															
Ortho Phosphate as P	mg/L		0.001	<0.001	0.002	<0.001	0.003	0.001	0.002	0.003	<0.001			<0.001	<0.2	<0.2
Total Dissolved Phosphate As P	mg/L		0.006	<0.001	0.002	<0.001	0.003	0.002	0.002	0.005	0.002				<0.005	<0.005
Total Phosphate as P	mg/L	0.4	0.006	<0.001	0.006	<0.001	0.004	0.005	0.004	0.007	0.005			0.004	<0.02	<0.02
Aluminum (Al)-Total	mg/L	3.0	0.035	0.026	0.035	0.022	0.024	0.027	0.021	0.058	0.041	0.027	0.014	0.0137	0.021	0.019
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.0001	0.0002
Arsenic (As)-Total	mg/L	0.10	<0.0001	<0.0001	<0.0001	0.001	0.0003	0.00018	0.00665	0.00016	0.0002	0.0002	0.0002	0.0002	<0.0004	<0.0004
Barium (Ba)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00211	0.00206	0.00232	0.00277	0.00204	0.00138	0.00178	<0.005	<0.005
Beryllium (Be)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005
Bismuth (Bi)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
Boron (B)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	0.022	0.003	0.001	<0.001	<0.001	0.001	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.0001
Calcium (Ca)-Total	mg/L		0.977	1.05	1.08	1.43	1.71	0.98	1.08	1.06	1.52	0.95	1.1	1.34	1.13	1.08
Chromium (Cr)-Total	mg/L	0.170	<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0007	0.0002	<0.0005	<0.0005	<0.0005	0.0001	<0.0009	<0.0009
Cobalt (Co)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Cu)-Total	mg/L	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.0009	0.0012	0.001	0.0017	0.001	0.0009	0.001	<0.001	<0.001
Iron (Fe)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	0.03	0.02	0.03	0.02	<0.03	0.04		<0.10	0.02
Lead (Pb)-Total	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	0.00008	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001
Lithium (Li)-Total	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	<0.001	<0.001	0.002	<0.001	<0.001	<0.001			
Magnesium (Mg)-Total	mg/L		0.445	0.439	0.467	0.646	0.7	0.425	0.434	0.524	0.74	0.47	0.5	0.698	0.56	0.53
Manganese (Mn)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.003	0.00717	0.00302	0.00209	0.00663	0.0029	0.0011	<0.01	0.002
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00002	<0.0002	<0.0001
Molybdenum (Mo)-Total	mg/L	1.50	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00006	<0.0005	<0.0005
Nickel (Ni)-Total	mg/L	0.10	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0004	0.0003	0.0005	0.0003	0.0003	0.00029	<0.0006	<0.0006
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.36	<0.5	<0.5

JER-WQ6

Sample ID	Units	PKCA Discharge Criteria	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	JER-WQ6	JER-WQ6	JER-WQ6
Date Sampled			15-Jul-95	19-Aug-95	12-Sep-95	23-Nov-95	16-Apr-96	14-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	18-May-05	29-Jul-05	30-Aug-05
Selenium (Se)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0008	<0.0008
Silicon (Si)-Total	mg/L		0.277	0.258	0.238	0.39	0.34	0.23	0.23	0.3	0.77	0.38	0.3		0.19	0.18
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0002	<0.0002
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.584	0.6	0.8
Strontium (Sr)-Total	mg/L		0.011	0.012	0.013	0.01	0.01	0.0091	0.0073	0.0058	0.0074	0.0054	0.0048	0.0059		0.0052
Thallium (Tl)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005
Tin (Sn)-Total	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0003	0.0004	0.0001	0.0001	<0.0001	<0.0001			
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Uranium (U)-Total	mg/L	1.0	<0.0005	<0.0005	<0.0005	0.00016	0.00015				0.00028		0.00026	0.00014	0.00012	0.00009
Vanadium (V)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	0.0003	0.0001	<0.001	<0.001	<0.001	<0.00005	0.0001	0.0003
Zinc (Zn)-Total	mg/L	0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.019	<0.001	0.002	<0.001	<0.001	0.001	<0.002	<0.002
Aluminum (Al)-Dissolved	mg/L	2.0	0.017	0.015	0.013	0.019	0.022	0.026	0.042	0.027	0.03	0.021	0.007	0.01	0.012	0.015
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004	<0.0001	<0.0001
Arsenic (As)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.00019	0.00028	0.00018	0.0003	0.0002	0.0002	<0.0004	<0.0001	<0.0001
Barium (Ba)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00212	0.00219	0.00255	0.0026	0.00202	0.00133	0.0018	<0.003	<0.003
Beryllium (Be)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001
Bismuth (Bi)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005		
Boron (B)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	0.002	0.006	0.003	0.001	0.001	0.001	0.002	<0.004	<0.004
Cadmium (Cd)-Dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium (Ca)-Dissolved	mg/L		0.943	1.02	1.02	1.37	1.64	1.04	1.1	1.09	1.46	0.93	1.07	1.4	1.1	1.03
Chromium (Cr)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	0.0002	0.0003	0.0001	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004
Cobalt (Co)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005
Copper (Cu)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.0008	0.0013	0.0009	0.0016	0.001	0.0009	0.0008	0.0036	<0.0010
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.005	<0.01	<0.01
Lead (Pb)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	0.00021	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	0.0001
Lithium (Li)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	<0.001	0.005	0.002	<0.001	<0.001	<0.001			
Magnesium (Mg)-Dissolved	mg/L		0.441	0.439	0.46	0.628	0.66	0.433	0.532	0.451	0.71	0.44	0.5	0.68		<0.50
Manganese (Mn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.00095	0.00314	0.00282	0.00043	0.00416	0.00111	0.001	<0.001	<0.001
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005		<0.0002	<0.0001
Molybdenum (Mo)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0002	<0.0003	<0.0003
Nickel (Ni)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0003	0.0003	0.0005	0.0004	0.0003	0.0002	0.0003	0.0003
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.4	<0.5	<0.5
Selenium (Se)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004
Silicon (Si)-Dissolved	mg/L		0.253	0.258	0.221	0.395	0.33	0.21	0.21	0.26	0.72	0.37	0.29		0.18	0.17
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00005	<0.00005
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.7	0.7	0.7
Strontium (Sr)-Dissolved	mg/L		0.011	0.011	0.013	0.01	0.01	0.0091	0.0076	0.0065	0.0072	0.0053	0.0047	0.0067		0.0046
Thallium (Tl)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002
Tin (Sn)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.3	<0.3	0.0002	0.0002	0.0001	0.0001	<0.0001	<0.0001	<0.0002		
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0003		
Uranium (U)-Dissolved	mg/L		<0.0005	<0.0005	<0.00005	0.00015	0.00015				0.00027		0.00024	0.0001	0.0001	0.0001
Vanadium (V)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.0005	<0.0005
Zinc (Zn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.002	0.002	0.002	0.001	0.001	0.001	0.004	<0.002	<0.002
Oil and Grease	mg/L	5.0														
Total Inorganic Carbon	mg/L													1.2	1	2
Total Organic Carbon	mg/L		3.2	2.7	2.5	3.7	3.9	3.4	3	0.66	4.8			2.7	3	2
BOD	mg/L	25														

JER-WQ6

Sample ID	Units	PKCA Discharge Criteria	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	CL-04	JER-WQ6	JER-WQ6	JER-WQ6
Date Sampled			15-Jul-95	19-Aug-95	12-Sep-95	23-Nov-95	16-Apr-96	14-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	18-May-05	29-Jul-05	30-Aug-05
Fecal Coleform	CFU/100 mL	20														
Field Water Temperature	deg C															
Field Conductivity	uS/cm															
Field DO	%															
Field DO	mg/L															
Field pH																
Field ORP	mV															
Balance (+ions/-ions)	Ratio													Low EC	1.06	1

JER-WQ6

Sample ID	Units	PKCA Discharge Criteria	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ06	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6
Date Sampled			8-Apr-06	27-Jun-06	11-Jul-06	7-Aug-06	10-Sep-06	17-Dec-06	27-Apr-07	29-Jul-07	26-Aug-07	23-Sep-07	08-Dec-07	17-Dec-07
Time Sampled			M	M	M	M	M	M	14:30	09:30	09:30	11:25	12:45	13:52
Lab Sample ID			Jun-73	Jun-03	Jun-05	L420594-18	06-11253	L464346-4	L501255-7	L535988-2	L546749-15	L557895-10	L585854-7	L587890-1
Hardness (as CaCO3)	mg/L		<6.0	<6	<6		<6	8.53	5.63	5.5	5.13	6.07	5.75	6.89
Conductivity	uS/cm		17	15	14		14	22.3	15.3	15.0	15.4	16.1	13.8	18.9
pH	pH	6.0 - 8.8	6.82	6.75	6.81		6.73	6.78	6.73	6.70	6.89	7.00	6.71	8.56
Total Dissolved Solids	mg/L	4000	13	13	4		8	17	<15	13.0	14.0	<15	17	16
Total Suspended Solids	mg/L	25	<2	<2	<2		<2	<2	<3	<3	<3	<3	<3	<3
Turbidity	NTU		<1	2	2		1	1.16	0.13	0.48	0.37	0.33	0.24	0.45
Ammonia as N	mg/L	12	<0.1	0.03	0.01	<0.005	0.01	0.0199	0.0337	0.0080	0.0093	0.0131	0.0122	0.0244
Acidity (as CaCO3)	mg/L		<1	2	4		1	2.2	1.2	1.1	1.9	1.8	1.6	<1.0
Alkalinity, Bicarbonate (as CaCO3)	mg/L		11	9	9		11	10.2	4.7	4.8	4.4	4.6	4.4	5.6
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		9	7	7		9	10.2	4.7	4.8	4.4	4.6	4.4	5.6
Chloride (Cl)	mg/L	1000	0.4	0.2	0.2		0.2	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride (F)	mg/L		0.04	0.04	0.03		0.03							
Sulfate (SO4)	mg/L		0.6	1.2	<0.5		<0.5	1.66	1.14	1.09	1.11	1.77	1.11	1.76
Nitrate (as N)	mg/L	56	<0.05	<0.05	<0.05		<0.05	0.0917	0.0071	0.0223	0.0524	0.0398	0.0386	0.0395
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L				<0.2				-	-	-	-	0.137	-
Ortho Phosphate as P	mg/L		<0.20	<0.20	<0.20		<0.20	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L							0.0024	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4						0.0086	0.0042	0.0033	0.0023	0.0026	0.0025	0.0034
Aluminum (Al)-Total	mg/L	3.0	0.013	0.0332	0.0276	0.0217	0.0185	0.0162	0.0148	0.0183	0.0141	0.0128	0.0104	0.013
Antimony (Sb)-Total	mg/L		<0.0001	<0.00005	<0.00005	0.0000059	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0002	<0.0002	0.000171	<0.0002	0.00021	0.00016	0.00016	0.00018	0.00015	0.00015	0.00017
Barium (Ba)-Total	mg/L		<0.005	0.00212	0.00167	0.00161	0.00182	0.0025	0.00174	0.00188	0.00179	0.00210	0.00171	0.00237
Beryllium (Be)-Total	mg/L		<0.0005	<0.0001	<0.0001	0.0000052	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L								<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	0.001	<0.001	0.0195	0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0001	<0.00005	<0.00005	<0.00005	0.00003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.28	1.07	0.88	0.998	1.04	1.83	1.22	1.24	1.10	1.37	1.25	1.53
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0005	0.0011	0.000372	0.0033	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.00005	<0.00005	0.0000149	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	<0.001	0.0011	<0.001	0.00152	<0.001	0.0014	0.00097	0.00093	0.00080	0.00083	0.00081	0.00115
Iron (Fe)-Total	mg/L		<0.10	<0.10	<0.10	0.00583	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.0001	0.00049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L				<0.005	<0.00002	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.64	<0.50	0.20	0.473	0.54	0.906	0.642	0.582	0.614	0.659	0.638	0.823
Manganese (Mn)-Total	mg/L		<0.01	<0.01	<0.01	0.00185	<0.01	0.00216	0.00113	0.00435	0.00218	0.00187	0.000639	0.000716
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000104	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	0.0008	0.0003	0.0003	0.000298	<0.0001	0.00071	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	0.302	<0.5	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

JER-WQ6

Sample ID	Units	PKCA Discharge Criteria	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ06	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6
Date Sampled			8-Apr-06	27-Jun-06	11-Jul-06	7-Aug-06	10-Sep-06	17-Dec-06	27-Apr-07	29-Jul-07	26-Aug-07	23-Sep-07	08-Dec-07	17-Dec-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.21	0.12	0.13	0.243	0.16	0.304	0.162	0.188	0.182	0.176	0.139	0.165
Silver (Ag)-Total	mg/L		<0.0002	<0.0001	<0.0001	0.0000063	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<0.5	0.7	<0.5	0.468	<0.5	0.87	0.55	0.55	0.55	0.59	0.59	0.71
Strontium (Sr)-Total	mg/L		0.0056	0.0045	0.0048	0.00443	0.0050	0.00806	0.00538	0.00547	0.00520	0.00579	0.0061	0.00671
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	0.0000114	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L				<0.0001	0.000063	<0.0001	<0.00010	0.00048	0.00152	0.00580	<0.00010	0.0019	0.00483
Titanium (Ti)-Total	mg/L				<0.0005	<0.00004	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00014	0.00014	0.00009	0.000144	0.00015	0.000215	0.000152	0.000156	0.000165	0.000137	0.000129	0.000168
Vanadium (V)-Total	mg/L		0.0003	<0.0005	<0.0005	0.000147	0.0029	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	0.006	0.002	0.00297	0.002	0.0011	<0.001	<0.001	0.0033	<0.001	<0.001	0.0047
Aluminum (Al)-Dissolved	mg/L	2.0	0.013	0.020	0.016	0.0198	0.014	0.0099	0.0109	<0.009	<0.009	0.0083	0.0087	0.0097
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.00005	<0.00005	0.0000058	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	<0.0001	0.0002	0.000167	<0.0001	0.00022	0.00016	0.00013	0.00016	0.00017	0.00015	0.00017
Barium (Ba)-Dissolved	mg/L		<0.003	<0.00005	0.0115	0.0016	0.00208	0.00253	0.00175	0.00172	0.00164	0.00204	0.00166	0.00209
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L								<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.001	<0.001	0.0165	0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.0000047	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		0.6	1.1	1.0	0.993	0.5	1.87	1.24	1.21	1.07	1.35	1.25	1.44
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0003	<0.0003	0.000366	0.0008	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	<0.00002	<0.00002	0.0000144	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		<0.0010	<0.0001	0.0036	0.00152	<0.0001	0.00117	0.00086	<0.00090	<0.00080	0.00075	<0.00090	0.00091
Iron (Fe)-Dissolved	mg/L		<0.10	<0.10	<0.10	0.00583	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.0000279	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L				<0.0010	<0.00002	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		<0.5	<0.5	0.4	0.467	0.4	0.938	0.618	0.603	0.598	0.657	0.637	0.8
Manganese (Mn)-Dissolved	mg/L		<0.010	<0.010	<0.010	0.00183	<0.010	0.000081	0.000161	<0.000070	<0.000050	0.000084	0.000081	0.000208
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.00005	<0.00005	0.0000198	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.0001	<0.00005	0.00035	0.000293	0.00025	0.00127	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	0.302	<0.5	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.19	0.14	0.13	0.234	0.14	0.284	0.147	0.183	0.153	0.179	0.13	0.152
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.0000045	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<0.5	<0.5	<0.5	0.467	<0.5	0.89	0.54	0.54	0.53	0.61	0.59	0.73
Strontium (Sr)-Dissolved	mg/L		0.0055	0.0038	0.0064	0.00437	0.0052	0.00823	0.00534	0.00520	0.00485	0.00578	0.00562	0.00646
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00005	<0.00005	0.0000106	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L				<0.0001	0.0000468	<0.0001	<0.00010	0.00051	0.00123	0.00292	<0.00010	0.00171	0.00508
Titanium (Ti)-Dissolved	mg/L				<0.0005	<0.00004	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00011	0.00014	0.00014	0.000135	0.00012	0.00015	0.000134	0.000125	0.000125	0.000109	0.000117	0.000151
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0001	0.0002	0.000144	0.0003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.002	<0.001	0.002	0.00228	0.003	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	0.0054
Oil and Grease	mg/L	5.0							-	-	-	-	-	-
Total Inorganic Carbon	mg/L		<1	0.2	<0.1		1.0	1.25	0.79	0.65	0.74	0.84	0.7	0.98
Total Organic Carbon	mg/L		3	4.4	2.7		2.5	4.29	3.02	3.54	3.04	3.24	3.01	3.48
BOD	mg/L	25							-	-	-	-	-	-

JER-WQ6

Sample ID	Units	PKCA Discharge Criteria	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ06	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6	JER-WQ6
Date Sampled			8-Apr-06	27-Jun-06	11-Jul-06	7-Aug-06	10-Sep-06	17-Dec-06	27-Apr-07	29-Jul-07	26-Aug-07	23-Sep-07	08-Dec-07	17-Dec-07
Fecal Coleform	CFU/100 mL	20							-	-	-	-	-	-
Field Water Temperature	deg C		0.39	6.93	12.23	15.9	10.23	0.3	2.67	12.27	8.56	4.55	0.58	0.89
Field Conductivity	uS/cm		14	12	11	6	9	22	15	14	12	15	17	17
Field DO	%								124.8	103.2	-	110.8	104.5	107.2
Field DO	mg/L		13.53	14.75	10.99		11.58	9.49	16.86	11.02	-	14.33	15.09	14.88
Field pH			6.17	6.09	5.72	7.8	5.31	6.47	6.01	6.56	6.67	7.75	7.77	5.49
Field ORP	mV		390.80	264.60	423.70		291.70	329	62.9	323.0	---	188.2	145.1	43.6
Balance (+ions/-ions)	Ratio		0.39	0.68	0.73		0.30							

JER-WQ7

Sample ID	Units	PKCA Discharge Criteria	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05
Date Sampled			15-Jul-95	19-Aug-95	10-Sep-95	23-Nov-95	16-Apr-96	14-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	7-Apr-99	5-Jul-99	2-Aug-99
Time Sampled			10:55	13:00	15:20	10:45	16:16	16:01	17:35	15:20	10:45	18:44	10:30	8:30		
Lab Sample ID																
Hardness (as CaCO3)	mg/L		4.18	4.33	4.29	6.33	6.76	4.49	4.8	4.59	6.68	4.51	61.4	7.48	5.23	5.58
Conductivity	uS/cm										6.5	12	158	22	13	12
pH	pH	6.0 - 8.8	6.41	6.77	6.92	6.76	6.88	6.5	6.89	6.54		6.19	6.76	6.63	6.48	6.41
Total Dissolved Solids	mg/L	4000	11	9	10	15	15	8	8	8	13			16	11	11
Total Suspended Solids	mg/L	25	2	<1	<1	<1	3	<1	3	4	5	<1	1	<3	<3	<3
Turbidity	NTU											0.4	0.3			
Ammonia as N	mg/L	12	0.013	0.005	<0.005	0.017	0.028	<0.005	<0.005	0.007	0.018			0.011	<0.005	<0.005
Acidity (as CaCO3)	mg/L		1.9	2.4	1.9	4.3	1.8	2	1.7	2	2					
Alkalinity, Bicarbonate (as CaCO3)	mg/L		5.6	5	4.1	6.2	5.5	4.1	3.7	4	5					
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	1	<1	<1	<1					
Alkalinity, Hydroxide (as CaCO3)	mg/L															
Alkalinity, Total (as CaCO3)	mg/L		5.6	4	4.1	6.2	5.5	4.1	3.7	4	5	4	4	6	4	5
Chloride (Cl)	mg/L	1000	0.9	0.5	0.7	0.8	1	0.6	0.7	0.8	1.3	1.2	39	1.3	0.5	<0.5
Fjuoride (F)	mg/L		0.03	0.02	0.02	0.03	0.06	<0.02	0.03	0.03	0.04					
Sulfate (SO4)	mg/L		<1	<1	1.6	2.1	1.3	<1	<1	<1	<1	1	2	2	1	1
Nitrate (as N)	mg/L	56	0.013	<0.005	<0.005	0.028	0.009	<0.005	<0.005	0.007	0.018	0.018	2.5	0.022	0.024	<0.005
Nitrite (as N)	mg/L	5.0	0.001	0.001	0.001	0.001	0.001	<0.001	0.001	0.001	0.001			0.002	0.002	<0.001
Total Kjeldahl Nitrogen	mg N/L															
Ortho Phosphate as P	mg/L		<0.001	<0.001	<0.001	<0.001	0.006	0.002	0.006	0.004	0.001					
Total Dissolved Phosphate As P	mg/L		0.002	0.003	<0.001	<0.001	0.006	0.002	0.006	0.004	0.002			0.027	0.003	0.004
Total Phosphate as P	mg/L	0.4	0.005	0.005	0.003	<0.001	0.007	0.007	0.007	0.009	0.003			0.039	0.008	0.003
Aluminum (Al)-Total	mg/L	3.0	0.034	0.026	0.38	0.022	0.028	0.027	0.033	0.061	0.031	0.026	0.031	0.015	0.023	0.018
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	0.00008	<0.00005	<0.00005
Arsenic (As)-Total	mg/L	0.10	<0.0001	<0.0001	<0.0001	0.0001	0.0002	0.0002	0.00023	0.00018	0.0002	0.0002	0.0001	0.0003	0.0002	0.0002
Barium (Ba)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00226	0.00214	0.00236	0.00281	0.00191	0.0379	0.00267	0.00181	0.00196
Beryllium (Be)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth (Bi)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (B)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	0.003	0.006	0.001	<0.001	0.005	0.001	<0.001	<0.001
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.01	1.08	1.72	1.4	1.7	1.01	1.07	1.09	1.47	0.93	18.2	1.68	1.15	1.24
Chromium (Cr)-Total	mg/L	0.170	<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0002	0.0001	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001
Copper (Cu)-Total	mg/L	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.0009	0.0009	0.001	0.0014	0.0011	0.0015	0.0016	0.0009	0.001
Iron (Fe)-Total	mg/L		<0.03	<0.03	0.031	<0.03	<0.03	0.03	0.02	0.03	<0.01	<0.03	0.03	0.11	<0.03	<0.03
Lead (Pb)-Total	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	0.00005	<0.00005	0.00006	<0.00005	0.00005	0.00029	0.00023	<0.00005
Lithium (Li)-Total	mg/L		<0.015	<0.015	0.023	<0.015	<0.01	<0.001	0.002	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium (Mg)-Total	mg/L		0.448	0.456	0.466	0.7	0.66	0.435	0.485	0.467	0.69	0.43	4.7	0.81	0.6	0.6
Manganese (Mn)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.00337	0.0025	0.00318	0.00153	0.00577	0.0477	0.00206	0.00529	0.00267
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum (Mo)-Total	mg/L	1.50	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0003	0.0004	0.0004	0.0004	0.0012	0.0005	0.0004	0.0003
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

JER-WQ7

Sample ID	Units	PKCA Discharge Criteria	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05
Date Sampled			15-Jul-95	19-Aug-95	10-Sep-95	23-Nov-95	16-Apr-96	14-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	7-Apr-99	5-Jul-99	2-Aug-99
Selenium (Se)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon (Si)-Total	mg/L		0.275	0.265	0.236	0.425	0.32	0.22	0.22	0.3	0.56	0.37	2.35	0.39	0.48	0.27
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	<0.00001
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	3	<2	<2	<2
Strontium (Sr)-Total	mg/L		0.011	0.012	0.017	0.01	0.009	0.0091	0.0066	0.0066	0.0084	0.0051	0.138	0.008	0.0051	0.0055
Thallium (Tl)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin (Sn)-Total	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0002	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (U)-Total	mg/L	1.0	<0.0005	<0.0005	<0.0005	0.00018	0.00015				0.00023		0.0001	0.00022		
Vanadium (V)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Zn)-Total	mg/L	0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	0.001	0.003	0.002	0.012	0.002	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.017	0.015	0.015	0.028	0.026	0.025	0.017	0.032	0.025	0.02	0.033	0.012	0.015	0.014
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005
Arsenic (As)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.00018	0.00019	0.00018	0.0001	0.0002	0.0001	0.0003	0.0002	0.0002
Barium (Ba)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00225	0.00205	0.00215	0.00271	0.00203	0.0375	0.0026	0.00185	0.00198
Beryllium (Be)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth (Bi)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (B)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	0.002	0.002	0.004	0.001	0.001	0.005	0.001	<0.001	<0.001
Cadmium (Cd)-Dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Dissolved	mg/L		0.965	1.01	0.995	1.41	1.59	1.1	1.07	1.09	1.47	1.02	17.3	1.67	1.15	1.24
Chromium (Cr)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0002	<0.0001	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005
Cobalt (Co)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Copper (Cu)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.0009	0.0009	0.0009	0.0014	0.001	0.0017	0.0017	0.0009	0.0009
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	0.04	<0.03	<0.03
Lead (Pb)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	<0.00005	<0.00005	<0.00005	<0.00005	0.00014	0.00021	0.00021	<0.00005
Lithium (Li)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium (Mg)-Dissolved	mg/L		0.429	0.436	0.438	0.68	0.67	0.423	0.519	0.453	0.69	0.48	4.4	0.8	0.6	0.6
Manganese (Mn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.0013	0.00063	0.00115	0.00046	0.00385	0.0459	0.00101	0.00352	0.00102
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum (Mo)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0003	0.0003	0.0004	0.0003	0.0013	0.0004	0.0003	0.0003
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium (Se)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon (Si)-Dissolved	mg/L		0.254	0.25	0.218	0.422	0.32	0.2	0.21	0.28	0.55	0.39	2.23	0.39	0.28	0.28
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	<2	<2
Strontium (Sr)-Dissolved	mg/L		0.011	0.01	0.013	0.01	0.011	0.0091	0.0065	0.0065	0.0081	0.0052	0.133	0.0079	0.0051	0.0056
Thallium (Tl)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005
Tin (Sn)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0006	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (U)-Dissolved	mg/L		<0.0005	<0.0005	<0.00005	0.00016	0.00015				0.00022		0.00011	0.00023		
Vanadium (V)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Zn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.001	0.001	<0.001	<0.001	<0.001	0.003	0.01	<0.001	<0.001
Oil and Grease	mg/L	5.0														
Total Inorganic Carbon	mg/L															
Total Organic Carbon	mg/L		3.2	2.8	2.5	3.9	4.4	3.8	3	0.67	4.5			5.8	3.6	4.3
BOD	mg/L	25														

JER-WQ7

Sample ID	Units	PKCA Discharge Criteria	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05	CL-05
Date Sampled			15-Jul-95	19-Aug-95	10-Sep-95	23-Nov-95	16-Apr-96	14-Jul-96	10-Aug-96	3-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	7-Apr-99	5-Jul-99	2-Aug-99
Fecal Coleform	CFU/100 mL	20														
Field Water Temperature	deg C															
Field Conductivity	uS/cm															
Field DO	%															
Field DO	mg/L															
Field pH																
Field ORP	mV															
Ion Balance	Ratio															

JER-WQ7

Sample ID	Units	PKCA Discharge Criteria	CL-05	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7
Date Sampled			1-Sep-99	30-Jun-05	29-Jul-05	26-Aug-05	18-Jun-06	11-Jul-06	7-Aug-06	10-Sep-06	26-Jun-07	17-Jul-07	25-Aug-07	23-Sep-07
Time Sampled											13:30	00:00	16:10	10:25
Lab Sample ID							Jun-94	Jun-06	L420594-19	06-11254	L523057-3	L531523-12	L546749-12	L557895-6
Hardness (as CaCO3)	mg/L		5.43	<6		<6	<6	<6		<6	5.35	5.31	5.37	5.37
Conductivity	uS/cm		13	20	13	14	14	14		14	14.4	17.3	14.7	13.1
pH	pH	6.0 - 8.8	6.73	5.72	5.66	6.91	6.76	6.81		6.75	6.45	6.89	6.86	7.09
Total Dissolved Solids	mg/L	4000	12	<15	12	12	32	12		8	10	<15	17.0	16.0
Total Suspended Solids	mg/L	25	<3	<2	2	<2	2	<2		<2	<3	<3	<3	<3
Turbidity	NTU			1	2	1	1	2		1	1.31	0.56	0.34	0.42
Ammonia as N	mg/L	12	<0.005	<0.1	<0.1	<0.1	0.02	0.01	<0.005	0.01	0.0108	0.0073	0.0090	0.0079
Acidity (as CaCO3)	mg/L			2	3	2	3	2		1	<1.0	1.7	1.6	2.0
Alkalinity, Bicarbonate (as CaCO3)	mg/L			11	7	7	8	10		11	3.9	5.4	4.3	4.4
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1		<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1		<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		5	9	6	6	6	8		9	3.9	5.4	4.3	4.4
Chloride (Cl)	mg/L	1000	0.9	0.4	0.2	0.4	0.4	0.2		0.3	<0.5	<0.5	<0.5	<0.5
Fjuoride (F)	mg/L			0.04	0.06	0.03	0.03	0.03		0.03				
Sulfate (SO4)	mg/L		2	3.4	0.9	0.7	0.8	<0.5		0.6	0.91	0.95	1.07	1.28
Nitrate (as N)	mg/L	56	0.007	0.05	<0.05	<0.05	<0.05	<0.05		<0.05	0.0408	0.0243	0.0237	0.0354
Nitrite (as N)	mg/L	5.0	0.001	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	0.0012
Total Kjeldahl Nitrogen	mg N/L							<0.2			-	-	-	-
Ortho Phosphate as P	mg/L		<0.2	<0.2		<0.2	<0.20	<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.002	<0.005	<0.005	<0.005					<0.0020	<0.0020	0.0021	<0.0020
Total Phosphate as P	mg/L	0.4	0.004	<0.02	<0.02	<0.02					0.0051	0.0022	0.0062	0.0026
Aluminum (Al)-Total	mg/L	3.0	0.021	<0.02	0.05	0.034	0.0211	0.0283	0.0219	0.0239	0.0391	0.0203	0.0246	0.0146
Antimony (Sb)-Total	mg/L		<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000062	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.0002	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00015	0.00015	0.00017	0.00017
Barium (Ba)-Total	mg/L		0.0019	<0.005	<0.005	<0.005	0.00177	0.00163	0.00164	0.00202	0.00231	0.00178	0.00189	0.00169
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.000003	0.0002	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.0005								<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.001	<0.010	<0.010	<0.010	<0.001	<0.001	0.0291	0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.000002	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.17	1.12	1.16	1.17	1.08	0.88	1.02	1.08	1.15	1.13	1.30	1.16
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0009	<0.0009	<0.0009	0.0014	0.0013	0.000268	0.0034	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.00006	<0.00005	0.0000179	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.0013	<0.001	<0.001	0.0012	0.0076	<0.001	0.00155	<0.001	0.00091	0.00088	0.00161	0.00086
Iron (Fe)-Total	mg/L		<0.03	0.05	<0.10	<0.10	<0.10	<0.10	0.00581	<0.10	0.041	<0.030	0.050	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.001					<0.005	0.00024	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.6	0.56	0.57	0.56	<0.50	0.19	0.473	0.55	0.632	0.580	0.620	0.578
Manganese (Mn)-Total	mg/L		0.00201	0.007	<0.01	<0.01	<0.01	<0.01	0.00189	<0.01	0.00562	0.00521	0.00400	0.00246
Mercury (Hg)-Total	mg/L		<0.00005	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	0.0003	<0.0006	<0.0006	<0.0006	0.0005	0.0004	0.000302	0.0002	0.00058	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<2	<0.5	<0.5	<0.5	<0.5	<0.5	0.298	<0.5	<0.50	<0.50	<0.50	<0.50

JER-WQ7

Sample ID	Units	PKCA Discharge Criteria	CL-05	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7
Date Sampled			1-Sep-99	30-Jun-05	29-Jul-05	26-Aug-05	18-Jun-06	11-Jul-06	7-Aug-06	10-Sep-06	26-Jun-07	17-Jul-07	25-Aug-07	23-Sep-07
Selenium (Se)-Total	mg/L		<0.001	<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	0.0012	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.30	0.2	0.26	0.21	0.15	0.12	0.265	0.18	0.300	0.180	0.167	0.175
Silver (Ag)-Total	mg/L		<0.00001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0000028	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<2	0.8	0.6	<0.5	<0.5	<0.5	0.457	<0.5	<0.50	0.52	0.57	0.53
Strontium (Sr)-Total	mg/L		0.0053			0.0048	0.0044	0.0046	0.0045	0.0052	0.00538	0.00511	0.00546	0.00516
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000074	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.0001					<0.0001	0.0000347	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		<0.01					<0.0005	0.000043	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.0002	0.00012	0.00017	0.00016	0.00012	0.00010	0.000144	0.00014	0.000207	0.000151	0.000165	0.000135
Vanadium (V)-Total	mg/L		<0.001	<0.0001	0.0002	0.0002	<0.0005	<0.0005	0.000123	0.0029	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.001	<0.002	<0.002	0.004	0.007	0.003	0.00395	0.003	<0.001	<0.001	<0.001	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.014	0.013	0.018	0.022	0.015	0.019	0.0186	0.013	0.0204	0.0125	<0.009	0.0080
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.0000058	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	0.0002	<0.0001	0.0003	0.0002	0.0001	0.000165	<0.0001	0.00015	0.00017	0.00015	0.00016
Barium (Ba)-Dissolved	mg/L		0.00184	<0.003	<0.003	<0.003	0.00156	0.00284	0.00159	0.00206	0.00205	0.00177	0.00169	0.00157
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.0005								<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.001	<0.004	<0.004	<0.004	<0.001	<0.001	0.0249	<0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000002	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.19	1.15	1.4	1.2	0.7	1.1	1	0.5	1.15	1.15	1.20	1.19
Chromium (Cr)-Dissolved	mg/L		<0.0005	<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	0.000261	0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.00005	<0.00005	<0.00005	0.00002	<0.00002	0.0000153	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.001	0.0039	0.0047	<0.0010	<0.0001	0.0029	0.00147	<0.0001	0.00083	0.00083	<0.00070	0.00069
Iron (Fe)-Dissolved	mg/L		<0.03	<0.01	<0.01	<0.01	<0.10	<0.10	0.00572	<0.10	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	0.0000085	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.001					<0.0010	0.00006	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.6	0.55	0.6	0.5	<0.5	0.4	0.473	0.4	0.600	0.590	0.576	0.584
Manganese (Mn)-Dissolved	mg/L		0.00058	0.003	<0.001	0.005	<0.010	<0.010	0.00184	<0.010	0.00206	0.00242	0.000062	0.000069
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.00005	<0.0003	<0.0003	<0.0003	<0.00005	0.00006	0.0000247	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0003	0.0003	0.0003	0.0002	0.00025	0.00042	0.00027	0.00025	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<2	<0.5	<0.5	<0.5	<0.5	<0.5	0.292	<0.5	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.001	<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.3	0.21	0.25	0.25	0.26	0.14	0.261	0.15	0.216	0.164	0.143	0.138
Silver (Ag)-Dissolved	mg/L		<0.00001	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	0.0000014	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<2	<0.5	<0.5	<0.5	<0.5	<0.5	0.449	<0.5	<0.50	0.54	0.55	0.55
Strontium (Sr)-Dissolved	mg/L		0.0054			0.0047	0.0044	0.0061	0.00445	0.0052	0.00522	0.00524	0.00501	0.00516
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	0.0000074	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.0001					<0.0001	<0.00003	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L		<0.01					<0.0005	<0.00004	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00019	0.00011	0.00012	0.00026	0.00011	0.00014	0.000138	0.00011	0.000161	0.000132	0.000118	0.000108
Vanadium (V)-Dissolved	mg/L		<0.001	<0.0005	<0.0005	<0.0005	0.0002	0.0003	0.000122	0.0005	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.001	0.003	0.002	<0.002	<0.001	0.004	0.00128	0.002	<0.0010	<0.0010	0.0010	0.0011
Oil and Grease	mg/L	5.0									-	0.64	-	-
Total Inorganic Carbon	mg/L			1	1	2	0.1	<0.1		1	0.62	3.18	0.70	0.71
Total Organic Carbon	mg/L		3.3	2	2		2.7	2.7		2.6	3.22	-	3.22	3.07
BOD	mg/L	25										-	-	-

JER-WQ7

Sample ID	Units	PKCA Discharge Criteria	CL-05	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7	JER-WQ7
Date Sampled			1-Sep-99	30-Jun-05	29-Jul-05	26-Aug-05	18-Jun-06	11-Jul-06	7-Aug-06	10-Sep-06	26-Jun-07	17-Jul-07	25-Aug-07	23-Sep-07
Fecal Coleform	CFU/100 mL	20										-	-	-
Field Water Temperature	deg C						5.84	14.51	15.8	11.25	6.75	16.36	11.70	3.83
Field Conductivity	uS/cm						12	12	6	9	45	21	12	12
Field DO	%										135.1	107.2	-	109
Field DO	mg/L						10.52	10.79		10.89	15.5	10.7	-	14.3
Field pH							7.00	6.12	7.7	5.65	6.81	7.30	6.92	8.29
Field ORP	mV						221.50	407.20		277.60	152.6	172.3	148.6	156.8
Ion Balance	Ratio				1.02	0.89	0.6	0.67		0.28				

JER-WQ8

Sample ID	Units	PKCA Discharge Criteria	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	JER-WQ8
Date Sampled			15-Jul-95	20-Aug-95	10-Sep-95	23-Nov-95	19-Apr-96	23-Jul-96	12-Aug-96	14-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	5-Jul-99	2-Aug-99	1-Sep-99	26-May-05
Time Sampled			9:15	16:20	10:30	13:30	08:50	21:49	15:05	12:18	12:10	13:38	10:20				
Lab Sample ID																	
Hardness (as CaCO3)	mg/L		4.3	4.35	4.19	6.45	7.8	4.64	4.85	6.97	6.66	4.46	5.15	4.99	4.93	5.07	7
Conductivity	uS/cm									5.14	6.06	12	9	13	11	16	20.5
pH	pH	6.0 - 8.8	6.38	6.76	6.56	6.65	6.25	6.41	6.76			6.16	6.29	6.29	6.72	6.95	6.7
Total Dissolved Solids	mg/L	4000	10	8	10	14	16	7	8	9	12			<15	12	12	40
Total Suspended Solids	mg/L	25	<1	<1	1	2	<1	3	2	1	1	<1	<1	<3	<3	<3	<3
Turbidity	NTU											0.4	0.4				0.15
Ammonia as N	mg/L	12	0.013	<0.005	<0.005	0.017	0.033	0.005	0.023	<0.005	0.015			<0.005	<0.005	<0.005	0.023
Acidity (as CaCO3)	mg/L		1.3	2.4	4.8	2.9	1.8	1.9	1.5	2	2					<5	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		5.4	3.7	4.2	5.2	6.2	3.2	3.5	3.2	5						8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1	<1	<1					<5	
Alkalinity, Hydroxide (as CaCO3)	mg/L															<5	
Alkalinity, Total (as CaCO3)	mg/L		5.4	4	4.2	5.2	6.2	3.2	3.5	3.2	5	4	4	5	5	5	6
Chloride (Cl)	mg/L	1000	0.7	<0.5	0.5	1.1	1.6	0.7	0.7	0.7	1.2	0.9	0.7	0.5	0.5	1	<1
Fluoride (F)	mg/L		0.03	0.02	0.02	0.03	0.03	<0.02	0.05	0.04	0.03						
Sulfate (SO4)	mg/L		<1	<1	1.5	1.4	1.6	<1	<1	<1	1	<1	1	1	1	2	1.38
Nitrate (as N)	mg/L	56	<0.005	<0.005	<0.005	0.008	0.01	<0.005	0.042	0.007	0.011	0.005	<0.005	<0.005	<0.005	<0.005	0.013
Nitrite (as N)	mg/L	5.0	0.001	<0.001	<0.001	0.001	0.001	0.001	0.001	0.001	<0.001			0.001	<0.001	<0.001	<0.002
Total Kjeldahl Nitrogen	mg N/L																
Ortho Phosphate as P	mg/L		0.001	<0.001	<0.001	<0.001	0.002	0.002	0.003	<0.001	0.001					<0.001	
Total Dissolved Phosphate As P	mg/L		0.003	0.002	0.002	<0.001	0.002	0.003	0.003	0.002	0.002			0.003	0.002	<0.002	0.001
Total Phosphate as P	mg/L	0.4	0.004	0.004	0.004	<0.001	0.005	0.005	0.005	0.003	0.005			0.007	0.004	0.003	0.004
Aluminum (Al)-Total	mg/L	3.0	0.03	0.023	0.026	0.021	0.026	0.036	0.028	0.034	0.028	0.026	0.012	0.016	0.015	0.015	0.0113
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00014
Arsenic (As)-Total	mg/L	0.10	<0.0001	<0.0001	<0.0001	0.0001	0.0003	0.00017	0.00021	0.00018	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00016
Barium (Ba)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00196	0.002	0.00215	0.00268	0.00211	0.00153	0.00173	0.0017	0.00169	0.00247
Beryllium (Be)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
Bismuth (Bi)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron (B)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	0.003	0.002	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		0.993	1.02	0.995	1.54	1.89	1.03	1.08	1.11	1.35	1.03	1.04	1.13	1.07	1.09	1.52
Chromium (Cr)-Total	mg/L	0.170	<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0002	0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00016
Cobalt (Co)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Cu)-Total	mg/L	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.001	0.001	0.0011	0.0011	0.0011	0.0008	0.0009	0.0009	0.0009	0.001
Iron (Fe)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	0.02	0.03	0.03	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03	
Lead (Pb)-Total	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Magnesium (Mg)-Total	mg/L		0.442	0.456	0.464	0.67	0.78	0.516	0.516	0.545	0.64	0.46	0.5	0.6	0.6	0.6	0.748
Manganese (Mn)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.00226	0.00288	0.00272	0.00108	0.00406	0.00197	0.00406	0.00251	0.00245	0.0039
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002
Molybdenum (Mo)-Total	mg/L	1.50	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00006
Nickel (Ni)-Total	mg/L	0.10	<0.001	<0.001	0.003	<0.001	<0.001	0.0003	0.0003	0.0003	0.0004	0.0004	0.0002	0.0003	0.0003	0.0003	0.00036
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.38

JER-WQ8

Sample ID	Units	PKCA Discharge Criteria	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	JER-WQ8
Date Sampled			15-Jul-95	20-Aug-95	10-Sep-95	23-Nov-95	19-Apr-96	23-Jul-96	12-Aug-96	14-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	5-Jul-99	2-Aug-99	1-Sep-99	26-May-05
Selenium (Se)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Silicon (Si)-Total	mg/L		0.217	0.275	0.222	0.331	0.37	0.24	0.24	0.33	0.46	0.33	0.24	0.35	0.21	0.21	
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
Strontium (Sr)-Total	mg/L		0.011	0.01	0.013	0.01	0.011	0.0059	0.006	0.0063	0.008	0.0052	0.005	0.0052	0.0052	0.0052	0.0065
Thallium (Tl)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Tin (Sn)-Total	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0001	0.0002	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Uranium (U)-Total	mg/L	1.0	<0.0005	<0.0005	<0.0005	0.00016	0.00014	0.0001			0.00017		0.0001			0.00016	0.00011
Vanadium (V)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005
Zinc (Zn)-Total	mg/L	0.50	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	0.0018
Aluminum (Al)-Dissolved	mg/L	2.0	0.014	0.016	0.013	0.018	0.022	0.024	0.03	0.035	0.021	0.017	0.005	0.011	0.012	0.011	0.01
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004
Arsenic (As)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.00017	0.00023	0.00019	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	<0.0004
Barium (Ba)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.00203	0.00197	0.00237	0.00267	0.00195	0.00123	0.00171	0.00171	0.00169	0.0023
Beryllium (Be)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth (Bi)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Boron (B)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	0.002	0.004	0.004	0.001	0.001	0.001	<0.001	<0.001	<0.001	0.004
Cadmium (Cd)-Dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00005	0.00025	0.00011	0.00005	0.00005	0.00009	<0.00005	<0.00005	<0.00005	<0.0001
Calcium (Ca)-Dissolved	mg/L		0.993	0.991	0.947	1.52	1.84	1.02	1.11	1.19	1.38	1.03	1.09	1.11	1.08	1.1	1.6
Chromium (Cr)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	0.0001	0.0002	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
Cobalt (Co)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Cu)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	0.0011	0.0011	0.0016	0.0012	0.001	0.0015	0.0009	0.0009	0.0009	<0.0006
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03	0.009
Lead (Pb)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	0.00025	0.00027	<0.00005	<0.00005	0.00019	0.00015	<0.00005	<0.00005	<0.0001
Lithium (Li)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.01	0.001	0.003	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Magnesium (Mg)-Dissolved	mg/L		0.442	0.456	0.443	0.646	0.78	0.509	0.508	0.529	0.64	0.46	0.6	0.5	0.5	0.6	0.8
Manganese (Mn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.00062	0.00064	0.00114	0.0005	0.0011	0.00064	0.00173	0.00094	0.00078	0.003
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Molybdenum (Mo)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	0.0002
Nickel (Ni)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.0003	0.0003	0.0004	0.0004	0.0007	0.0003	0.0003	0.0002	0.0003
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.3
Selenium (Se)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0004
Silicon (Si)-Dissolved	mg/L		0.213	0.234	0.205	0.321	0.37	0.23	0.24	0.32	0.49	0.32	0.29	0.25	0.21	0.21	
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.588
Strontium (Sr)-Dissolved	mg/L		0.011	0.01	0.013	0.01	0.011	0.0059	0.006	0.0065	0.008	0.0052	0.0042	0.0051	0.0053	0.0052	<1
Thallium (Tl)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin (Sn)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.3	<0.03	0.0001	0.0002	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0003
Uranium (U)-Dissolved	mg/L		<0.0005	<0.0005	<0.00005	0.00016	0.00014	0.00009			0.00018		0.00008			0.00014	0.0001
Vanadium (V)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Zinc (Zn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	0.004	0.001	0.003	0.001	0.001	0.004	0.001	0.002	<0.001	0.004
Oil and Grease	mg/L	5.0															
Total Inorganic Carbon	mg/L																2.1
Total Organic Carbon	mg/L		3.2	2.9	2.7	4.3	3.9	3.3	3.4	4.5	4.2			3.6	4.2	3.2	3.1
BOD	mg/L	25															

JER-WQ8

Sample ID	Units	PKCA Discharge Criteria	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	CL-06	JER-WQ8
Date Sampled			15-Jul-95	20-Aug-95	10-Sep-95	23-Nov-95	19-Apr-96	23-Jul-96	12-Aug-96	14-Sep-96	4-Dec-96	8-Jul-97	31-Aug-98	5-Jul-99	2-Aug-99	1-Sep-99	26-May-05
Fecal Coleform	CFU/100 mL	20															
Field Water Temperature	deg C																
Field Conductivity	uS/cm																
Field DO	%																
Field DO	mg/L																
Field pH																	
Field ORP	mV																

JER-WQ8

Sample ID	Units	PKCA Discharge Criteria	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ08	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8
Date Sampled			30-Jul-05	29-Aug-05	10-Apr-06	18-Jun-06	11-Jul-06	5-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	18-Dec-07
Time Sampled											14:00	00:00	15:15	10:40	13:25
Lab Sample ID					Jun-78	Jun-95	Jun-07	L420594-20	06-10849	L464346-6	L501255-6	L531523-4	L546749-10	L557895-7	L588743-1
Hardness (as CaCO3)	mg/L		<6	<6	<6.0	<6	<6		<6	7.58	7.6	5.08	5.43	5.37	6.18
Conductivity	uS/cm		14	12	20	14	14		12	19.9	19.5	16.3	14.4	13.0	15.3
pH	pH	6.0 - 8.8	6.6	6.36	6.93	6.83	6.82		6.83	6.7	6.51	6.91	6.85	7.06	6.49
Total Dissolved Solids	mg/L	4000	<15	<15	16	16	8		14	15	<15	12.0	18.0	13.0	13
Total Suspended Solids	mg/L	25	<2	<2	<2	<2	<2		<2	<2	<3	<3	<3	<3	<3
Turbidity	NTU		2	2	<1	1	1		1	0.47	0.32	0.61	0.43	0.44	0.31
Ammonia as N	mg/L	12	<0.1	<0.1	<0.1	0.02	0.01	<0.005	0.01	0.0145	0.0187	0.0056	0.0060	0.0066	0.0204
Acidity (as CaCO3)	mg/L		3	2	3	2	2		<1	2.1	1.3	2.0	1.7	1.8	1.6
Alkalinity, Bicarbonate (as CaCO3)	mg/L		6	8	13	8	11		8	9.2	6.5	5.3	4.6	4.5	6.2
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		5	7	11	7	9		6	9.2	6.5	5.3	4.6	4.5	6.2
Chloride (Cl)	mg/L	1000	0.2	0.2	0.5	0.4	0.3		0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride (F)	mg/L		0.06	<0.02	0.05	0.03	0.03		0.04						
Sulfate (SO4)	mg/L		<0.5	0.7	0.7	0.8	<0.5		1.7	1.43	1.40	0.87	1.00	1.19	1.22
Nitrate (as N)	mg/L	56	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.005	0.0164	<0.005	<0.005	0.0081	0.0051
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L						0.2		0.2		-	-	-	-	0.15
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.20	<0.20	<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005						0.002	0.0021	<0.0020	<0.0020	<0.0020	0.0025
Total Phosphate as P	mg/L	0.4	<0.02	<0.02						0.0065	0.0049	0.0037	0.0039	0.0033	0.0056
Aluminum (Al)-Total	mg/L	3.0	<0.02	0.02	0.012	0.0202	0.0245	0.0237	0.0164	0.0143	0.0122	0.0199	0.0137	0.0114	0.0086
Antimony (Sb)-Total	mg/L		<0.0001	0.0002	<0.0001	<0.00005	<0.00005	0.0000068	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	0.0003	0.00023	0.00019	0.00017	0.00018	0.00019	0.00019
Barium (Ba)-Total	mg/L		<0.005	<0.005	<0.005	0.00148	0.00151	0.00159	0.00153	0.0025	0.00267	0.00164	0.00160	0.00161	0.00193
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.0000032	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L										<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	0.001	<0.001	0.0341	0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0001	<0.0001	<0.00005	<0.00005	0.000007	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.05	1.1	1.70	0.87	0.89	0.99	1.12	1.69	1.60	1.09	1.17	1.18	1.37
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	<0.0005	0.0008	<0.0005	0.0020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000262	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.0015	<0.001	<0.001	<0.001	<0.001	0.00178	<0.001	0.00137	0.00101	0.00085	0.00089	0.00091	0.00935
Iron (Fe)-Total	mg/L		<0.10	0.12	<0.10	<0.10	<0.10	0.0159	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	0.07
Lead (Pb)-Total	mg/L	0.02	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L						<0.005	0.000152	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.55	0.54	0.83	<0.50	0.20	0.471	0.57	0.831	0.807	0.551	0.598	0.581	0.689
Manganese (Mn)-Total	mg/L		<0.01	0.003	<0.01	<0.01	<0.01	0.00275	<0.01	0.0018	0.00182	0.00393	0.00249	0.00184	0.000782
Mercury (Hg)-Total	mg/L		<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	0.0003	<0.0006	<0.0006	0.0003	0.0003	0.000374	0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00174
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.303	<0.5	0.52	<0.50	<0.50	<0.50	<0.50	<0.50

JER-WQ8

Sample ID	Units	PKCA Discharge Criteria	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ08	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8
Date Sampled			30-Jul-05	29-Aug-05	10-Apr-06	18-Jun-06	11-Jul-06	5-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	18-Dec-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.15	0.17	0.24	0.13	0.11	0.257	0.19	0.243	0.277	0.193	0.119	0.118	0.167
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0000634	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.5	0.8	<0.5	<0.5	<0.5	0.449	<0.5	0.75	0.64	<0.50	0.52	0.52	0.59
Strontium (Sr)-Total	mg/L			0.0053	0.0074	0.0040	0.0044	0.00446	0.0048	0.00735	0.00692	0.00476	0.00498	0.00512	0.00607
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000068	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	0.0000303	<0.0001	<0.00010	0.00052	0.00247	0.00135	<0.00010	0.00154
Titanium (Ti)-Total	mg/L						<0.0005	<0.00004	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.0001	0.0001	0.00015	0.00012	0.00007	0.000131	0.00013	0.000166	0.000136	0.000138	0.000114	0.000102	0.000121
Vanadium (V)-Total	mg/L		0.0001	0.0002	0.0002	<0.0005	<0.0005	0.000102	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	<0.002	<0.001	0.003	0.00405	0.003	0.0012	<0.001	<0.001	<0.001	0.0016	0.006
Aluminum (Al)-Dissolved	mg/L	2.0	0.011	0.013	0.014	0.014	0.015	0.0214	0.014	0.0097	0.0098	0.0111	<0.0080	0.0091	0.0078
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.0000068	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		<0.0001	<0.0001	0.0003	0.0002	0.0002	0.000184	0.0001	0.00023	0.00019	0.00016	0.00017	0.00018	0.00019
Barium (Ba)-Dissolved	mg/L		<0.003	<0.003	<0.003	0.00147	0.00182	0.00158	0.00162	0.00245	0.00275	0.00158	0.00158	0.00159	0.00203
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0000032	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L										<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.004	<0.004	<0.001	<0.001	0.0301	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000053	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.1	1.09	0.8	0.7	1.0	0.982	1.0	1.67	1.67	1.13	1.18	1.18	1.41
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	0.000237	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.00002	<0.00002	0.0000229	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0033	<0.0010	<0.0010	<0.0001	0.0020	0.00176	0.0003	0.00116	0.00098	0.00070	<0.00080	0.00077	0.00115
Iron (Fe)-Dissolved	mg/L		<0.01	<0.01	<0.10	<0.10	<0.10	0.0138	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000572	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L						<0.0010	<0.00002	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.5	0.51	<0.5	<0.5	0.5	0.465	0.5	0.828	0.835	0.548	0.602	0.588	0.648
Manganese (Mn)-Dissolved	mg/L		<0.001	<0.001	<0.010	<0.010	<0.010	0.00274	<0.010	<0.000050	0.000392	0.000673	<0.000050	0.000129	0.000276
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	0.0000337	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.0006	0.0002	<0.0001	0.00025	0.00030	0.000364	0.00031	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.303	<0.5	0.51	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.16	0.2	0.23	0.24	0.11	0.243	0.19	0.226	0.242	0.163	0.106	0.116	0.106
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000511	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.6	<0.5	<0.5	<0.5	<0.5	0.443	<0.5	0.77	0.67	<0.50	0.52	0.54	0.66
Strontium (Sr)-Dissolved	mg/L			0.0045	0.0080	0.0042	0.0059	0.00444	0.0050	0.00723	0.00719	0.00477	0.00500	0.00511	0.00628
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	0.0000068	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.00003	<0.0001	<0.00010	0.00046	0.00846	0.00289	<0.00010	0.00273
Titanium (Ti)-Dissolved	mg/L						<0.0005	<0.00004	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00009	0.0001	0.00012	0.00011	0.00013	0.000124	0.00011	0.00011	0.000115	0.000114	0.000093	0.000089	0.000112
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	0.0001	0.0002	0.000102	0.0009	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.002	<0.002	<0.002	<0.001	0.002	0.00302	0.004	<0.0010	<0.0010	<0.0020	<0.0010	0.0015	0.0022
Oil and Grease	mg/L	5.0									-	0.69	-	-	-
Total Inorganic Carbon	mg/L		<1	1	<1	<0.1	<0.1		1.1	1.16	1.15	3.27	0.76	0.70	0.91
Total Organic Carbon	mg/L		3	2	3	2.6	2.7		2.6	4.32	3.69	-	3.68	3.43	3.64
BOD	mg/L	25									-	-	-	-	-

JER-WQ8

Sample ID	Units	PKCA Discharge Criteria	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ08	JER-WQ8	JER-WQ8	JER-WQ8	JER-WQ8
Date Sampled			30-Jul-05	29-Aug-05	10-Apr-06	18-Jun-06	11-Jul-06	5-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	18-Dec-07
Fecal Coleform	CFU/100 mL	20									-	-	-	-	-
Field Water Temperature	deg C				3.13	10.74	14.2	15.3	9.11	1.27	2.77	17.02	8.54	1.87	2.99
Field Conductivity	uS/cm				18	12	12	5	9	20	21	14	11	13	19
Field DO	%										138	114.5	-	111.2	106.9
Field DO	mg/L				10.19	8.64	10.04		10.91	9.79	18.72	11.04	-	15.41	14.28
Field pH					6.25	6.85	6.31	7.9	5.92	6.53	5.29	6.38	6.67	8.04	5.44
Field ORP	mV				410.90	237.20	375.20		299.40	319	81.3	184.9	276.0	175.3	39

JER-WQ9

Sample ID	Units	PKCA Discharge Criteria	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ09	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9
Date Sampled			28-Jun-05	29-Jul-05	28-Aug-05	18-Jun-06	11-Jul-06	5-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07	1-Jul-07	16-Jul-07	25-Aug-07	23-Sep-07	18-Dec-07
Time Sampled											13:30	18:05	00:00	16:00	10:50	14:00
Lab Sample ID								L420594-21	06-10850	L464346-7	L501255-5	L525299-1	L531523-1	L546749-11	L557895-8	L588743-2
Hardness (as CaCO3)	mg/L		<6	<6	<6	<6	<6		<6	9.26	10.9	4.83	4.96	5.12	5.43	7.86
Conductivity	uS/cm		19	13	12	14	14		12	23.7	27.7	11.8	16.4	14.4	13.3	20.2
pH	pH	6.0 - 8.8	5.46	5.55	6.16	6.78	6.78		6.79	6.77	7.17	6.50	6.87	6.86	7.03	7.3
Total Dissolved Solids	mg/L	4000	40	<15	<15	28	12		14	18	15.0	<15	19.0	23.0	<15	17
Total Suspended Solids	mg/L	25	<2	<2	<2	<2	<2		<2	<2	<3	<3	<3	<3	<3	<3
Turbidity	NTU		1	2	2	1	1		1	0.58	0.23	0.89	0.41	0.48	0.36	0.29
Ammonia as N	mg/L	12	<0.1	<0.1	<0.1	0.02	0.01	<0.005	<0.01	0.0346	0.0066	0.0052	0.0095	0.0097	0.0066	0.0187
Acidity (as CaCO3)	mg/L		2	3	2	3	2		2	2.5	1.6	1.4	2.3	1.9	1.8	2.4
Alkalinity, Bicarbonate (as CaCO3)	mg/L		10	7	9	8	9		8	11	9.0	3.2	5.5	4.4	4.6	7.2
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		8	5	7	7	8		7	11	9.0	3.2	5.5	4.4	4.6	7.2
Chloride (Cl)	mg/L	1000	0.2	0.2	0.2	0.4	0.3		0.4	0.57	0.62	<0.5	<0.5	<0.5	<0.5	0.57
Fluoride(F)	mg/L		0.04	0.06	<0.02	0.03	0.03		0.04							
Sulfate (SO4)	mg/L		1.1	0.9	0.9	0.9	<0.5		1.6	1.7	1.96	0.79	0.88	1.03	1.14	1.47
Nitrate (as N)	mg/L	56	<0.05	<0.05	0.06	<0.05	<0.05		<0.05	0.0366	0.153	0.0237	0.0106	0.0109	0.0199	0.0333
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L						<0.2		0.2		-	-	-	-	-	0.154
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.2	<0.20	<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005	<0.050	<0.005					0.0029	0.0028	<0.0020	<0.0020	<0.0020	<0.0020	0.0022
Total Phosphate as P	mg/L	0.4	0.06	<0.02	<0.02					0.0049	0.0071	0.0043	0.0037	0.0026	0.0030	0.0045
Aluminum (Al)-Total	mg/L	3.0	0.028	0.021	0.012	0.0271	0.0217	0.0205	0.0167	0.0215	0.0203	0.0265	0.0173	0.0122	0.0109	0.0108
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000091	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	0.000188	<0.0002	0.00022	0.00024	0.00014	0.00016	0.00016	0.00017	0.00019
Barium (Ba)-Total	mg/L		<0.005	<0.005	<0.005	0.00154	0.00145	0.00201	0.00166	0.00337	0.00462	0.00186	0.00177	0.00149	0.00153	0.00248
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.0000033	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L										<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	0.003	<0.001	0.0383	0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	0.0000281	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		0.99	1.11	1	0.85	0.86	1.05	1.16	2.04	2.37	1.07	1.03	1.14	1.24	1.71
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	0.0012	0.0010	0.0002	0.0022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	0.00005	<0.00005	0.0000402	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	<0.001	0.0016	<0.001	<0.001	<0.001	0.00166	<0.001	0.0014	0.00148	0.00078	0.00085	0.00081	0.00083	0.00104
Iron (Fe)-Total	mg/L		<0.10	<0.10	0.02	<0.10	<0.10	0.0219	<0.10	0.046	0.052	0.033	0.032	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.000194	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L						<0.005	0.00029	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.51	0.57	0.56	<0.50	0.19	0.48	0.60	1.01	1.21	0.494	0.530	0.587	0.594	0.835
Manganese (Mn)-Total	mg/L		0.002	<0.01	0.003	<0.01	<0.01	0.00642	<0.01	0.015	0.0293	0.00324	0.00261	0.00253	0.00252	0.00461
Mercury (Hg)-Total	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	0.0000341	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	<0.0006	0.0005	0.0003	0.000258	0.0004	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.312	<0.5	0.58	0.64	<0.50	<0.50	<0.50	<0.50	<0.50

JER-WQ9

Sample ID	Units	PKCA Discharge Criteria	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ09	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9
Date Sampled			28-Jun-05	29-Jul-05	28-Aug-05	18-Jun-06	11-Jul-06	5-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07	1-Jul-07	16-Jul-07	25-Aug-07	23-Sep-07	18-Dec-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.2	0.13	0.16	0.14	0.10	0.269	0.25	0.513	0.598	0.193	0.206	0.134	0.142	0.198
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.000122	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.7	0.7	0.7	<0.5	<0.5	0.47	<0.5	0.86	0.98	<0.50	<0.50	0.53	0.53	0.76
Strontium (Sr)-Total	mg/L				0.0052	0.0043	0.0044	0.00466	0.0050	0.00871	0.0106	0.00457	0.00474	0.00481	0.00514	0.00746
Thallium (Tl)-Total	mg/L		<0.00005	<0.00002	<0.00005	<0.00005	<0.00005	0.0000046	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	<0.0000300	<0.0001	<0.00010	0.00365	<0.00010	0.00435	<0.00010	<0.00010	0.00745
Titanium (Ti)-Total	mg/L						<0.0005	0.000242	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00012	0.00013	0.00008	0.00012	0.00008	0.000129	0.00013	0.00021	0.000189	0.000135	0.000123	0.000106	0.000104	0.000133
Vanadium (V)-Total	mg/L		<0.0001	<0.0001	0.0002	<0.0005	<0.0005	0.000104	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	<0.002	<0.001	0.002	0.0106	0.003	0.0012	0.0011	0.0021	0.0022	<0.001	0.0023	0.0024
Aluminum (Al)-Dissolved	mg/L	2.0	0.027	<0.01	0.012	0.013	0.014	0.0183	0.010	0.0092	0.0123	0.0116	0.0076	<0.006	0.0063	0.0084
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.000009	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0001	<0.0001	0.0002	0.0003	0.0002	0.000188	0.0002	0.00023	0.00022	0.00016	0.00015	0.00015	0.00015	0.00017
Barium (Ba)-Dissolved	mg/L		0.003	<0.003	<0.003	0.00152	0.00236	0.002	0.00141	0.00326	0.00436	0.00173	0.00168	0.00143	0.00148	0.00247
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L										<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.004	<0.004	<0.001	<0.001	0.0373	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000275	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.13	1.2	0.99	0.6	1.0	1.04	1.1	2.02	2.40	1.12	1.08	1.10	1.20	1.73
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	0.000184	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.00002	<0.00002	0.0000401	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0027	0.004	<0.0010	<0.0001	0.0028	0.00166	0.0016	0.00117	0.00133	0.00053	0.00072	<0.00070	0.00065	0.00096
Iron (Fe)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.10	<0.10	0.0205	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	0.00015	<0.00005	0.00079	0.000193	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L						<0.0010	0.00011	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.56	0.6	<0.50	<0.5	0.4	0.477	0.5	1.02	1.20	0.493	0.546	0.573	0.592	0.862
Manganese (Mn)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.010	<0.010	0.00642	<0.010	0.000242	0.00294	0.000058	0.000579	0.000064	0.000148	0.00197
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	0.0000338	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.0001	0.0002	<0.0001	0.00019	0.00093	0.000256	0.00023	<0.00050	0.00052	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.312	<0.5	0.58	0.64	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.23	0.14	0.15	0.08	0.11	0.268	0.24	0.514	0.574	0.154	0.159	0.131	0.122	0.191
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000881	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.9	0.5	0.7	<0.5	<0.5	0.468	<0.5	0.87	0.98	<0.50	0.50	0.52	0.54	0.79
Strontium (Sr)-Dissolved	mg/L				0.0046	0.0043	0.0058	0.00466	0.0036	0.00865	0.0105	0.00492	0.00490	0.00473	0.00509	0.00766
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00005	<0.00002	<0.00005	<0.00005	0.0000046	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.00003	0.0003	<0.00010	0.00297	<0.00010	0.00306	<0.00010	<0.00010	0.00378
Titanium (Ti)-Dissolved	mg/L						<0.0005	0.000063	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00012	0.00008	0.00008	0.00011	0.00012	0.000126	0.00009	0.000138	0.000158	0.000102	0.000100	0.000079	0.000080	0.000129
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	0.0001	0.0002	0.0000946	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.003	<0.002	<0.002	<0.001	0.002	0.00977	0.001	<0.0010	0.0012	0.0031	<0.0010	<0.0010	0.0010	0.0017
Oil and Grease	mg/L	5.0									-	-	0.75	-	-	-
Total Inorganic Carbon	mg/L		<1	<1	1	<0.1	<0.1		1.2	1.55	1.72	0.53	3.04	0.70	0.77	1.29
Total Organic Carbon	mg/L		1	3	2	2.6	2.5		2.5	4.48	4.86	3.14	-	3.42	2.96	3.88
BOD	mg/L	25									-		-	-	-	-

JER-WQ9

Sample ID	Units	PKCA Discharge Criteria	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ09	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9	JER-WQ9
Date Sampled			28-Jun-05	29-Jul-05	28-Aug-05	18-Jun-06	11-Jul-06	5-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07	1-Jul-07	16-Jul-07	25-Aug-07	23-Sep-07	18-Dec-07
Fecal Coleform	CFU/100 mL	20									-		-	-	-	-
Field Water Temperature	deg C					11.78	14.36	16.3	8.55	0.25	0.44	7.67	17.05	10.49	2.17	1.07
Field Conductivity	uS/cm					13	12	5	10	24	29	13	14	11	13	28
Field DO	%										126.3	129.5	112.7	-	102.6	108.2
Field DO	mg/L					9.40	9.38		11.03	7.92	18.13	15.38	10.88	-	14.11	15.41
Field pH						7.84	5.84	7.6	5.65	6.54	5.30	6.22	6.11	6.81	7.95	5.44
Field ORP	mV					210.60	381.00		303.10	314	131.4	156.4	240.4	148.6	174.5	39
Balance (+ions/-ions)	Ratio		0.75	0.96	1	0.5	0.64		0.66							

JER-WQ10

Sample ID	Units	PKCA Discharge Criteria	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10
Date Sampled			18-May-05	30-Jul-05	29-Aug-05	8-Apr-06	27-Jun-06	11-Jul-06	3-Aug-06	5-Sep-06	17-Dec-06	26-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	08-Dec-07
Time Sampled												15:15	00:00	12:00	09:40	11:30
Lab Sample ID						Jun-71	Jun-04	Jun-09	L420594-22	06-10847	L464346-2	L501255-3	L531523-3	L546749-2	L557895-3	L585854-8
Hardness (as CaCO3)	mg/L		6	<6	<6	<6.0	<6	<6		<6	6.73	5.05	4.43	4.67	4.38	4.78
Conductivity	uS/cm		16.7	13	16	17	14	13		11	17.8	13.6	14.5	12.9	11.3	11.6
pH	pH	6.0 - 8.8	7	6.62	6.35	6.79	6.69	6.73		6.76	6.59	6.63	6.81	6.75	7.17	6.67
Total Dissolved Solids	mg/L	4000	30	<15	12	14	12	12		14	13	<15	15.0	17.0	<15	13
Total Suspended Solids	mg/L	25	<3	<2	<2	3	<2	<2		<2	<2	<3	<3	<3	<3	<3
Turbidity	NTU		0.15	2	2	1	1	2		1	0.55	0.12	0.45	0.40	0.29	0.21
Ammonia as N	mg/L	12	0.008	<0.1	<0.1	<0.1	0.02	0.01	<0.005	0.01	0.0177	0.0260	0.0106	0.0062	0.0068	0.0123
Acidity (as CaCO3)	mg/L		<5	3	2	2	3	1		1	2.1	1.2	2.0	1.9	1.6	1.7
Alkalinity, Bicarbonate (as CaCO3)	mg/L		5	8	11	10	8	9		7	5.3	4.3	4.7	3.9	4.0	3.8
Alkalinity, Carbonate (as CaCO3)	mg/L		<5	<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<5	<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		<5	6	9	9	7	7		6	5.3	4.3	4.7	3.9	4.0	3.8
Chloride (Cl)	mg/L	1000	<1	0.2	0.3	0.4	0.2	0.2		0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride (F)	mg/L			0.05	<0.02	0.05	0.05	0.03		0.03						
Sulfate (SO4)	mg/L		1.31	<0.5	1.5	0.6	1.3	<0.5		1.5	1.46	1.09	0.86	0.99	1.45	1.03
Nitrate (as N)	mg/L	56	0.009	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	0.0257	0.0182	<0.005	<0.005	0.0256	0.0153
Nitrite (as N)	mg/L	5.0	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
Total Kjeldahl Nitrogen	mg N/L							<0.2		0.2		-	-	-	-	0.129
Ortho Phosphate as P	mg/L		<0.001	<0.2	<0.2	<0.20	<0.20	<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L			<0.005	<0.005						0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	0.005	<0.02	<0.02						0.0044	0.0031	0.0027	0.0036	0.0031	0.003
Aluminum (Al)-Total	mg/L	3.0	0.0171	0.022	0.016	0.018	0.0331	0.0284	0.0259	0.0198	0.0188	0.0115	0.0210	0.0167	0.0128	0.0113
Antimony (Sb)-Total	mg/L		0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.000009	0.00007	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00021	<0.0004	<0.0004	<0.0004	0.0002	<0.0002	0.000197	0.0003	0.00022	0.00017	0.00020	0.00021	0.00017	0.00018
Barium (Ba)-Total	mg/L		0.00183	<0.005	<0.005	<0.005	0.00190	0.00156	0.00184	0.00162	0.00233	0.00169	0.00163	0.00159	0.00158	0.00165
Beryllium (Be)-Total	mg/L		<0.0002	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.0000039	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L											<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		0.001	<0.010	<0.010	<0.010	<0.001	<0.001	0.0442	0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00002	<0.0001	<0.0001	<0.00005	<0.00005	0.0000222	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.25	0.98	0.98	1.29	0.91	0.77	0.902	0.99	1.41	1.10	0.917	0.996	0.948	1.03
Chromium (Cr)-Total	mg/L	0.170	0.00011	<0.0009	<0.0009	<0.0009	<0.0005	0.0011	0.000219	0.0015	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000317	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00201	<0.001	0.00136	0.00070	0.00073	0.00079	0.00073	0.00078
Iron (Fe)-Total	mg/L			<0.10	0.03	<0.10	<0.10	<0.10	0.0188	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.00025	0.00024	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L							<0.005	<0.00002	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.671	0.51	<0.50	0.67	<0.50	0.16	0.426	0.52	0.718	0.601	0.491	0.527	0.497	0.542
Manganese (Mn)-Total	mg/L		0.0009	<0.01	<0.002	<0.01	<0.01	<0.01	0.00214	<0.01	0.00159	0.000255	0.00325	0.00212	0.00120	0.000619
Mercury (Hg)-Total	mg/L		<0.00002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.00006	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	0.000027	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	0.0003	0.0006	0.0013	<0.0006	0.0002	0.0003	0.000302	0.0004	0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		0.36	<0.5	<0.5	<0.5	<0.5	<0.5	0.297	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0001	<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

JER-WQ10

Sample ID	Units	PKCA Discharge Criteria	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10
Date Sampled			18-May-05	30-Jul-05	29-Aug-05	8-Apr-06	27-Jun-06	11-Jul-06	3-Aug-06	5-Sep-06	17-Dec-06	26-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	08-Dec-07
Silicon (Si)-Total	mg/L			0.21	0.21	0.33	0.13	0.14	0.271	0.22	0.342	0.251	0.224	0.187	0.206	0.175
Silver (Ag)-Total	mg/L		<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.000338	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.596	<0.5	0.9	<0.5	<0.5	<0.5	0.434	<0.5	0.68	0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Total	mg/L		0.0058		0.0051	0.0063	0.0041	0.0044	0.00441	0.0045	0.00669	0.00500	0.00450	0.00464	0.00477	0.005
Thallium (Tl)-Total	mg/L			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000044	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L							<0.0001	0.0000439	<0.0001	<0.00010	0.00080	0.00193	0.00132	<0.00010	0.0018
Titanium (Ti)-Total	mg/L							<0.0005	0.000177	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00016	0.00016	0.00012	0.00018	0.00014	0.00008	0.000142	0.00016	0.000236	0.000144	0.000146	0.000135	0.000130	0.000133
Vanadium (V)-Total	mg/L		<0.00005	0.0002	0.0002	0.0004	<0.0005	<0.0005	0.0000894	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.001	0.003	<0.002	0.002	0.003	0.003	0.0077	0.013	0.0011	<0.001	<0.001	<0.001	0.0011	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.02	0.014	0.013	0.016	0.020	0.028	0.0232	0.016	0.0114	0.0131	0.0129	<0.01	0.0091	0.0093
Antimony (Sb)-Dissolved	mg/L		<0.0004	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.000008	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		<0.0004	<0.0001	0.0002	0.0002	<0.0001	0.0002	0.000192	0.0002	0.00021	0.00016	0.00017	0.00020	0.00017	0.00016
Barium (Ba)-Dissolved	mg/L		0.0018	<0.003	<0.003	<0.003	<0.00005	0.00187	0.00175	0.00178	0.00237	0.00167	0.00159	0.00156	0.00144	0.00157
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0000037	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00005									<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.002	<0.004	<0.004	<0.004	<0.001	<0.001	0.0384	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.0001	<0.00005	0.00009	<0.00005	<0.00005	<0.00005	0.0000196	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.2	1	0.94	0.6	1.0	0.9	0.879	0.9	1.47	1.08	0.965	0.996	0.947	1.01
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	0.000192	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.0000245	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0008	0.0031	<0.0010	<0.0010	0.0003	0.0023	0.00198	0.0007	0.0012	0.00086	0.00068	<0.00070	0.00067	<0.00080
Iron (Fe)-Dissolved	mg/L		0.006	<0.01	<0.01	<0.10	<0.10	<0.10	0.0172	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.0001	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	0.000231	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		0.0004					<0.0010	<0.00002	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.69	0.51	<0.50	<0.5	<0.5	0.4	0.418	0.4	0.742	0.575	0.491	0.529	0.490	0.546
Manganese (Mn)-Dissolved	mg/L		0.001	<0.001	<0.001	<0.010	<0.010	<0.010	0.00207	<0.010	<0.000050	0.000234	0.00146	0.000078	0.000072	0.000119
Mercury (Hg)-Dissolved	mg/L			<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L			<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	0.0000261	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0003	0.0002	0.0003	<0.0001	0.00016	0.00103	0.00028	0.00033	0.00124	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		0.3	<0.5	<0.5	<0.5	<0.5	<0.5	0.295	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L			0.2	0.22	0.30	0.15	0.14	0.263	0.21	0.337	0.225	0.222	0.175	0.194	0.179
Silver (Ag)-Dissolved	mg/L		<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000334	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.8	0.6	0.7	<0.5	<0.5	<0.5	0.42	<0.5	0.71	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	mg/L		0.0067		0.0047	0.0061	0.0037	0.0062	0.00428	0.0033	0.00701	0.00492	0.00448	0.00476	0.00457	0.00503
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	0.000004	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.0002					<0.0001	<0.00003	<0.0001	<0.00010	0.00084	0.00190	0.00130	<0.00010	0.00055
Titanium (Ti)-Dissolved	mg/L		<0.0003					<0.0005	0.000101	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.0002	0.00013	0.00012	0.00013	0.00011	0.00012	0.000141	0.00015	0.000163	0.000178	0.000126	0.000118	0.000112	0.000114
Vanadium (V)-Dissolved	mg/L		<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	0.0002	0.0000858	0.0009	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.005	<0.002	<0.002	<0.002	<0.001	0.002	0.00614	0.004	0.0012	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010
Oil and Grease	mg/L	5.0										-	0.53	-	-	-
Total Inorganic Carbon	mg/L		1.1	1	1	<1	<0.1	<0.1		1.0	0.96	0.64	3.35	0.55	0.53	0.56
Total Organic Carbon	mg/L		3	2	2	3	2.9	2.6		2.4	3.95	2.82	-	3.36	2.96	2.84
BOD	mg/L	25										-	-	-	-	-
Fecal Coleform	CFU/100 mL	20										-	-	-	-	-

JER-WQ10

Sample ID	Units	PKCA Discharge Criteria	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10	JER-WQ10
Date Sampled			18-May-05	30-Jul-05	29-Aug-05	8-Apr-06	27-Jun-06	11-Jul-06	3-Aug-06	5-Sep-06	17-Dec-06	26-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	08-Dec-07
Field Water Temperature	deg C					0.71	N/A	12.87	16.2	9.55	0.62	4.54	16	8.69	3.86	1.08
Field Conductivity	uS/cm					17	N/A	10	3	8	18	26	13	10	11	14
Field DO	%											106.8	116.2	-	111.3	101.7
Field DO	mg/L					22.83	N/A	10.50		10.41	10.27	13.78	11.45	-	14.64	14.41
Field pH						6.06	N/A	5.75	7.5	5.98	6.33	5.53	6.19	6.80	8.72	6.56
Field ORP	mV					414.20	N/A	473.50		268.00	300	210.5	189.6	285.2	185.7	43.6
Ion Balance	Ratio		Low EC	0.88	1	0.53	0.64	0.66		0.63						

JER-WQ11

Sample ID	Units	PKCA Discharge Criteria	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	JER-WQ11
Date Sampled			17-Jul-95	20-Aug-95	13-Sep-95	23-Nov-95	15-Jul-96	11-Aug-96	12-Sep-96	5-Dec-96	8-Jul-97	31-Aug-98	7-Apr-99	5-Jul-99	2-Aug-99	1-Sep-99	17-May-05
Time Sampled			11:30	12:42	12:01	9:15	11:34	10:41	15:45	13:10	20:32	10:05	9:40				
Lab Sample ID																	
Hardness (as CaCO3)	mg/L		6.93	4.84	4.62	6.27	4.68	5.22	7.08	6.56	4.99	4.56	8.21	4.9	5.21	5.1	7
Conductivity	uS/cm								5.11	7.87	13	12	22	12	22	13	19.8
pH	pH	6.0 - 8.8	6.56	6.84	6.85	6.69	6.89	7.01			6.06	6.4	6.65	6.52	7.73	6.71	7.2
Total Dissolved Solids	mg/L	4000	9	10	11	11	7	7	8	11			18	<15	11	12	30
Total Suspended Solids	mg/L	25	1	<1	<1	<1	1	7	<1	1	3	<1	<3	6	3	<3	<3
Turbidity	NTU										0.5	0.8					0.2
Ammonia as N	mg/L	12	0.013	<0.005	<0.005	0.014	<0.005	<0.005	<0.005	0.013			0.014	<0.005	<0.005	<0.005	<0.005
Acidity (as CaCO3)	mg/L		1.7	2.6	3.5	4.3	2	1.9	2	3						<5	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		5.1	4.8	5.1	6.2	4.7	4.5	4.5	7							8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1	<1						<5	
Alkalinity, Hydroxide (as CaCO3)	mg/L															<5	
Alkalinity, Total (as CaCO3)	mg/L		5.1	8.1	5.1	6.2	4.7	4.5	4.5	7	5	5	8	5	5	6	7
Chloride (Cl)	mg/L	1000	<0.5	<0.5	0.6	0.6	<0.5	<0.5	<0.5	<0.5	1	<0.5	0.9	<0.5	<0.5	0.7	<1
Fluoride (F)	mg/L		0.03	0.02	0.02	0.03	<0.02	0.03	0.04	<0.02							
Sulfate (SO4)	mg/L		<1	<1	1.1	<1	<1	<1	<1	<1	<1	1	3	1	1	2	1.04
Nitrate (as N)	mg/L	56	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.01	0.019	<0.005	<0.006
Nitrite (as N)	mg/L	5.0	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001			0.001	0.002	<0.001	<0.001	<0.002
Total Kjeldahl Nitrogen	mg N/L																
Ortho Phosphate as P	mg/L		0.001	<0.001	0.001	<0.001	0.001	0.002	0.001	<0.001						<0.001	
Total Dissolved Phosphate As P	mg/L		0.002	<0.001	0.003	<0.001	0.002	0.002	0.001	0.002			<0.002	0.008	<0.002	<0.002	
Total Phosphate as P	mg/L	0.4	0.004	0.004	0.005	<0.001	0.003	0.004	0.003	0.005			0.005	0.01	0.004	0.003	0.004
Aluminum (Al)-Total	mg/L	3.0	0.03	0.016	0.022	0.007	0.019	0.018	0.032	0.038	0.016	0.012	0.01	0.015	0.016	0.017	0.0105
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00018	<0.00005	<0.00005	<0.00005	0.00014
Arsenic (As)-Total	mg/L	0.10	<0.0001	<0.0001	<0.0001	<0.0001	0.00014	0.00015	0.00015	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.00017
Barium (Ba)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	0.00277	0.00132	0.00134	0.00237	0.00154	0.0012	0.00204	0.00142	0.00142	0.00127	0.00163
Beryllium (Be)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
Bismuth (Bi)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron (B)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.001	0.002	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0002	<0.0002	0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.02	1.04	1.03	1.3	0.97	1.02	1.01	1.7	0.99	1.13	1.86	1.16	1.19	1.16	1.59
Chromium (Cr)-Total	mg/L	0.170	<0.015	<0.015	<0.015	<0.015	0.0002	0.0002	<0.0001	<0.0005	<0.0005	<0.0005	0.0015	<0.0005	<0.0005	<0.0005	0.00013
Cobalt (Co)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Cu)-Total	mg/L	0.04	<0.01	<0.01	<0.01	<0.01	0.001	0.0012	0.0011	0.0017	0.0011	0.0009	0.0019	0.001	0.0009	0.0009	0.0012
Iron (Fe)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	0.03	0.02	0.03	0.01	<0.03	0.03	<0.03	<0.03	<0.03	<0.03	
Lead (Pb)-Total	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	0.00008	<0.00005	0.00007	0.00011	0.00006	<0.00005	0.00042	0.00017	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.015	<0.015	<0.015	<0.015	<0.001	0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Magnesium (Mg)-Total	mg/L		0.548	0.565	0.548	0.695	0.538	0.586	0.621	0.93	0.56	0.6	0.88	0.5	0.6	0.6	0.722
Manganese (Mn)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	0.00393	0.00327	0.00299	0.00162	0.0049	0.00315	0.0013	0.00396	0.00194	0.00178	0.0006
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002
Molybdenum (Mo)-Total	mg/L	1.50	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00006
Nickel (Ni)-Total	mg/L	0.10	0.001	<0.001	<0.001	<0.001	0.0002	0.0002	0.0002	0.0003	0.0002	0.0001	0.0004	0.0003	0.0002	0.0002	0.00024
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.42

JER-WQ11

Sample ID	Units	PKCA Discharge Criteria	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	JER-WQ11
Date Sampled			17-Jul-95	20-Aug-95	13-Sep-95	23-Nov-95	15-Jul-96	11-Aug-96	12-Sep-96	5-Dec-96	8-Jul-97	31-Aug-98	7-Apr-99	5-Jul-99	2-Aug-99	1-Sep-99	17-May-05
Selenium (Se)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Silicon (Si)-Total	mg/L		0.242	0.272	0.228	0.3	0.25	0.28	0.38	0.66	0.36	0.31	0.5	0.32	0.30	0.28	
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.64
Strontium (Sr)-Total	mg/L		0.009	0.009	0.011	<0.001	0.0039	0.0039	0.004	0.0066	0.0039	0.0042	0.0072	0.0045	0.0049	0.0047	0.0061
Thallium (Tl)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Tin (Sn)-Total	mg/L		<0.03	<0.03	<0.03	<0.3	0.0003	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Uranium (U)-Total	mg/L	1.0	<0.0005	<0.0005	<0.0005	0.00008				0.00018		0.0001	0.00021			0.00014	0.00015
Vanadium (V)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005
Zinc (Zn)-Total	mg/L	0.50	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	0.002	0.001	<0.001	0.005	0.003	<0.001	<0.001	0.0026
Aluminum (Al)-Dissolved	mg/L	2.0	0.007	0.006	<0.005	0.006	0.022	0.011	0.013	0.013	0.009	0.008	0.007	0.009	0.008	0.006	<0.01
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00011	<0.00005	<0.00005	<0.00005	<0.0004
Arsenic (As)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.00013	0.00012	0.00013	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	<0.0004
Barium (Ba)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	0.00225	0.00134	0.00143	0.00221	0.00164	0.00148	0.00194	0.00144	0.00148	0.00123	0.0016
Beryllium (Be)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth (Bi)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Boron (B)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	0.002	0.002	<0.001	0.002	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.002
Cadmium (Cd)-Dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.0001
Calcium (Ca)-Dissolved	mg/L		0.981	1.04	0.954	1.32	1	1.06	1.03	1.62	1.06	1	1.86	1.13	1.19	1.15	1.6
Chromium (Cr)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	0.0001	0.0002	<0.0001	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0005	<0.0004
Cobalt (Co)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Cu)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	0.0009	0.0012	0.0011	0.0018	0.0011	0.0009	0.0019	0.0008	0.0009	0.0009	0.0009
Iron (Fe)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	0.02	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.007
Lead (Pb)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	0.00007	0.00013	<0.00005	0.00026	0.00011	0.00005	<0.00005	<0.0001
Lithium (Li)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.015	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Magnesium (Mg)-Dissolved	mg/L		0.535	0.542	0.544	0.722	0.531	0.625	0.616	0.93	0.57	0.5	0.9	0.5	0.5	0.5	0.73
Manganese (Mn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	0.00048	0.00106	0.00056	0.00023	0.00142	0.0003	0.00044	0.002	0.00054	0.00027	0.001
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Molybdenum (Mo)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0002
Nickel (Ni)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	0.0002	0.0002	0.0002	0.0003	0.0002	0.0003	0.0004	0.0003	0.0003	0.0002	0.0002
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.4
Selenium (Se)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0004
Silicon (Si)-Dissolved	mg/L		0.226	0.272	0.219	0.304	0.24	0.28	0.35	0.65	0.35	0.23	0.48	0.33	0.28	0.27	
Silver (Ag)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0.8
Strontium (Sr)-Dissolved	mg/L		0.008	0.009	0.01	<0.001	0.0039	0.004	0.0039	0.0065	0.0042	0.005	0.0071	0.0044	0.0049	0.0046	0.0067
Thallium (Tl)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin (Sn)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.3	0.0004	0.0002	0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0003
Uranium (U)-Dissolved	mg/L		<0.0005	<0.0005	<0.00005	0.00008				0.00017		0.0001	0.0002			0.00012	0.0001
Vanadium (V)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Zinc (Zn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.001	0.001	0.002	0.003	0.001	<0.001	0.007	0.003	0.002	0.001	0.005
Oil and Grease	mg/L	5.0															
Total Inorganic Carbon	mg/L																1.5
Total Organic Carbon	mg/L		2.6	2.2	2.2	2.3	3	2.6	4	4			4.9	3.1	4	2.8	2.9
BOD	mg/L	25															

JER-WQ11

Sample ID	Units	PKCA Discharge Criteria	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	CL-02	JER-WQ11
Date Sampled			17-Jul-95	20-Aug-95	13-Sep-95	23-Nov-95	15-Jul-96	11-Aug-96	12-Sep-96	5-Dec-96	8-Jul-97	31-Aug-98	7-Apr-99	5-Jul-99	2-Aug-99	1-Sep-99	17-May-05
Fecal Coleform	CFU/100 mL	20															
Field Water Temperature	deg C																
Field Conductivity	uS/cm																
Field DO	%																
Field DO	mg/L																
Field pH																	
Field ORP	mV																
Balance (+ions/-ions)	Ratio																Low EC

JER-WQ11

Sample ID	Units	PKCA Discharge Criteria	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11
Date Sampled			30-Jul-05	29-Aug-05	10-Apr-06	27-Jun-06	11-Jul-06	4-Aug-06	5-Sep-06	17-Dec-06	26-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	07-Dec-07
Time Sampled											14:30		11:15	09:20	11:15
Lab Sample ID					Jun-76	Jun-05	Jun-10	L420594-23	06-10846	L464346-1	L501255-4	L531523-2	L546749-1	L557895-23	L585854-9
Hardness (as CaCO3)	mg/L		7	<6	<6.0	<6	<6		<6	7.61	6.36	4.87	5.28	5.28	6.76
Conductivity	uS/cm		13	13	19	15	14		12	20.1	17.2	15.8	14.7	14.1	14
pH	pH	6.0 - 8.8	6.73	6.31	6.99	6.80	6.86		6.82	6.83	6.70	6.89	6.74	6.34	6.78
Total Dissolved Solids	mg/L	4000	16	<15	16	8	<4		13	12	<15	16.0	19.0	<15	14
Total Suspended Solids	mg/L	25	<2	<2	<2	<2	<2		<2	<2	<3	<3	<3	<3	<3
Turbidity	NTU		2	2	1	1	2		1	0.45	0.21	0.45	0.39	0.29	0.21
Ammonia as N	mg/L	12	<0.1	<0.1	<0.1	0.01	0.02	<0.005	0.01	0.018	0.0180	0.0063	0.0059	<0.005	0.0083
Acidity (as CaCO3)	mg/L		2	2	3	2	3		<1	2.7	1.1	2.0	<1.0	3.3	1.5
Alkalinity, Bicarbonate (as CaCO3)	mg/L		8	9	13	9	11		9	8.8	6.0	5.8	4.9	4.5	5
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		7	7	11	8	9		7	8.8	6.0	5.8	4.9	4.5	5
Chloride (Cl)	mg/L	1000	0.2	0.2	0.4	0.4	0.3		0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride (F)	mg/L		0.06	0.02	0.05	0.04	0.03		0.04						
Sulfate (SO4)	mg/L		<0.5	0.9	<0.5	0.9	<0.5		1.3	1.15	0.98	0.69	0.82	0.66	0.87
Nitrate (as N)	mg/L	56	<0.05	0.06	<0.05	<0.05	<0.05		<0.05	<0.005	0.0058	<0.005	0.0168	<0.005	<0.005
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L						<0.2		<0.2		-	-	-	-	0.173
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.20	<0.20	<0.20		<0.20	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005						0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	<0.02	<0.02						0.0039	0.0028	<0.002	0.0031	0.0023	0.0033
Aluminum (Al)-Total	mg/L	3.0	<0.02	0.011	0.010	0.0231	0.0185	0.0199	0.0136	0.0108	0.0067	0.0131	0.0127	0.0071	0.0055
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000062	0.00094	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	0.000135	0.0003	0.00018	0.00013	0.00013	0.00014	0.00013	0.00012
Barium (Ba)-Total	mg/L		<0.005	0.021	<0.005	0.00164	0.00136	0.00135	0.00118	0.00193	0.00150	0.00134	0.00127	0.00115	0.00152
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.0000032	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L										<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.001	<0.001	0.0449	0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0001	<0.0001	<0.00005	<0.00005	0.0000055	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.21	1.18	1.66	1.17	1.00	1.12	1.21	1.87	1.55	1.08	1.24	1.23	1.38
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	<0.0005	0.0008	0.000211	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000209	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.0013	<0.001	<0.001	<0.001	<0.001	0.0017	<0.001	0.00178	0.00094	0.00074	0.00092	0.00070	0.00081
Iron (Fe)-Total	mg/L		<0.10	0.02	<0.10	<0.10	<0.10	0.0104	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.0001	<0.0001	<0.0001	0.00005	<0.00005	0.0000311	0.00010	0.000228	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L						<0.005	0.000032	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.54	<0.50	0.74	<0.50	0.19	0.44	0.53	0.814	0.675	0.494	0.566	0.541	0.624
Manganese (Mn)-Total	mg/L		<0.01	<0.002	<0.01	<0.01	<0.01	0.00185	<0.01	0.00108	0.000816	0.00354	0.00149	0.00113	0.000612
Mercury (Hg)-Total	mg/L		<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	0.0000281	0.00038	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	<0.0006	0.0001	0.0002	0.000197	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.317	<0.5	0.61	<0.50	<0.50	<0.50	<0.50	<0.50

JER-WQ11

Sample ID	Units	PKCA Discharge Criteria	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11
Date Sampled			30-Jul-05	29-Aug-05	10-Apr-06	27-Jun-06	11-Jul-06	4-Aug-06	5-Sep-06	17-Dec-06	26-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	07-Dec-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.24	0.23	0.32	0.13	0.15	0.288	0.25	0.359	0.310	0.238	0.277	0.265	0.28
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0000067	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<0.5	0.7	<0.5	<0.5	<0.5	0.455	<0.5	0.81	0.57	<0.50	<0.50	<0.50	0.55
Strontium (Sr)-Total	mg/L			0.0050	0.0069	0.0044	0.0043	0.00445	0.0046	0.00693	0.00573	0.00435	0.00486	0.00472	0.0059
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000048	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	<0.0000300	<0.0001	0.00147	0.00074	0.00259	0.00497	<0.00010	0.039
Titanium (Ti)-Total	mg/L						<0.0005	0.000114	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00012	0.00008	0.00015	0.00012	0.00007	0.000121	0.00018	0.000156	0.000119	0.000104	0.000093	0.000087	0.000089
Vanadium (V)-Total	mg/L		0.0002	0.0002	0.0004	<0.0005	<0.0005	0.0000884	0.0016	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	0.021	0.002	0.003	0.00445	0.004	0.0027	<0.001	0.0012	<0.001	0.0012	0.0013
Aluminum (Al)-Dissolved	mg/L	2.0	<0.01	0.011	0.009	0.010	0.011	0.0146	0.009	0.0046	<0.005	0.0094	<0.005	0.0038	0.0054
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000045	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		<0.0001	0.0002	0.0002	<0.0001	0.0002	0.000134	0.0002	0.00017	0.00013	0.00013	0.00013	0.00012	0.00015
Barium (Ba)-Dissolved	mg/L		<0.003	<0.003	<0.003	0.00076	0.0115	0.00135	0.00121	0.00185	0.00145	0.00131	0.00124	0.00109	0.00146
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L										<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.004	<0.004	<0.001	<0.001	0.0448	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	0.00008	<0.00005	<0.00005	<0.00005	0.0000045	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.2	1.10	0.6	1.2	1.1	1.12	1.1	1.77	1.45	1.11	1.21	1.23	1.56
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	0.000211	<0.0003	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	0.00006	<0.00005	<0.00002	<0.00002	0.0000208	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0026	<0.0010	<0.0010	<0.0001	0.0034	0.00155	0.0001	0.00151	0.00079	0.00074	<0.00070	0.00061	<0.0010
Iron (Fe)-Dissolved	mg/L		<0.01	<0.01	<0.10	<0.10	<0.10	0.00819	<0.10	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	0.00009	<0.00005	<0.00005	0.00006	0.0000268	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L						<0.0010	0.000031	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.5	<0.50	<0.5	<0.5	0.4	0.436	0.5	0.777	0.665	0.508	0.550	0.537	0.693
Manganese (Mn)-Dissolved	mg/L		<0.001	<0.001	<0.010	<0.010	<0.010	0.00178	<0.010	<0.000050	0.000144	0.00269	0.000197	0.000050	0.000137
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	0.0000239	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0002	0.0005	<0.0001	<0.00005	0.00054	0.000189	0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.308	<0.5	0.63	<0.50	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.23	0.22	0.30	0.18	0.16	0.281	0.25	0.358	0.310	0.248	0.283	0.244	0.275
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000067	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.6	0.7	<0.5	<0.5	<0.5	0.451	<0.5	0.79	0.58	<0.50	0.50	<0.50	0.62
Strontium (Sr)-Dissolved	mg/L			0.0048	0.0064	0.0041	0.0064	0.00444	0.0040	0.00679	0.00561	0.00442	0.00498	0.00470	0.00604
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	0.0000047	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.00003	<0.0001	0.00142	0.00100	0.00349	0.00552	<0.00010	0.00304
Titanium (Ti)-Dissolved	mg/L						<0.0005	0.000068	<0.0005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00011	0.00009	0.00010	0.00011	0.00011	0.000126	0.00023	0.000087	0.000096	0.000091	0.000070	0.000070	0.000084
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	0.0002	0.0000859	0.0009	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.002	<0.002	<0.002	<0.001	0.003	0.00415	0.002	0.0027	<0.0010	0.0013	0.0011	<0.0010	0.0012
Oil and Grease	mg/L	5.0									-	0.73	-	-	-
Total Inorganic Carbon	mg/L		1	2	<1	0.3	0.1		1.2	1.3	1.02	3.26	0.87	0.78	0.82
Total Organic Carbon	mg/L		2	2	3	2.6	2.5		2.3	4.88	2.90	-	3.22	2.74	2.93
BOD	mg/L	25									-	-	-	-	-

JER-WQ11

Sample ID	Units	PKCA Discharge Criteria	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11	JER-WQ11
Date Sampled			30-Jul-05	29-Aug-05	10-Apr-06	27-Jun-06	11-Jul-06	4-Aug-06	5-Sep-06	17-Dec-06	26-Apr-07	16-Jul-07	25-Aug-07	23-Sep-07	07-Dec-07
Fecal Coleform	CFU/100 mL	20									-	-	-	-	-
Field Water Temperature	deg C				1.51	N/A	12.8	14	9.48	0.65	1.37	15.68	8.81	3.01	1.73
Field Conductivity	uS/cm				17	N/A	12	7	9	20	19	14	11	14	16
Field DO	%										142.6	115.6	-	110.6	103.7
Field DO	mg/L				14.48	N/A	10.92		10.79	12.78	20.06	11.49	-	14.8	14.5
Field pH					6.06	N/A	5.55	7.7	5.94	6.4	5.30	6.07	7.30	8.89	6.7
Field ORP	mV				408.70	N/A	412.30		284.80	309	323.5	204.9	315.4	177.2	31
Balance (+ions/-ions)	Ratio		0.96	1	0.35	0.63	0.58		0.62						

JER-WQ12

Sample ID	Units	PKCA Discharge Criteria	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12
Date Sampled			28-Jun-05	26-Aug-05	27-Jun-06	11-Jul-06	6-Aug-06	12-Sep-06	26-Jun-07	22-Jul-07	11-Aug-07	25-Aug-07
Time Sampled									14:05	10:20	00:00	14:15
Lab Sample ID					Jun-06	Jun-11	L420594-24	06-11362	L523057-4	L534134-2	L543213-6	L546749-7
Hardness (as CaCO3)	mg/L		11.4	14.1	<6	20.2		29.8	25.4	48.4	43.9	40.2
Conductivity	uS/cm		31	34	15	57		80	65.1	132	115	105
pH	pH	6.0 - 8.8	6.06	7.15	6.75	7.35		7.40	7.26	7.62	7.56	7.50
Total Dissolved Solids	mg/L	4000	44	16	13	48		28	39.0	101	74.0	74.0
Total Suspended Solids	mg/L	25	<2	<2	<2	<2		<2	<3	<3	<3	<3
Turbidity	NTU		1	<1	2	3		1	1.90	0.74	0.42	0.33
Ammonia as N	mg/L	12	<0.1	<0.1	0.02	0.01	0.007	0.02	0.0102	0.0078	<0.005	<0.005
Acidity (as CaCO3)	mg/L		2	2	2	2		2	5.4	1.9	1.1	3.2
Alkalinity, Bicarbonate (as CaCO3)	mg/L		12	14	10	22		25	15.8	31.6	28.1	26.3
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		10	11	8	18		20	15.8	31.6	28.1	26.3
Chloride (Cl)	mg/L	1000	1.4	2.2	0.2	3		4.0	3.71	6.18	5.97	5.58
Fluoride (F)	mg/L		0.03	0.03	0.04	0.04		0.04				
Sulfate (SO4)	mg/L		<0.5	0.6	1.1	1.2		3.6	3.65	7.85	7.83	6.77
Nitrate (as N)	mg/L	56	0.59	0.3	<0.05	0.91		1.22	1.35	3.97	2.71	2.32
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05		<0.05	0.0033	0.0012	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L					0.2			-	-		-
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.20	<0.20		<0.20	<0.0010	0.0015	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005					0.0027	0.0021	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	0.05	<0.02					0.0047	0.0051	0.0032	0.0023
Aluminum (Al)-Total	mg/L	3.0	0.064	0.034	0.0372	0.0770	0.0428	0.0429	0.0615	0.0193	0.0154	0.0199
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.00005	<0.00005	0.0000806	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	<0.0002	0.0003	0.000301	0.0003	0.00019	0.00020	0.00014	0.00019
Barium (Ba)-Total	mg/L		<0.005	0.006	0.00210	0.00890	0.0126	0.0105	0.00962	0.0180	0.0149	0.0135
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0001	<0.0001	0.0000076	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L								<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.001	0.003	0.0673	0.002	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		2.58	3.51	1.12	4.64	7.63	7.07	5.60	11.4	10.3	9.83
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0005	0.0014	0.000462	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.00005	<0.00005	0.0000829	0.00013	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.0014	0.002	0.0012	0.0016	0.00265	0.0031	0.00233	0.00197	0.00180	0.00188
Iron (Fe)-Total	mg/L		0.03	<0.10	<0.10	<0.10	0.0249	0.12	0.057	<0.030	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.0001	<0.0001	0.00008	0.00009	0.000101	0.00014	0.000097	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L					<0.005	0.00097	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		1.02	1.36	<0.50	1.45	2.22	2.98	2.62	4.80	4.39	3.87
Manganese (Mn)-Total	mg/L		0.002	<0.01	<0.01	<0.01	0.00721	0.02	0.00405	0.00393	0.00558	0.00220
Mercury (Hg)-Total	mg/L		<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.00005	0.00011	0.000413	0.00017	0.000163	0.000587	0.000358	0.000365
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	0.0004	0.0012	0.000938	0.0014	0.00163	0.00116	0.00085	0.00089
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	1.04	0.6	0.83	1.26	1.01	1.06
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0010	<0.0010	0.000175	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

JER-WQ12

Sample ID	Units	PKCA Discharge Criteria	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12
Date Sampled			28-Jun-05	26-Aug-05	27-Jun-06	11-Jul-06	6-Aug-06	12-Sep-06	26-Jun-07	22-Jul-07	11-Aug-07	25-Aug-07
Silicon (Si)-Total	mg/L		0.62	0.66	0.13	0.61	1.43	1.43	1.04	1.66	1.36	1.38
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0001	<0.0001	0.0000062	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.8	<0.5	<0.5	1.4	2.2	1.8	2.26	3.84	3.39	3.27
Strontium (Sr)-Total	mg/L			0.0174	0.0047	0.0216	0.0302	0.0239	0.0215	0.0474	0.0425	0.0363
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.000015	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L					<0.0001	<0.0000300	0.0002	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L					0.0011	0.000705	0.0013	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00037	0.00016	0.00016	0.00139	0.00144	0.00165	0.00122	0.000913	0.000547	0.000792
Vanadium (V)-Total	mg/L		<0.0001	0.0002	<0.0005	<0.0005	0.000309	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	0.005	0.003	0.005	0.00512	0.007	0.0041	0.0030	0.0026	0.0029
Aluminum (Al)-Dissolved	mg/L	2.0	0.049	0.023	0.024	0.021	0.0372	0.008	0.0126	0.0148	-	<0.01
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.00005	<0.00005	0.0000773	<0.00005	<0.00010	<0.00010	-	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	0.0002	0.0001	0.0004	0.000296	0.0003	0.00018	0.00019	-	0.00019
Barium (Ba)-Dissolved	mg/L		0.008	0.006	0.00175	0.00892	0.0125	0.00941	0.00929	0.0178	-	0.0133
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.0000063	<0.0001	<0.00050	<0.00050	-	<0.00050
Bismuth (Bi)-Dissolved	mg/L								<0.00050	<0.00050	-	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.004	<0.001	0.003	0.0514	0.002	<0.010	<0.010	-	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.0000028	<0.00002	<0.000050	<0.000050	-	<0.000050
Calcium (Ca)-Dissolved	mg/L		2.76	3.4	1.1	5.1	7.58	7.2	5.84	11.4	-	9.83
Chromium (Cr)-Dissolved	mg/L		0.0004	<0.0004	0.0005	<0.0003	0.000452	0.0005	<0.00050	<0.00050	-	<0.00050
Cobalt (Co)-Dissolved	mg/L		0.00007	<0.00005	<0.00002	0.00005	0.0000809	0.00005	<0.00010	<0.00010	-	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0049	0.0011	0.0002	0.0043	0.00253	0.0031	0.00247	0.00186	-	0.00167
Iron (Fe)-Dissolved	mg/L		0.02	<0.01	<0.10	<0.10	0.0246	<0.10	<0.030	<0.030	-	<0.030
Lead (Pb)-Dissolved	mg/L		0.00005	<0.00005	0.00010	0.00006	0.0000715	<0.00005	<0.000050	<0.000050	-	<0.000050
Lithium (Li)-Dissolved	mg/L					<0.0010	0.00097	<0.0010	<0.0050	<0.0050	-	<0.0050
Magnesium (Mg)-Dissolved	mg/L		1.09	1.4	0.5	1.8	2.21	2.9	2.62	4.80	-	3.81
Manganese (Mn)-Dissolved	mg/L		0.008	<0.001	<0.010	<0.010	0.00709	0.016	0.000579	0.000619	-	0.000435
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	-	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.00005	0.00031	0.000409	<0.00005	0.000193	0.000586	-	0.000355
Nickel (Ni)-Dissolved	mg/L		<0.0001	0.0004	0.00006	0.00129	0.000918	0.00100	0.00156	0.00102	-	0.00084
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	0.5	1.04	0.5	0.86	1.25	-	1.05
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	-	<0.0010
Silicon (Si)-Dissolved	mg/L		0.65	0.71	0.15	0.56	1.4	1.38	0.887	1.65	-	1.35
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.0000054	<0.00005	<0.000010	<0.000010	-	<0.000010
Sodium (Na)-Dissolved	mg/L		1	0.6	<0.5	1.4	2.17	1.6	2.29	3.83	-	3.21
Strontium (Sr)-Dissolved	mg/L			0.0166	0.0046	0.0243	0.03	0.0218	0.0217	0.0471	-	0.0362
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00002	<0.00005	<0.00005	0.0000142	<0.00005	<0.00010	<0.00010	-	<0.00010
Tin (Sn)-Dissolved	mg/L					<0.0001	<0.00003	0.0001	<0.00010	<0.00010	-	<0.00010
Titanium (Ti)-Dissolved	mg/L					<0.0005	0.000702	<0.0005	<0.010	<0.010	-	<0.010
Uranium (U)-Dissolved	mg/L		0.00035	0.00016	<0.00005	0.00118	0.00144	0.00130	0.00111	0.000855	-	0.000676
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	0.0001	0.0003	0.000306	0.0004	<0.0010	<0.0010	-	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.003	<0.002	<0.001	0.004	0.00255	0.003	0.0039	0.0026	-	0.0024
Oil and Grease	mg/L	5.0							-	6.83	-	-
Total Inorganic Carbon	mg/L		1	3	0.2	2.1		4.3	3.59	3.92	5.19	5.13
Total Organic Carbon	mg/L		2	3	2.8	3.5		4.2	4.53	-	3.62	3.95
BOD	mg/L	25								-	-	-
Fecal Coleform	CFU/100 mL	20								-	-	-

JER-WQ12

Sample ID	Units	PKCA Discharge Criteria	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12	JER-WQ12
Date Sampled			28-Jun-05	26-Aug-05	27-Jun-06	11-Jul-06	6-Aug-06	12-Sep-06	26-Jun-07	22-Jul-07	11-Aug-07	25-Aug-07
Field Water Temperature	deg C				8.57	13.74	10.1	6.1	14.98	12.85	10.51	8.92
Field Conductivity	uS/cm				12	53	107	56	83	137	107	83
Field DO	%								114.1	105.1	92.8	-
Field DO	mg/L				12.66	9.35		12.02	11.28	11.35	10.36	-
Field pH					6.43	6.77	8.0	6.31	6.74	7.21	6.76	7.54
Field ORP	mV				250.00	334.00		209.60	148.4	190.9	122.3	246.3
Balance (+ions/-ions)	Ratio		0.99	0.98	0.65	0.90		0.99				

JER-WQ13

Sample ID	Units	PKCA Discharge Criteria	CL-12	CL-12	CL-12	CL-12	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13
Date Sampled			18-Aug-95	10-Sep-95	22-Nov-95	17-Apr-96	26-May-05	29-Jun-05	30-Jun-05	26-Aug-05	10-Apr-06	21-Jun-06	11-Jul-06	12-Jul-06	6-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07
Time Sampled			11:35	12:45	13:40	09:45												15:20
Lab Sample ID											Jun-79	Jun-30	Jun-12	Jun-13	L420594-25	06-10852	L464346-8	L501255-9
Hardness (as CaCO3)	mg/L		8.46	8.19	11.4	23.5	12	6.4		8.9	8.8	<6	11.8	11.9		16.8	29.7	33.3
Conductivity	uS/cm						27.7	0.017	0.02	22	33	26	37	36		48	74.7	85.5
pH	pH	6.0 - 8.8	7.15	6.87	6.95	6.5	7.1	5.89	5.71	7.05	7.03	6.92	7.03	7.02		7.14	7.07	7.51
Total Dissolved Solids	mg/L	4000	16	15	22	42	40	<15	<15	<15		16	31	20		38	53	44.0
Total Suspended Solids	mg/L	25	1	<1	<1	1	<3	<2	<2	<2	<2	2	<2	<2		<2	<2	<3
Turbidity	NTU						0.3	2	3	1	<1	2	2	2		1	0.59	0.33
Ammonia as N	mg/L	12	0.034	<0.005	0.028	0.088	0.019	<0.1	<0.1	<0.1	<0.1	0.01	0.02	0.02	0.013	0.01	0.0255	0.0433
Acidity (as CaCO3)	mg/L		2.4	3.5	3.9	3.6	<5	3	2	2	3	4	3	2		2	2.4	1.3
Alkalinity, Bicarbonate (as CaCO3)	mg/L		8.3	8.9	11.1	22.8	12	8	13	10	17	13	12	14		16	23.2	22.8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1		<1	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L						<5	<1	<1	<1	<1	<1	<1	<1		<1	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		8.3	8.9	11.1	22.8	10	6	10	8	14	11	10	11		13	23.2	22.8
Chloride (Cl)	mg/L	1000	<0.5	<0.5	1	1	1	0.6	0.6	1.2	1.6	1.6	2.6	2.5		3.3	5.7	6.35
Fluoride (F)	mg/L		0.03	0.03	0.04	0.05		0.05	0.03	0.02	0.04	0.03	0.03	0.03		0.03		
Sulfate (SO4)	mg/L		<1	<1	<1	2.5	0.97	0.5	2.5	0.5	0.6	1.6	0.7	0.6		2.6	4.42	5.04
Nitrate (as N)	mg/L	56	<0.005	<0.005	0.009	0.048	0.014	0.08	0.06	0.23	0.30	0.30	0.61	0.60		0.78	1.36	1.55
Nitrite (as N)	mg/L	5.0	0.001	<0.001	0.001	0.001	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	0.002	0.0020
Total Kjeldahl Nitrogen	mg N/L												0.2	0.3		0.3		-
Ortho Phosphate as P	mg/L		<0.001	<0.001	<0.001	0.004	<0.001	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20		<0.20	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.001	0.003	<0.001	0.004	0.002	<0.005	<0.005	<0.005							0.004	0.0023
Total Phosphate as P	mg/L	0.4	0.003	0.004	<0.001	0.013	0.016	<0.02	0.03	<0.02							0.0069	0.0046
Aluminum (Al)-Total	mg/L	3.0	0.04	0.027	0.017	0.026	0.052	0.05	0.06	0.038	0.025	0.0949	0.0414	0.0449	0.0293	0.0240	0.0092	0.0119
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.00022	0.0005	0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.0000279	<0.00005	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0001	<0.0001	<0.0001	0.0004	0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	0.000193	0.0004	0.0002	0.00024
Barium (Ba)-Total	mg/L		<0.01	<0.01	<0.01	<0.01	0.00245	<0.005	<0.005	<0.005	<0.005	0.00399	0.00365	0.00349	0.00376	0.00399	0.00555	0.00638
Beryllium (Be)-Total	mg/L		<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.000007	<0.0001	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.1	<0.1	<0.1	<0.1												<0.00050
Boron (B)-Total	mg/L		<0.1	<0.1	<0.1	<0.1	<0.001	<0.010	<0.010	<0.010	<0.010	0.004	0.002	0.002	0.109	0.003	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.0002	<0.0002	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.0000043	<0.00002	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.77	1.69	2.34	4.98	2.36	1.67	1.5	2.07	2.97	1.90	2.35	2.32	3.04	3.99	6.4	6.90
Chromium (Cr)-Total	mg/L	0.170	<0.015	<0.015	<0.015	<0.01	0.00025	<0.0009	<0.0009	<0.0009	<0.0009	0.0015	0.0013	0.0013	0.000445	0.0045	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.000044	<0.00005	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	<0.01	<0.01	<0.01	<0.01	0.0024	0.0014	0.0013	0.0018	<0.001	0.0020	0.0012	0.0012	0.00221	0.0011	0.00238	0.00232
Iron (Fe)-Total	mg/L		0.116	0.1	<0.03	0.11	0.022	<0.10	0.07	<0.10	<0.10	<0.10	<0.10	<0.10	0.0322	<0.10	<0.030	<0.030
Lead (Pb)-Total	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	<0.00005	0.00011	0.0000642	0.00010	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.015	<0.015	<0.015	<0.01							<0.005	<0.005	0.00049	<0.005	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		1.02	1.06	1.42	2.76	1.21	0.82	0.73	1	1.46	0.96	0.96	0.95	1.38	2.11	3.26	3.80
Manganese (Mn)-Total	mg/L		0.006	<0.005	<0.005	0.008	0.0015	<0.01	0.006	<0.01	<0.01	<0.01	<0.01	<0.01	0.00355	<0.01	0.00286	0.00272
Mercury (Hg)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.001	<0.001	<0.001	<0.001	<0.00006	<0.0005	<0.0005	<0.0005	<0.0005	0.00006	<0.00005	<0.00005	<0.00005	0.00006	0.000115	0.000099
Nickel (Ni)-Total	mg/L	0.10	<0.001	<0.001	<0.001	<0.001	0.0004	<0.0006	<0.0006	<0.0006	<0.0006	0.0011	0.0007	0.0006	0.000411	0.0007	0.00066	0.00063
Potassium (K)-Total	mg/L		<2	<2	<2	<2	0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.424	<0.5	0.7	0.73

JER-WQ13

Sample ID	Units	PKCA Discharge Criteria	CL-12	CL-12	CL-12	CL-12	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13
Date Sampled			18-Aug-95	10-Sep-95	22-Nov-95	17-Apr-96	26-May-05	29-Jun-05	30-Jun-05	26-Aug-05	10-Apr-06	21-Jun-06	11-Jul-06	12-Jul-06	6-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07
Selenium (Se)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	0.0001	<0.0008	<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0010	0.000116	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.286	0.265	0.381	0.73		0.46	0.61	0.62	0.90	0.48	0.47	0.47	0.734	0.89	1.28	1.40
Silver (Ag)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.000008	<0.0001	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	0.67	0.5	0.8	<0.5	0.6	<0.5	1.0	1.0	1.67	1.1	2.75	2.94
Strontium (Sr)-Total	mg/L		0.01	0.013	0.007	0.016	0.0074			0.006	0.0100	0.0080	0.0097	0.0092	0.0103	0.0120	0.0196	0.0210
Thallium (Tl)-Total	mg/L		<0.1	<0.1	<0.1	<0.1		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000092	<0.00005	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.03	<0.03	<0.3	<0.03							<0.0001	<0.0001	<0.0000300	<0.0001	<0.00010	0.00077
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01							<0.0005	<0.0005	0.000269	<0.0005	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	<0.0005	<0.0005	0.00021	0.00026	0.00096	0.00069	0.00066	0.00063	0.00072	0.00058	0.00046	0.00041	0.000485	0.00078	0.00265	0.00245
Vanadium (V)-Total	mg/L		<0.03	<0.03	<0.03	<0.03	0.00006	0.0001	<0.0001	0.0002	0.0003	<0.0005	<0.0005	<0.0005	0.000173	0.0016	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.005	<0.005	<0.005	<0.005	0.0021	<0.002	<0.002	<0.002	<0.002	0.006	0.003	0.010	0.00639	0.003	<0.001	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.025	0.012	0.014	0.02	0.05	0.036	0.04	0.036	0.025	0.060	0.026	0.026	0.025	0.018	0.0041	<0.007
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000273	<0.00005	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	0.0004	<0.0004	<0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.000192	<0.0001	0.00022	0.00024
Barium (Ba)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	0.0023	0.005	<0.003	<0.003	<0.003	0.00487	0.00372	0.0182	0.00375	0.00199	0.00551	0.00634
Beryllium (Be)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0000057	<0.0001	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.0005	<0.1	<0.1	<0.1	<0.00005											<0.00050
Boron (B)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	0.003	<0.004	<0.004	<0.004	<0.004	<0.001	0.002	0.002	0.09	<0.001	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000043	<0.00002	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.71	1.64	2.27	4.95	2.5	1.8	1.5	2	1.7	1.2	2.6	2.6	3.04	3.6	6.47	7.05
Chromium (Cr)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.01	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0003	0.0031	<0.0003	0.000414	0.0034	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	0.00008	0.00002	0.0000431	<0.00002	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	0.0014	0.0039	0.0064	0.0016	<0.0010	0.0003	0.0034	0.0057	0.00221	0.0014	0.00203	0.00230
Iron (Fe)-Dissolved	mg/L		0.049	0.051	<0.03	0.08	0.023	0.04	0.02	0.04	<0.10	<0.10	<0.10	<0.10	0.0322	<0.10	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	0.00007	0.0000594	0.00006	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.015	<0.015	<0.015	<0.01							<0.0010	<0.0010	0.00043	<0.0010	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		1.02	0.995	1.39	2.71	1.3	<0.5	0.7	1	1.1	0.7	1.3	1.3	1.32	1.9	3.28	3.82
Manganese (Mn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	0.001	0.002	0.004	0.002	<0.010	<0.010	<0.010	<0.010	0.00355	<0.010	<0.000050	0.000087
Mercury (Hg)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	0.0002	<0.0003	<0.0003	<0.0003	<0.0003	0.00007	0.00021	0.00012	0.0000605	<0.00005	0.000104	0.000108
Nickel (Ni)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	0.0003	0.0003	0.0004	0.0002	<0.0001	0.00062	0.00430	0.00101	0.000384	0.00064	0.00061	0.00066
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.417	<0.5	0.7	0.74
Selenium (Se)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0006	0.000112	<0.0006	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.286	0.246	0.372	0.72		0.47	0.65	0.65	0.97	0.47	0.51	0.52	0.729	0.86	1.31	1.40
Silver (Ag)-Dissolved	mg/L		<0.00001	<0.00001	<0.0001	<0.00001	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000059	<0.00005	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	<1	0.5	<0.5	<0.5	0.8	0.7	1.0	1.0	1.62	1.5	2.79	3.04
Strontium (Sr)-Dissolved	mg/L		0.01	0.011	0.007	0.016	0.0069			0.0062	0.0095	0.0074	0.0121	0.0120	0.0103	0.0119	0.0199	0.0214
Thallium (Tl)-Dissolved	mg/L		<0.1	<0.1	<0.1	<0.1	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	<0.00005	0.0000091	<0.00005	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.03	<0.03	<0.3	<0.03	<0.0002						0.0002	<0.0001	<0.00003	<0.0001	<0.00010	0.00079
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.0003						<0.0005	<0.0005	0.00011	<0.0005	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		<0.0005	<0.00005	0.00020	0.00025	0.001	0.00053	0.00063	0.00057	0.00061	0.00052	0.00044	0.00043	0.000476	0.00062	0.00205	0.00221
Vanadium (V)-Dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	0.0003	0.0003	0.000168	0.0013	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	0.002	<0.002	0.003	<0.002	<0.002	<0.001	0.003	0.003	0.00533	0.003	<0.0010	<0.0010
Oil and Grease	mg/L	5.0																-
Total Inorganic Carbon	mg/L						2.7	2	2	<1	1	0.4	0.4	0.4		2.4	3.91	4.76
Total Organic Carbon	mg/L		5.8	4.8	6.7	9.6	6.7	4	4	6	4	3.5	3.7	3.6		3.6	5.92	6.22
BOD	mg/L	25																-

JER-WQ13

Sample ID	Units	PKCA Discharge Criteria	CL-12	CL-12	CL-12	CL-12		JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13
Date Sampled			18-Aug-95	10-Sep-95	22-Nov-95		17-Apr-96	26-May-05	29-Jun-05	30-Jun-05	26-Aug-05	10-Apr-06	21-Jun-06	11-Jul-06	12-Jul-06	6-Aug-06	5-Sep-06	17-Dec-06	27-Apr-07
Fecal Coleform	CFU/100 mL	20																	-
Field Water Temperature	deg C											1.57	15.15	15.84		16.3	8.73	0.21	3.26
Field Conductivity	uS/cm											32	24	33		34	36	77	87
Field DO	%																		122.6
Field DO	mg/L											11.55	10.41	9.07			11.10	9.01	16.33
Field pH												6.3	6.26	7.05		7.8	6.54	6.76	5.91
Field ORP	mV											427.40	193.10	334.20			268.40	341	85.5
Balance (+ions/-ions)	Ratio							Low EC		0.93		0.94	0.61	0.45	0.85	0.83		0.88		

JER-WQ13

Sample ID	Units	PKCA Discharge Criteria	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13
Date Sampled			1-Jul-07	17-Jul-07	25-Aug-07	23-Sep-07	08-Dec-07
Time Sampled			10:15	00:00	14:00	12:00	13:30
Lab Sample ID			L525299-2	L531523-10	L546749-6	L557895-12	L585854-10
Hardness (as CaCO3)	mg/L		21.8	22.8	28.2	30.3	36
Conductivity	uS/cm		55.0	67.7	78.3	85.4	93.8
pH	pH	6.0 - 8.8	7.35	7.06	7.45	7.70	7.37
Total Dissolved Solids	mg/L	4000	39.0	42.0	59.0	37.0	66
Total Suspended Solids	mg/L	25	<3	<3	<3	<3	<3
Turbidity	NTU		1.39	0.65	0.60	0.69	0.39
Ammonia as N	mg/L	12	0.0144	0.0183	0.0112	0.0167	0.0388
Acidity (as CaCO3)	mg/L		6.0	2.4	2.7	2.2	2.3
Alkalinity, Bicarbonate (as CaCO3)	mg/L		13.6	15.8	15.7	16.9	21.5
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		13.6	15.8	15.7	16.9	21.5
Chloride (Cl)	mg/L	1000	3.68	4.06	5.07	5.54	6.26
Fluoride (F)	mg/L						
Sulfate (SO4)	mg/L		3.19	3.47	4.73	5.46	5.99
Nitrate (as N)	mg/L	56	1.01	1.19	1.99	2.33	2.59
Nitrite (as N)	mg/L	5.0	<0.001	0.0062	0.0051	0.0064	0.0045
Total Kjeldahl Nitrogen	mg N/L		-	-	-	-	0.297
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		0.0025	<0.0020	<0.0020	<0.0020	<0.0020
Total Phosphate as P	mg/L	0.4	0.0069	0.0028	0.0043	0.0027	0.0033
Aluminum (Al)-Total	mg/L	3.0	0.0375	0.0265	0.0135	0.0367	0.007
Antimony (Sb)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00017	0.00019	0.00019	0.00018	0.0002
Barium (Ba)-Total	mg/L		0.00554	0.00511	0.00487	0.00499	0.00583
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		4.66	4.89	5.98	6.51	7.48
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.00187	0.00168	0.00156	0.00175	0.00178
Iron (Fe)-Total	mg/L		0.048	0.068	0.051	0.039	<0.030
Lead (Pb)-Total	mg/L	0.02	0.000450	<0.00005	<0.00005	0.000200	0.000055
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		2.36	2.54	3.22	3.50	4.08
Manganese (Mn)-Total	mg/L		0.00319	0.00627	0.00350	0.00293	0.00132
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.000089	0.000091	0.000125	0.000142	0.000124
Nickel (Ni)-Total	mg/L	0.10	0.00109	0.00105	0.00086	0.00097	0.00091
Potassium (K)-Total	mg/L		0.60	0.60	0.74	0.80	0.91

JER-WQ13

Sample ID	Units	PKCA Discharge Criteria	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13
Date Sampled			1-Jul-07	17-Jul-07	25-Aug-07	23-Sep-07	08-Dec-07
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.770	0.698	0.648	0.704	0.714
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		2.07	2.28	3.00	3.48	3.9
Strontium (Sr)-Total	mg/L		0.0161	0.0164	0.0190	0.0211	0.0248
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	0.00251	0.00156	<0.00010	0.00151
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000928	0.00103	0.000951	0.00108	0.00104
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.0013	0.0012	<0.001	0.0017	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.0106	0.0136	<0.009	0.0062	0.0066
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.00016	0.00019	0.00039	0.00018	0.0002
Barium (Ba)-Dissolved	mg/L		0.00509	0.00505	0.00495	0.00471	0.00571
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		4.69	4.95	6.00	6.49	7.68
Chromium (Cr)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.00192	0.00156	0.00168	0.00147	0.00178
Iron (Fe)-Dissolved	mg/L		<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L		0.000064	<0.000050	<0.000050	<0.000050	0.000051
Lithium (Li)-Dissolved	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		2.44	2.54	3.21	3.42	4.09
Manganese (Mn)-Dissolved	mg/L		<0.000050	0.000435	0.000627	0.000847	0.00089
Mercury (Hg)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		0.000089	0.000104	0.000106	0.000131	0.000129
Nickel (Ni)-Dissolved	mg/L		0.00085	0.00099	0.00100	0.00078	0.00089
Potassium (K)-Dissolved	mg/L		0.60	0.61	0.75	0.78	0.9
Selenium (Se)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.669	0.690	0.646	0.678	0.697
Silver (Ag)-Dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		2.19	2.31	3.00	3.39	3.98
Strontium (Sr)-Dissolved	mg/L		0.0162	0.0167	0.0192	0.0207	0.0245
Thallium (Tl)-Dissolved	mg/L		<0.00010	<0.00010	0.00020	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.00010	0.00194	0.00184	<0.00010	0.00119
Titanium (Ti)-Dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.000763	0.000897	0.00100	0.000920	0.000967
Vanadium (V)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	0.0012
Oil and Grease	mg/L	5.0	-	3.16	-	-	-
Total Inorganic Carbon	mg/L		2.67	5.08	3.14	3.50	3.8
Total Organic Carbon	mg/L		4.72	-	5.25	5.12	5.24
BOD	mg/L	25		-	-	-	-

JER-WQ13

Sample ID	Units	PKCA Discharge Criteria	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13	JER-WQ13
Date Sampled			1-Jul-07	17-Jul-07	25-Aug-07	23-Sep-07	08-Dec-07
Fecal Coleform	CFU/100 mL	20		-	-	-	-
Field Water Temperature	deg C		11.71	17.17	8.28	3.57	2.44
Field Conductivity	uS/cm		66	66	62	337	100
Field DO	%		130.9	103.6	-	80.4	97.1
Field DO	mg/L		14.38	10.02	-	10.02	13.23
Field pH			7.97	7.06	7.25	6.76	7.81
Field ORP	mV		194.4	151.6	238.5	156.3	39.4
Balance (+ions/-ions)	Ratio						

JER-WQ14

Sample ID	Units	PKCA Discharge Criteria	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14
Date Sampled			28-Jun-05	29-Jul-05	26-Aug-05	21-Jun-06	11-Jul-06	6-Aug-06	5-Sep-06	1-Jul-07	17-Jul-07	25-Aug-07	23-Sep-07
Time Sampled										10:50	00:00	14:45	11:05
Lab Sample ID						Jun-31	Jun-14	L420594-26	06-10851	L525299-3	L531523-9	L546749-9	L557895-9
Hardness (as CaCO3)	mg/L		6.4	7.2	7.4	<6	6.7		9.5	7.58	9.43	11.7	11.6
Conductivity	uS/cm		18	16	17	16	20		21	16.5	25.5	26.8	27.4
pH	pH	6.0 - 8.8	5.73	5.87	7.09	6.85	7.18		7.14	6.74	6.88	7.25	7.73
Total Dissolved Solids	mg/L	4000	36	<15	20	13	12		22	18.0	15.0	31.0	27.0
Total Suspended Solids	mg/L	25	<2	<2	<2	<2	<2		<2	<3	5.9	<3	<3
Turbidity	NTU		1	1	<1	1	1		1	1.48	1.58	0.43	0.41
Ammonia as N	mg/L	12	<0.1	<0.1	<0.1	0.01	0.01	0.009	0.01	0.0118	0.0398	0.0126	0.0117
Acidity (as CaCO3)	mg/L		2	4	2	6	2		2	2.6	2.2	2.2	1.9
Alkalinity, Bicarbonate (as CaCO3)	mg/L		12	13	10	11	13		14	6.4	10	10.2	10.9
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1		<1	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		10	11	8	9	10		12	6.4	10	10.2	10.9
Chloride (Cl)	mg/L	1000	0.1	0.3	0.4	0.5	0.3		0.4	<0.5	0.52	0.73	0.81
Fluoride (F)	mg/L		0.03	0.05	0.02	0.02	0.03		0.03				
Sulfate (SO4)	mg/L		<0.5	<0.5	<0.5	1.1	<0.5		1.0	<0.50	<0.50	0.52	0.68
Nitrate (as N)	mg/L	56	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.005	<0.005	0.0051	0.0198
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.001	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L						0.4		0.4	-	-	-	-
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.2	<0.20	<0.20		<0.20	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005	<0.005					0.0027	0.0035	0.0021	<0.0020
Total Phosphate as P	mg/L	0.4	<0.02	<0.02	<0.02					0.0047	0.0129	0.0047	0.0031
Aluminum (Al)-Total	mg/L	3.0	0.05	0.029	0.027	0.0417	0.0472	0.0324	0.0252	0.0370	0.0331	0.0219	0.0170
Antimony (Sb)-Total	mg/L		0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000131	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	0.000213	0.0004	0.00018	0.00023	0.00023	0.00022
Barium (Ba)-Total	mg/L		<0.005	<0.005	<0.005	0.00176	0.00206	0.00203	0.00212	0.00253	0.00258	0.00196	0.00186
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.0000031	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L									<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	<0.001	<0.001	0.112	0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	0.000012	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.34	1.56	1.84	1.22	1.49	1.84	2.48	1.87	2.30	2.76	2.77
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	<0.0005	0.0012	0.000213	0.0024	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000407	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	<0.001	<0.001	<0.001	<0.001	0.0053	0.00202	0.0015	0.00130	0.00158	0.00138	0.00134
Iron (Fe)-Total	mg/L		0.07	0.14	<0.10	0.11	0.12	0.155	0.17	0.106	0.251	0.230	0.174
Lead (Pb)-Total	mg/L	0.02	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.0000762	<0.00005	<0.00005	<0.00005	<0.00005	0.000090
Lithium (Li)-Total	mg/L						<0.005	<0.00002	<0.005	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.52	0.63	0.70	<0.50	0.33	0.657	1.01	0.708	0.920	1.13	1.14
Manganese (Mn)-Total	mg/L		0.003	<0.01	<0.01	0.01	<0.01	0.0054	<0.01	0.00812	0.0114	0.00304	0.00163
Mercury (Hg)-Total	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	0.0000445	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	<0.0006	0.0008	0.0005	0.000386	0.0008	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.285	<0.5	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

JER-WQ14

Sample ID	Units	PKCA Discharge Criteria	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14
Date Sampled			28-Jun-05	29-Jul-05	26-Aug-05	21-Jun-06	11-Jul-06	6-Aug-06	5-Sep-06	1-Jul-07	17-Jul-07	25-Aug-07	23-Sep-07
Silicon (Si)-Total	mg/L		0.2	0.09	0.29	0.18	0.25	0.467	0.66	0.272	0.260	0.235	0.216
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.000113	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.7	0.5	<0.5	<0.5	<0.5	0.518	<0.5	<0.50	0.53	0.72	0.76
Strontium (Sr)-Total	mg/L				0.0047	0.0033	0.0048	0.00482	0.0058	0.00504	0.00620	0.00648	0.00667
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000016	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	<0.0000300	<0.0001	<0.00010	0.00336	0.00476	<0.00010
Titanium (Ti)-Total	mg/L						<0.0005	0.000263	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.0002	0.00021	0.00024	0.00014	0.00019	0.000214	0.00023	0.000261	0.000273	0.000219	0.000194
Vanadium (V)-Total	mg/L		0.0002	0.0002	0.0003	<0.0005	<0.0005	0.000202	0.0017	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	<0.002	0.002	0.008	0.00366	0.002	<0.001	<0.001	<0.001	0.0023
Aluminum (Al)-Dissolved	mg/L	2.0	0.041	0.02	0.022	0.026	0.032	0.0273	0.022	0.0194	0.0213	0.0100	0.0090
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.0000116	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	<0.0001	0.0002	0.0001	0.0002	0.000195	0.0002	0.00017	0.00021	0.00021	0.00021
Barium (Ba)-Dissolved	mg/L		0.003	<0.003	<0.003	0.00192	0.00274	0.00192	0.00146	0.00234	0.00251	0.00189	0.00180
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000003	<0.0001	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L									<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.004	<0.004	<0.001	<0.001	0.111	<0.001	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000116	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.6	1.8	1.8	0.7	1.7	1.79	2.3	1.84	2.28	2.78	2.76
Chromium (Cr)-Dissolved	mg/L		0.0007	<0.0004	<0.0004	<0.0003	<0.0003	0.000209	0.0008	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00002	0.00002	0.0000379	<0.00002	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0054	0.006	<0.0010	0.0011	0.0050	0.00188	0.0007	0.00128	0.00147	0.00130	0.00126
Iron (Fe)-Dissolved	mg/L		0.03	0.09	0.07	<0.10	<0.10	0.149	0.14	0.031	0.137	0.093	0.082
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.00007	0.0000656	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L						<0.0010	<0.00002	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.55	0.7	0.7	<0.5	0.6	0.644	0.9	0.724	0.911	1.16	1.14
Manganese (Mn)-Dissolved	mg/L		0.005	<0.001	0.001	<0.010	<0.010	0.00521	<0.010	0.000084	0.00641	0.000154	0.000541
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00001	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	0.00005	0.00008	0.0000433	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.0001	0.0003	0.0002	0.00020	0.00087	0.000345	0.00029	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	0.275	<0.5	<0.50	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0001	<0.0006	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.21	0.1	0.34	0.24	0.27	0.42	0.63	0.232	0.246	0.231	0.196
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000697	<0.00005	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.7	0.6	<0.5	<0.5	<0.5	0.502	0.5	<0.50	0.54	0.75	0.77
Strontium (Sr)-Dissolved	mg/L				0.0044	0.0041	0.0078	0.00472	0.0051	0.00491	0.00616	0.00668	0.00660
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	0.0000016	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.00003	<0.0001	<0.00010	0.00303	0.00368	<0.00010
Titanium (Ti)-Dissolved	mg/L						<0.0005	0.000147	<0.0005	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00019	0.00015	0.00021	0.00016	0.00022	0.000212	0.00019	0.000220	0.000228	0.000179	0.000149
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	0.0001	0.0004	0.000201	0.0014	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.004	<0.002	<0.002	<0.001	0.006	0.00268	0.002	<0.0010	<0.0010	<0.0010	0.0019
Oil and Grease	mg/L	5.0								-	1.69	-	-
Total Inorganic Carbon	mg/L		<1	2	2	0.2	0.5		2.2	1.01	6.57	2.06	2.15
Total Organic Carbon	mg/L		5	5	5	4.3	4.9		4.7	5.85	-	6.99	6.05
BOD	mg/L	25									-	-	-
Fecal Coleform	CFU/100 mL	20									-	-	-

JER-WQ14

Sample ID	Units	PKCA Discharge Criteria	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14	JER-WQ14
Date Sampled			28-Jun-05	29-Jul-05	26-Aug-05	21-Jun-06	11-Jul-06	6-Aug-06	5-Sep-06	1-Jul-07	17-Jul-07	25-Aug-07	23-Sep-07
Field Water Temperature	deg C					16.45	16.37	17	8.3	14.41	16.69	7.64	2.44
Field Conductivity	uS/cm					14	15	11	16	18	24	21	24
Field DO	%									127.6	102.1	-	107.8
Field DO	mg/L					7.79	8.54		11.47	13.00	9.94	-	14.7
Field pH						7.33	6.85	8.0	6.29	7.64	6.74	6.75	7.87
Field ORP	mV					154.30	358.20		284.30	139.4	191.5	267.9	187.5
Balance (+ions/-ions)	Ratio		0.83	0.77	0.95	0.38	0.73		0.80				

JER-WQ15

Sample ID	Units	PKCA Discharge Criteria	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15
Date Sampled			28-Jun-05	30-Jul-05	26-Aug-08	21-Jun-06	11-Jul-06	24-Sep-06	24-Jun-07	22-Jul-07	26-Aug-07
Time Sampled						M	M	M	09:00	10:00	09:45
Lab Sample ID						Jun-32	Jun-15	06-11731	L522053-3	L534134-3	L546749-16
Hardness (as CaCO3)	mg/L		<6	8.1	7.9	<6	7.2	11.1	5.82	11.1	16.1
Conductivity	uS/cm		17	17	18	16	19	30	13.2	25.0	36.5
pH	pH	6.0 - 8.8	5.57	5.99	6.97	6.85	7.05	6.87	6.59	7.18	6.96
Total Dissolved Solids	mg/L	4000	48	<15	<15	12	16	19	16.0	21.0	28.0
Total Suspended Solids	mg/L	25	<2	<2	<2	<2	<2	<2	<3	<3	<3
Turbidity	NTU		1	1	1	1	2	<1	0.79	0.48	0.52
Ammonia as N	mg/L	12	<0.1	<0.1	<0.1	0.03	0.01	0.02	0.0157	0.0215	<0.005
Acidity (as CaCO3)	mg/L		2	4	2	5	3	3	2.6	1.6	4.3
Alkalinity, Bicarbonate (as CaCO3)	mg/L		12	13	10	12	14	20	4.5	9.8	15.2
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		10	10	8	10	12	17	4.5	9.8	15.2
Chloride (Cl)	mg/L	1000	0.1	0.3	0.4	0.5	0.3	0.6	<0.5	0.60	0.63
Fluoride (F)	mg/L		0.03	0.05	0.02	0.02	0.03	0.03			
Sulfate (SO4)	mg/L		<0.5	<0.5	<0.5	0.9	<0.5	1.3	<0.50	0.61	0.55
Nitrate (as N)	mg/L	56	<0.05	0.08	0.08	<0.05	<0.05	0.06	0.0109	0.0653	0.118
Nitrite (as N)	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L						0.2		-	-	-
Ortho Phosphate as P	mg/L		<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005	<0.005	<0.005				0.0024	0.0023	<0.0020
Total Phosphate as P	mg/L	0.4	<0.02	<0.02	<0.02				0.0070	0.0050	0.0030
Aluminum (Al)-Total	mg/L	3.0	0.059	0.034	0.03	0.0491	0.0363	0.0176	0.0389	0.0232	0.0344
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	0.00012	0.00018	0.00016
Barium (Ba)-Total	mg/L		<0.005	<0.005	<0.005	0.00209	0.00296	0.00218	0.00197	0.00317	0.00502
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L								<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010	0.002	<0.001	<0.001	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00002	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		1.36	1.9	1.99	1.28	1.67	2.71	1.38	2.65	3.90
Chromium (Cr)-Total	mg/L	0.170	<0.0009	<0.0009	<0.0009	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	0.00020
Copper (Cu)-Total	mg/L	0.04	<0.001	<0.001	<0.001	0.0013	<0.001	0.0017	0.00107	0.00156	0.00092
Iron (Fe)-Total	mg/L		0.09	0.11	<0.10	<0.10	<0.10	0.12	0.066	0.179	0.172
Lead (Pb)-Total	mg/L	0.02			<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.0001	<0.0001			<0.005	<0.005	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.52	0.72	0.73	<0.50	0.37	1.14	0.582	1.02	1.47
Manganese (Mn)-Total	mg/L		<0.002	<0.01	<0.01	<0.01	<0.01	<0.01	0.00365	0.00511	0.0122
Mercury (Hg)-Total	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0006	<0.0006	<0.0006	0.0003	0.0004	<0.0001	<0.0005	<0.0005	0.00058
Potassium (K)-Total	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50

JER-WQ15

Sample ID	Units	PKCA Discharge Criteria	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15
Date Sampled			28-Jun-05	30-Jul-05	26-Aug-08	21-Jun-06	11-Jul-06	24-Sep-06	24-Jun-07	22-Jul-07	26-Aug-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0008	<0.0008	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.23	0.14	0.36	0.20	0.27	0.72	0.294	0.330	1.85
Silver (Ag)-Total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		0.7	0.7	<0.5	<0.5	<0.5	<0.5	<0.50	0.60	0.81
Strontium (Sr)-Total	mg/L				0.0051	0.0037	0.0052	0.0066	0.00373	0.00722	0.00924
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L						<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L						<0.0005	<0.0005	<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.00023	0.00023	0.00026	0.00019	0.00016	0.00019	0.000208	0.000228	0.000149
Vanadium (V)-Total	mg/L		0.0001	0.0002	0.0003	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.002	<0.002	0.005	0.002	0.005	0.035	<0.001	<0.001	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.043	0.019	0.025	0.032	0.031	0.010	0.0275	0.0152	0.0234
Antimony (Sb)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0001	<0.0001	0.0002	<0.0001	0.0002	0.0002	0.00012	0.00017	0.00015
Barium (Ba)-Dissolved	mg/L		0.004	0.004	<0.003	0.00401	0.00351	0.00174	0.00187	0.00310	0.00500
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L								<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.004	<0.004	<0.004	<0.001	<0.001	<0.001	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.48	2.1	2	0.8	1.9	2.7	1.38	2.70	3.99
Chromium (Cr)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		0.00008	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00010	<0.00010	0.00013
Copper (Cu)-Dissolved	mg/L		0.0041	0.0056	<0.0010	0.0001	0.0048	0.0014	0.00094	0.00155	<0.00090
Iron (Fe)-Dissolved	mg/L		0.03	0.06	0.05	<0.10	<0.10	<0.10	<0.030	0.080	0.061
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L						<0.0010	<0.0010	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.53	0.7	0.7	<0.5	0.6	1.1	0.579	1.05	1.49
Manganese (Mn)-Dissolved	mg/L		0.01	0.001	0.002	<0.010	<0.010	<0.010	0.00212	0.00151	0.0108
Mercury (Hg)-Dissolved	mg/L		<0.0002	<0.0002	<0.0001	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.00005	0.00006	<0.00005	<0.000050	<0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.0001	0.0003	0.0003	0.00013	0.00063	0.00027	<0.00050	<0.00050	0.00059
Potassium (K)-Dissolved	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	<0.0006	<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.25	0.16	0.42	0.26	0.30	0.69	0.258	0.328	1.85
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		0.7	0.7	<0.5	<0.5	<0.5	<0.5	<0.50	0.61	0.82
Strontium (Sr)-Dissolved	mg/L				0.0046	0.0041	0.0075	0.0068	0.00369	0.00726	0.00955
Thallium (Tl)-Dissolved	mg/L		<0.00002	<0.00002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L						<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L						<0.0005	<0.0005	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.00022	0.00018	0.00021	0.00022	0.00020	0.00013	0.000197	0.000184	0.000128
Vanadium (V)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	0.0001	0.0003	0.0002	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.004	<0.002	<0.002	<0.001	0.007	0.001	<0.0010	<0.0010	<0.0010
Oil and Grease	mg/L	5.0							0.71	1.88	-
Total Inorganic Carbon	mg/L		1	2	2	0.4	0.7	2.8	4.74	5.04	3.08
Total Organic Carbon	mg/L		3	4	5	3.7	3.9	5.7	-	-	4.27
BOD	mg/L	25								-	-

JER-WQ15

Sample ID	Units	PKCA Discharge Criteria	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15	JER-WQ15
Date Sampled			28-Jun-05	30-Jul-05	26-Aug-08	21-Jun-06	11-Jul-06	24-Sep-06	24-Jun-07	22-Jul-07	26-Aug-07
Fecal Coleform	CFU/100 mL	20								-	-
Field Water Temperature	deg C					14.92	14.84	5.95	7.69	13.52	8.54
Field Conductivity	uS/cm					13	15	26	32	39	29
Field DO	%								97.5	104	87.7
Field DO	mg/L					9.29	9.31	11.97	12.3	10.81	11.32
Field pH						5.72	6.01	5.95	7.20	7.57	5.96
Field ORP	mV					194.60	337.30	387.40	250.4	231.9	165.8

JER-WQ16

Sample ID	Units	PKCA Discharge Criteria	CL-17	CL-17	CL-17	CL-17		JER-WQ16	JER-WQ16	JER-WQ16	JER-WQ-16
Date Sampled			18-Jul-96	12-Aug-96	6-Sep-96	3-Dec-96	31-Jul-05	17-Jul-07	11-Aug-07	17-Dec-07	
Time Sampled			18:15	13:33	17:05	12:05				11:45	
Lab Sample ID								L531523-6	L543213-5	L587890-2	
Hardness (as CaCO3)	mg/L		6.21	6.86	7.13	6.83	6.4	7.12	7.38	10.7	
Conductivity	uS/cm					8.37	15	20.1	18.4	24.4	
pH	pH	6.0 - 8.8	6.83	7.05	6.68		6.47	6.77	7.14	7.7	
Total Dissolved Solids	mg/L	4000	10	10	14	12	20	<15	15.0	22	
Total Suspended Solids	mg/L	25	4	<1	1	2	<2	<3	<3	<3	
Turbidity	NTU						2	0.65	0.57	0.84	
Ammonia as N	mg/L	12	0.015	<0.005	0.027	0.015	<0.1	0.0099	0.0084	0.0263	
Acidity (as CaCO3)	mg/L		2	1.9	2	3	3	2.2	<1.0	1.4	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		6.3	6.3	5.9	7	9	7.5	6.3	9.3	
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	
Alkalinity, Hydroxide (as CaCO3)	mg/L						<1	<1.0	<1.0	<1.0	
Alkalinity, Total (as CaCO3)	mg/L		6.3	6.3	5.9	7	8	7.5	6.3	9.3	
Chloride (Cl)	mg/L	1000	<0.5	<0.5	<0.5	<0.5	0.2	<0.5	<0.5	0.58	
Fluoride (F)	mg/L		0.02	0.04	0.04	<0.02	0.05				
Sulfate (SO4)	mg/L		<1	<1	2.4	<1	<0.5	0.59	0.71	1.15	
Nitrate (as N)	mg/L	56	<0.005	0.005	0.033	0.015	<0.05	0.0673	0.0708	0.0774	
Nitrite (as N)	mg/L	5.0	0.001	0.001	0.002	0.001	<0.05	0.0015	<0.001	<0.001	
Total Kjeldahl Nitrogen	mg N/L							-	-	-	
Ortho Phosphate as P	mg/L		0.002	0.002	0.004	0.002	<0.2	<0.0010	<0.0010	<0.0010	
Total Dissolved Phosphate As P	mg/L		0.003	0.002	0.004	0.002	<0.005	<0.0020	<0.0020	<0.0020	
Total Phosphate as P	mg/L	0.4	0.009	0.006	0.012	0.004	<0.02	0.0027	0.0052	0.0053	
Aluminum (Al)-Total	mg/L	3.0	0.038	0.029	0.122	0.040	0.025	0.0217	0.0206	0.0138	
Antimony (Sb)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00010	<0.00010	<0.00010	
Arsenic (As)-Total	mg/L	0.10	0.0002	0.00018	0.00019	0.0001	<0.0004	0.00016	0.00016	0.00018	
Barium (Ba)-Total	mg/L		0.00131	0.00118	0.00147	0.00171	<0.005	0.00187	0.00180	0.00272	
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	
Bismuth (Bi)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005		<0.00050	<0.00050	<0.00050	
Boron (B)-Total	mg/L		0.002	0.003	0.007	<0.001	<0.010	<0.010	<0.010	<0.010	
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	
Calcium (Ca)-Total	mg/L		1.51	1.59	1.7	1.99	1.47	1.69	1.73	2.5	
Chromium (Cr)-Total	mg/L	0.170	<0.0001	0.0001	0.0003	<0.0005	<0.0009	<0.0005	<0.0005	<0.0005	
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	
Copper (Cu)-Total	mg/L	0.04	0.0011	0.0011	0.0016	0.0023	0.0011	0.00115	0.00135	0.00157	
Iron (Fe)-Total	mg/L		0.07	0.07	0.06	0.04	<0.10	0.049	0.063	<0.030	
Lead (Pb)-Total	mg/L	0.02	<0.00005	0.00006	0.0004	0.00009	0.0001	<0.00005	0.000056	<0.00005	
Lithium (Li)-Total	mg/L		<0.001	0.002	0.004	<0.001		<0.0050	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L		0.629	0.724	0.789	0.91	0.67	0.752	0.744	1.14	
Manganese (Mn)-Total	mg/L		0.0029	0.00282	0.0027	0.0025	<0.01	0.00710	0.00501	0.00162	
Mercury (Hg)-Total	mg/L						<0.0002	<0.000050	<0.000050	<0.000050	
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	
Nickel (Ni)-Total	mg/L	0.10	0.0002	0.0002	0.0004	0.0005	<0.0006	<0.0005	0.00055	0.00055	
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<0.5	<0.50	<0.50	<0.50	
Selenium (Se)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0008	<0.0010	<0.0010	<0.0010	

JER-WQ16

Sample ID	Units	PKCA Discharge Criteria	CL-17	CL-17	CL-17	CL-17	JER-WQ16	JER-WQ16	JER-WQ16	JER-WQ-16
Date Sampled			18-Jul-96	12-Aug-96	6-Sep-96	3-Dec-96	31-Jul-05	17-Jul-07	11-Aug-07	17-Dec-07
Silicon (Si)-Total	mg/L		0.32	0.32	0.84	0.87	0.27	0.276	0.230	0.247
Silver (Ag)-Total	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	<0.5	<0.50	<0.50	0.63
Strontium (Sr)-Total	mg/L		0.0035	0.0035	0.004	0.0048		0.00479	0.00505	0.00679
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		0.0003	0.0002	0.0003	<0.0001		0.00377	<0.00010	0.0107
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01		<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0				0.00003	0.00006	0.000080	0.000088	0.000087
Vanadium (V)-Total	mg/L		0.0001	0.0001	0.0001	<0.001	0.0001	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.001	<0.001	<0.001	0.001	<0.002	0.0010	0.0018	0.0057
Aluminum (Al)-Dissolved	mg/L	2.0	0.022	0.018	0.059	0.03	0.022	0.0124	-	0.0102
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00010	-	<0.00010
Arsenic (As)-Dissolved	mg/L		0.0002	0.00017	0.00018	<0.0001	<0.0001	0.00016	-	0.00017
Barium (Ba)-Dissolved	mg/L		0.00122	0.00114	0.00134	0.00163	<0.003	0.00177	-	0.00251
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.00050	-	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.004	<0.00050	-	<0.00050
Boron (B)-Dissolved	mg/L		<0.001	0.001	0.003	0.002	<0.00005	<0.010	-	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	1.5	<0.000050	-	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.48	1.54	1.59	1.89		1.63	-	2.44
Chromium (Cr)-Dissolved	mg/L		0.0001	0.0002	0.0002	<0.0005	<0.0004	<0.00050	-	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00010	-	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0012	0.0011	0.0015	0.0021	0.0034	0.00099	-	0.00126
Iron (Fe)-Dissolved	mg/L		0.04	0.03	0.02	0.02	<0.01	<0.030	-	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	0.0001	0.00024	0.00007	<0.00005	<0.000050	-	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.001	<0.001	0.001	<0.001		<0.0050	-	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.611	0.731	0.766	0.89	0.6	0.743	-	1.13
Manganese (Mn)-Dissolved	mg/L		0.00205	0.00175	0.00141	0.00194	<0.001	0.00232	-	0.000398
Mercury (Hg)-Dissolved	mg/L						<0.0002	<0.000050	-	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	<0.000050	-	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0002	0.0002	0.0003	0.0005	0.0003	<0.00050	-	<0.00050
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<0.5	<0.50	-	<0.50
Selenium (Se)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0004	<0.0010	-	<0.0010
Silicon (Si)-Dissolved	mg/L		0.31	0.31	0.77	0.83	0.27	0.265	-	0.225
Silver (Ag)-Dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.000010	-	<0.000010
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	0.5	<0.50	-	0.63
Strontium (Sr)-Dissolved	mg/L		0.0033	0.0034	0.0036	0.0048		0.00463	-	0.0066
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00010	-	<0.00010
Tin (Sn)-Dissolved	mg/L		0.0002	0.0002	0.0001	<0.0001		0.00255	-	0.00239
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01		<0.010	-	<0.010
Uranium (U)-Dissolved	mg/L					0.00003	0.00006	0.000069	-	0.000085
Vanadium (V)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.001	<0.0005	<0.0010	-	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.001	0.002	0.001	0.001	<0.002	<0.0010	-	0.0039
Oil and Grease	mg/L	5.0						1.07	-	-
Total Inorganic Carbon	mg/L						2	3.57	1.07	1.74
Total Organic Carbon	mg/L		3.8	4	0.4	4.7	3	-	3.43	4.3
BOD	mg/L	25						-	-	-
Fecal Coleform	CFU/100 mL	20						-	-	-

JER-WQ16

Sample ID	Units	PKCA Discharge Criteria	CL-17	CL-17	CL-17	CL-17		JER-WQ16	JER-WQ16	JER-WQ16	JER-WQ-16
Date Sampled			18-Jul-96	12-Aug-96	6-Sep-96	3-Dec-96		31-Jul-05	17-Jul-07	11-Aug-07	17-Dec-07
Field Water Temperature	deg C								16.67	10.14	2.7
Field Conductivity	uS/cm								18	18	24
Field DO	%								113.8	121	108.5
Field DO	mg/L								11.07	13.55	15.55
Field pH									6.33	7.30	5.7
Field ORP	mV								256.1	139.2	31
Ion Balance	Ratio							0.98			

JER-WQ17

Sample ID	Units	PKCA Discharge Criteria	CL-14	CL-14	CL-14	CL-14	JER-WQ17	JER-WQ17	JER-WQ17	JER-WQ17
Date Sampled			17-Jul-96	11-Aug-96	6-Sep-96	5-Dec-96	31-Jul-05	11-Jul-06	17-Jul-07	
Time Sampled			14:52	16:12	13:52	11:22			00:00	
Lab Sample ID								Jun-17	L531523-7	
Hardness (as CaCO3)	mg/L		6.14	7	6.56	6.82	6.7	6.5	7.64	
Conductivity	uS/cm					10.9	16	17	20.8	
pH	pH	6.0 - 8.8	6.73	7.02	6.74		7.2	7.03	6.81	
Total Dissolved Solids	mg/L	4000	10	11	10	16	<15	15	13.0	
Total Suspended Solids	mg/L	25	4	2	1	2	<2	<2	<3	
Turbidity	NTU						1	2	0.93	
Ammonia as N	mg/L	12	0.021	<0.005	0.007	0.035	<0.1	0.02	0.0183	
Acidity (as CaCO3)	mg/L		2	1.9	2	4	3	1	2.1	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		5.1	5.9	5.1	10	9	12	8.0	
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1.0	
Alkalinity, Hydroxide (as CaCO3)	mg/L						<1	<1	<1.0	
Alkalinity, Total (as CaCO3)	mg/L		5.1	5.9	5.1	10	7	9	8.0	
Chloride (Cl)	mg/L	1000	0.6	0.6	<0.5	<0.5	0.3	0.3	<0.5	
Fluoride (F)	mg/L		0.03	0.05	0.03	0.03	0.05	0.02		
Sulfate (SO4)	mg/L		<1	<1	<1	<1	<0.5	<0.5	0.59	
Nitrate (as N)	mg/L	56	<0.005	<0.005	0.007	0.007	0.06	0.08	0.0088	
Nitrite (as N)	mg/L	5.0	0.001	<0.001	0.001	0.002	<0.05	<0.05	<0.001	
Total Kjeldahl Nitrogen	mg N/L							<0.2	-	
Ortho Phosphate as P	mg/L		0.005	0.003	0.003	0.001	<0.2	<0.20	<0.0010	
Total Dissolved Phosphate As P	mg/L		0.005	0.003	0.003	0.002	<0.005		<0.0020	
Total Phosphate as P	mg/L	0.4	0.007	0.005	0.008	0.007	<0.02		0.0092	
Aluminum (Al)-Total	mg/L	3.0	0.038	0.041	0.124	0.042	0.029	0.0433	0.0278	
Antimony (Sb)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00010	
Arsenic (As)-Total	mg/L	0.10	0.00019	0.00024	0.00021	0.0002	<0.0004	<0.0002	0.00019	
Barium (Ba)-Total	mg/L		0.00192	0.00156	0.0018	0.00191	<0.005	0.00149	0.00189	
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.00050	
Bismuth (Bi)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005			<0.00050	
Boron (B)-Total	mg/L		<0.001	0.003	0.004	<0.001	<0.010	0.001	<0.010	
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	0.00006	<0.00005	<0.00005	0.0012	<0.00005	<0.00005	
Calcium (Ca)-Total	mg/L		1.46	1.6	1.47	2.47	1.59	1.42	1.73	
Chromium (Cr)-Total	mg/L	0.170	0.0001	0.0002	0.0002	<0.0005	<0.0009	0.0010	<0.0005	
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00010	
Copper (Cu)-Total	mg/L	0.04	0.0014	0.0014	0.0021	0.0027	0.0015	0.0016	0.00138	
Iron (Fe)-Total	mg/L		0.04	0.05	0.07	0.01	<0.10	<0.10	0.079	
Lead (Pb)-Total	mg/L	0.02	<0.00005	<0.00005	0.00006	0.00012	0.0002	<0.00005	<0.00005	
Lithium (Li)-Total	mg/L		<0.001	0.002	0.002	<0.001		<0.005	<0.0050	
Magnesium (Mg)-Total	mg/L		0.592	0.743	0.739	1.1	0.75	0.39	0.793	
Manganese (Mn)-Total	mg/L		0.00325	0.00305	0.00264	0.00168	<0.01	<0.01	0.00606	
Mercury (Hg)-Total	mg/L						<0.0002	<0.00005	<0.000050	
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	
Nickel (Ni)-Total	mg/L	0.10	0.0004	0.0003	0.0005	0.0004	<0.0006	0.0004	<0.0005	
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<0.5	<0.5	<0.50	
Selenium (Se)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0008	<0.0010	<0.0010	

JER-WQ17

Sample ID	Units	PKCA Discharge Criteria	CL-14	CL-14	CL-14	CL-14	JER-WQ17	JER-WQ17	JER-WQ17
Date Sampled			17-Jul-96	11-Aug-96	6-Sep-96	5-Dec-96	31-Jul-05	11-Jul-06	17-Jul-07
Silicon (Si)-Total	mg/L		0.38	0.36	0.99	1.1	0.25	0.19	0.281
Silver (Ag)-Total	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0001	<0.000010
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	0.6	<0.5	<0.50
Strontium (Sr)-Total	mg/L		0.006	0.0061	0.0051	0.0055		0.0046	0.00490
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010
Tin (Sn)-Total	mg/L		0.0002	0.0002	<0.0001	<0.0001		<0.0001	0.00338
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01		<0.0005	<0.010
Uranium (U)-Total	mg/L	1.0				0.00028	0.00005	<0.00005	0.000062
Vanadium (V)-Total	mg/L		0.0002	<0.0001	0.0001	<0.001	0.0002	<0.0005	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.001	<0.001	<0.001	0.001	<0.002	0.003	0.0022
Aluminum (Al)-Dissolved	mg/L	2.0	0.027	0.021	0.086	0.036	0.021	0.028	0.0128
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00010
Arsenic (As)-Dissolved	mg/L		0.00019	0.0002	0.00018	0.0002	<0.0001	0.0002	0.00019
Barium (Ba)-Dissolved	mg/L		0.00184	0.00159	0.00181	0.00191	<0.003	0.00227	0.00176
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005			<0.00050
Boron (B)-Dissolved	mg/L		<0.001	0.001	0.005	<0.001	<0.004	<0.001	<0.010
Cadmium (Cd)-Dissolved	mg/L		0.00009	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Calcium (Ca)-Dissolved	mg/L		1.48	1.6	1.45	2.54	1.6	1.5	1.73
Chromium (Cr)-Dissolved	mg/L		0.0001	0.0002	0.0002	<0.0005	<0.0004	<0.0003	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00002	<0.00010
Copper (Cu)-Dissolved	mg/L		0.0014	0.0014	0.0023	0.0021	0.0044	0.0032	0.00111
Iron (Fe)-Dissolved	mg/L		0.02	0.02	0.04	<0.01	0.01	<0.10	<0.030
Lead (Pb)-Dissolved	mg/L		<0.00005	<0.00005	0.00007	0.00005	<0.00005	<0.00005	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.001	0.001	0.003	<0.001		<0.0010	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.591	0.733	0.712	1.11	0.7	0.7	0.806
Manganese (Mn)-Dissolved	mg/L		0.00047	0.00058	0.00137	0.00035	<0.001	<0.010	0.000551
Mercury (Hg)-Dissolved	mg/L						<0.0002	<0.00005	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	<0.00005	<0.000050
Nickel (Ni)-Dissolved	mg/L		0.0003	0.0003	0.0005	0.0004	0.0002	0.00047	<0.00050
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<0.5	<0.5	<0.50
Selenium (Se)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0004	<0.0006	<0.0010
Silicon (Si)-Dissolved	mg/L		0.37	0.36	0.94	1.12	0.25	0.21	0.271
Silver (Ag)-Dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.000010
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	0.5	<0.5	<0.50
Strontium (Sr)-Dissolved	mg/L		0.0059	0.0061	0.005	0.0055		0.0060	0.00492
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00005	<0.00010
Tin (Sn)-Dissolved	mg/L		0.0002	0.0001	0.0001	<0.0001		<0.0001	0.00133
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01		<0.0005	<0.010
Uranium (U)-Dissolved	mg/L					0.00028	<0.00005	0.00006	0.000051
Vanadium (V)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.001	<0.0005	0.0003	<0.0010
Zinc (Zn)-Dissolved	mg/L		0.001	0.001	0.001	<0.001	<0.002	0.003	<0.0010
Oil and Grease	mg/L	5.0							1.17
Total Inorganic Carbon	mg/L						2	0.4	3.66
Total Organic Carbon	mg/L		4.6	4.1	0.38	5.9	3	3.3	-
BOD	mg/L	25							-
Fecal Coleform	CFU/100 mL	20							-

JER-WQ17

Sample ID	Units	PKCA Discharge Criteria	CL-14	CL-14	CL-14	CL-14		JER-WQ17	JER-WQ17	JER-WQ17
Date Sampled			17-Jul-96	11-Aug-96	6-Sep-96	5-Dec-96		31-Jul-05	11-Jul-06	17-Jul-07
Field Water Temperature	deg C								15.14	16.88
Field Conductivity	uS/cm								15	19
Field DO	%									107.2
Field DO	mg/L								8.88	10.35
Field pH									6.84	6.81
Field ORP	mV								340.00	197.2
Ion Balance	Ratio							1.01	0.75	

JER-WQ18

Sample ID	Units	PKCA Discharge Criteria	CL-16	CL-16	CL-16	CL-16	JER-WQ18	JER-WQ18	JER-WQ18	JER-WQ18	JER-WQ18
Date Sampled			17-Jul-96	11-Aug-96	6-Sep-96	3-Dec-96	31-Jul-05	11-Jul-06	17-Jul-07	11-Aug-07	
Time Sampled			17:11	14:39	12:00	11:50					
Lab Sample ID								Jun-18	L531523-8	L543213-4	
Hardness (as CaCO3)	mg/L		5.77	6.51	5.94	6.84	7.2	6.6	8.84	9.49	
Conductivity	uS/cm					7.44	17	18	24.0	23.3	
pH	pH	6.0 - 8.8	6.83	6.94	6.81		6.92	7.03	6.87	7.30	
Total Dissolved Solids	mg/L	4000	9	9	10	12	24	8	15.0	11.0	
Total Suspended Solids	mg/L	25	3	8	4	3	<2	<2	<3	<3	
Turbidity	NTU						3	2	0.91	1.22	
Ammonia as N	mg/L	12	0.018	0.01	0.014	0.016	<0.1	0.02	0.0067	0.0090	
Acidity (as CaCO3)	mg/L		2	1.9	2	3	2	3	2.0	<1.0	
Alkalinity, Bicarbonate (as CaCO3)	mg/L		4.8	5.1	5.6	6	9	14	9.3	8.9	
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1	<1.0	<1.0	
Alkalinity, Hydroxide (as CaCO3)	mg/L						<1	<1	<1.0	<1.0	
Alkalinity, Total (as CaCO3)	mg/L		4.8	5.1	5.6	6	8	11	9.3	8.9	
Chloride (Cl)	mg/L	1000	0.5	<0.5	<0.5	0.9	0.5	0.4	0.60	0.76	
Fluoride (F)	mg/L		<0.02	0.03	0.04	0.03	0.05	0.02			
Sulfate (SO4)	mg/L		<1	<1	<1	<1	<0.5	<0.5	0.51	0.67	
Nitrate (as N)	mg/L	56	0.01	<0.005	<0.005	0.011	<0.05	<0.05	<0.005	<0.005	
Nitrite (as N)	mg/L	5.0	0.001	0.001	0.001	0.001	<0.05	<0.05	<0.001	0.0015	
Total Kjeldahl Nitrogen	mg N/L							0.2	-	-	
Ortho Phosphate as P	mg/L		0.002	0.001	0.003	<0.001	<0.2	<0.20	<0.0010	<0.0010	
Total Dissolved Phosphate As P	mg/L		0.003	0.003	0.003	0.002	<0.005		<0.0020	0.0026	
Total Phosphate as P	mg/L	0.4	0.005	0.027	0.007	0.004	<0.02		0.0060	0.0066	
Aluminum (Al)-Total	mg/L	3.0	0.033	0.029	0.076	0.048	<0.02	0.0373	0.0262	0.0336	
Antimony (Sb)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00010	<0.00010	
Arsenic (As)-Total	mg/L	0.10	0.00017	0.00021	0.00018	0.0002	<0.0004	<0.0002	0.00020	0.00020	
Barium (Ba)-Total	mg/L		0.00168	0.00166	0.00184	0.0021	<0.005	0.00199	0.00167	0.00150	
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.00050	<0.00050	
Bismuth (Bi)-Total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005			<0.00050	<0.00050	
Boron (B)-Total	mg/L		<0.001	0.002	0.004	<0.001	<0.010	<0.001	<0.010	<0.010	
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	
Calcium (Ca)-Total	mg/L		1.37	1.46	1.41	1.79	1.68	1.41	2.05	2.20	
Chromium (Cr)-Total	mg/L	0.170	0.0001	0.0002	0.0001	<0.0005	<0.0009	0.0011	<0.0005	<0.0005	
Cobalt (Co)-Total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00010	<0.00010	
Copper (Cu)-Total	mg/L	0.04	0.0013	0.0013	0.0015	0.0022	<0.001	<0.001	0.00103	0.00101	
Iron (Fe)-Total	mg/L		0.03	0.04	0.04	0.02	<0.10	<0.10	0.117	0.158	
Lead (Pb)-Total	mg/L	0.02	<0.00005	0.00006	<0.00005	0.00011	<0.0001	<0.00005	<0.00005	<0.00005	
Lithium (Li)-Total	mg/L		<0.001	<0.001	0.002	<0.001		<0.005	<0.0050	<0.0050	
Magnesium (Mg)-Total	mg/L		0.56	0.67	0.668	0.79	0.73	0.34	0.856	0.971	
Manganese (Mn)-Total	mg/L		0.00301	0.00368	0.00336	0.00179	<0.01	<0.01	0.00464	0.00494	
Mercury (Hg)-Total	mg/L						<0.0002	<0.00005	<0.000050	<0.000050	
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	
Nickel (Ni)-Total	mg/L	0.10	0.0003	0.0003	0.0004	0.0005	<0.0006	0.0003	<0.0005	0.00062	
Potassium (K)-Total	mg/L		<2	<2	<2	<2	<0.5	<0.5	<0.50	<0.50	
Selenium (Se)-Total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0008	<0.0010	<0.0010	<0.0010	

JER-WQ18

Sample ID	Units	PKCA Discharge Criteria	CL-16	CL-16	CL-16	CL-16	JER-WQ18	JER-WQ18	JER-WQ18	JER-WQ18
Date Sampled			17-Jul-96	11-Aug-96	6-Sep-96	3-Dec-96	31-Jul-05	11-Jul-06	17-Jul-07	11-Aug-07
Silicon (Si)-Total	mg/L		0.37	0.37	0.68	0.95	0.17	0.20	0.187	0.239
Silver (Ag)-Total	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0001	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<2	<2	<2	<2	0.6	<0.5	0.57	0.71
Strontium (Sr)-Total	mg/L		0.0044	0.0046	0.0049	0.0057		0.0036	0.00490	0.00521
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		0.0002	0.0002	0.0002	<0.0001		<0.0001	0.00324	<0.00010
Titanium (Ti)-Total	mg/L		<0.01	<0.01	<0.01	<0.01		<0.0005	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0				0.00017	0.00008	0.00005	0.000104	0.000092
Vanadium (V)-Total	mg/L		<0.00001	<0.00001	0.0001	<0.001	0.0002	<0.0005	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.001	<0.001	<0.001	0.002	<0.002	0.005	0.0027	0.0013
Aluminum (Al)-Dissolved	mg/L	2.0	0.025	0.037	0.057	0.041	0.016	0.023	0.0125	-
Antimony (Sb)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00010	-
Arsenic (As)-Dissolved	mg/L		0.00018	0.0002	0.0002	0.0001	<0.0001	0.0002	0.00018	-
Barium (Ba)-Dissolved	mg/L		0.00166	0.0016	0.00172	0.00202	<0.003	0.0104	0.00155	-
Beryllium (Be)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.00050	-
Bismuth (Bi)-Dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005			<0.00050	-
Boron (B)-Dissolved	mg/L		<0.001	0.005	0.005	0.001	<0.004	<0.001	<0.010	-
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	-
Calcium (Ca)-Dissolved	mg/L		1.39	1.51	1.41	1.7	1.7	1.6	2.09	-
Chromium (Cr)-Dissolved	mg/L		0.0001	0.0002	<0.0001	<0.0005	<0.0004	<0.0003	<0.00050	-
Cobalt (Co)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00002	<0.00010	-
Copper (Cu)-Dissolved	mg/L		0.0012	0.0013	0.0015	0.004	0.0038	0.0033	0.00092	-
Iron (Fe)-Dissolved	mg/L		0.01	0.01	0.01	<0.01	0.04	<0.10	0.056	-
Lead (Pb)-Dissolved	mg/L		<0.00005	0.00014	0.00005	0.00008	<0.00005	<0.00005	<0.000050	-
Lithium (Li)-Dissolved	mg/L		<0.001	0.003	0.002	<0.001		<0.0010	<0.0050	-
Magnesium (Mg)-Dissolved	mg/L		0.558	0.665	0.588	0.78	0.7	0.6	0.882	-
Manganese (Mn)-Dissolved	mg/L		0.0008	0.0005	0.00059	0.00029	<0.001	<0.010	0.000326	-
Mercury (Hg)-Dissolved	mg/L						<0.0002	<0.00005	<0.000050	-
Molybdenum (Mo)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	0.00005	<0.000050	-
Nickel (Ni)-Dissolved	mg/L		0.0003	0.0003	0.0004	0.0005	0.0002	0.00046	<0.00050	-
Potassium (K)-Dissolved	mg/L		<2	<2	<2	<2	<0.5	<0.5	<0.50	-
Selenium (Se)-Dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0004	<0.0006	<0.0010	-
Silicon (Si)-Dissolved	mg/L		0.35	0.36	0.65	0.89	0.18	0.22	0.189	-
Silver (Ag)-Dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.000010	-
Sodium (Na)-Dissolved	mg/L		<2	<2	<2	<2	0.6	<0.5	0.58	-
Strontium (Sr)-Dissolved	mg/L		0.0045	0.0048	0.0048	0.0056		0.0054	0.00494	-
Thallium (Tl)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00005	<0.00010	-
Tin (Sn)-Dissolved	mg/L		0.0003	0.0002	0.0001	0.0001		<0.0001	0.0107	-
Titanium (Ti)-Dissolved	mg/L		<0.01	<0.01	<0.01	<0.01		<0.0005	<0.010	-
Uranium (U)-Dissolved	mg/L					0.00017	<0.00005	0.00010	0.000081	-
Vanadium (V)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.001	<0.0005	0.0003	<0.0010	-
Zinc (Zn)-Dissolved	mg/L		0.001	<0.001	0.002	0.002	<0.002	0.002	0.0015	-
Oil and Grease	mg/L	5.0							1.56	-
Total Inorganic Carbon	mg/L						2	0.5	3.87	1.56
Total Organic Carbon	mg/L		3.9	3.5	0.65	5.1	3	3.0	-	3.20
BOD	mg/L	25							-	-
Fecal Coleform	CFU/100 mL	20							-	-

JER-WQ18

Sample ID	Units	PKCA Discharge Criteria	CL-16	CL-16	CL-16	CL-16		JER-WQ18	JER-WQ18	JER-WQ18	JER-WQ18
Date Sampled			17-Jul-96	11-Aug-96	6-Sep-96	3-Dec-96		31-Jul-05	11-Jul-06	17-Jul-07	11-Aug-07
Field Water Temperature	deg C								15.72	17.25	9.24
Field Conductivity	uS/cm								15	22	24
Field DO	%									105.1	131.4
Field DO	mg/L								8.64	10.08	15.03
Field pH									7.05	6.89	7.65
Field ORP	mV								327.50	194.1	211.4
Ion Balance	Ratio							1.06	0.69		

JER-WQ21

Sample ID	Units	PKCA Discharge Criteria	JER-WQ21	JER-WQ21	JER-WQ21
Date Sampled			01-JUL-07	29-JUL-07	25-AUG-07
Time Sampled			17:55	08:30	16:15
Lab Sample ID			L525299-4	L535988-1	L546749-13
Hardness (as CaCO3)	mg/L		4.06	6.4	6.12
Conductivity	uS/cm		9.9	16.2	15.5
pH	pH	6.0 - 8.8	6.67	7.05	6.92
Total Dissolved Solids	mg/L	4000	11.0	17.0	15.0
Total Suspended Solids	mg/L	25	<3	<3	<3
Turbidity	NTU		1.02	0.98	0.61
Ammonia as N	mg/L	12	0.0105	0.0124	0.0211
Acidity (as CaCO3)	mg/L		2.5	1.2	1.9
Alkalinity, Bicarbonate (as CaCO3)	mg/L		3.6	6.0	5.4
Alkalinity, Carbonate (as CaCO3)	mg/L		<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		3.6	6.0	5.4
Chloride (Cl)	mg/L	1000	<0.5	<0.5	<0.5
Fluoride (F)	mg/L				
Sulfate (SO4)	mg/L		<0.50	0.65	0.57
Nitrate (as N)	mg/L	56	0.0082	0.0902	0.0119
Nitrite (as N)	mg/L	5.0	<0.001	<0.001	<0.001
Total Kjeldahl Nitrogen	mg N/L		-	-	-
Ortho Phosphate as P	mg/L		<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		0.0025	<0.0020	0.0062
Total Phosphate as P	mg/L	0.4	0.0062	0.0071	0.0158
Aluminum (Al)-Total	mg/L	3.0	0.0369	0.0360	0.0141
Antimony (Sb)-Total	mg/L		<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.10	0.00012	0.00012	0.00015
Barium (Ba)-Total	mg/L		0.00193	0.00303	0.00127
Beryllium (Be)-Total	mg/L		<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	mg/L		<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L		<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0024	<0.00005	<0.00005	<0.00005
Calcium (Ca)-Total	mg/L		0.907	1.45	1.33
Chromium (Cr)-Total	mg/L	0.170	<0.0005	<0.0005	<0.0005
Cobalt (Co)-Total	mg/L		<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.04	0.00114	0.00161	0.00138
Iron (Fe)-Total	mg/L		0.090	0.219	0.123
Lead (Pb)-Total	mg/L	0.02	<0.00005	<0.00005	<0.00005
Lithium (Li)-Total	mg/L		<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total	mg/L		0.424	0.634	0.674
Manganese (Mn)-Total	mg/L		0.00508	0.00727	0.00359
Mercury (Hg)-Total	mg/L		<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	<0.00005	<0.00005	<0.00005
Nickel (Ni)-Total	mg/L	0.10	<0.0005	<0.0005	<0.0005
Potassium (K)-Total	mg/L		<0.50	<0.50	<0.50
Selenium (Se)-Total	mg/L		<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.186	0.180	0.119

JER-WQ21

Sample ID	Units	PKCA Discharge Criteria	JER-WQ21	JER-WQ21	JER-WQ21
Date Sampled			01-JUL-07	29-JUL-07	25-AUG-07
Silver (Ag)-Total	mg/L		<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	mg/L		<0.50	0.55	<0.50
Strontium (Sr)-Total	mg/L		0.00327	0.00592	0.00413
Thallium (Tl)-Total	mg/L		<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L		<0.010	<0.010	<0.010
Uranium (U)-Total	mg/L	1.0	0.000124	0.000125	0.000085
Vanadium (V)-Total	mg/L		<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.50	<0.001	0.0058	<0.001
Aluminum (Al)-Dissolved	mg/L	2.0	0.0130	<0.006	<0.004
Antimony (Sb)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L		0.00010	0.00013	0.00015
Barium (Ba)-Dissolved	mg/L		0.00179	0.00229	0.00120
Beryllium (Be)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L		<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L		0.900	1.45	1.34
Chromium (Cr)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L		0.00101	<0.0010	0.00111
Iron (Fe)-Dissolved	mg/L		<0.030	0.121	<0.030
Lead (Pb)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L		<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Dissolved	mg/L		0.440	0.674	0.675
Manganese (Mn)-Dissolved	mg/L		<0.000050	<0.00010	0.000114
Mercury (Hg)-Dissolved	mg/L		<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		<0.000050	0.000072	<0.000050
Nickel (Ni)-Dissolved	mg/L		<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	mg/L		<0.50	<0.50	<0.50
Selenium (Se)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010
Silicon (Si)-Dissolved	mg/L		0.149	0.178	0.104
Silver (Ag)-Dissolved	mg/L		<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	mg/L		<0.50	0.56	<0.50
Strontium (Sr)-Dissolved	mg/L		0.00328	0.00525	0.00411
Thallium (Tl)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L		<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L		<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.000091	0.000061	0.000058
Vanadium (V)-Dissolved	mg/L		<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.0010	0.0051	<0.0010
Oil and Grease	mg/L	5.0	-	-	-
Total Inorganic Carbon	mg/L		<0.50	0.94	0.95
Total Organic Carbon	mg/L		3.87	4.32	4.32
BOD	mg/L	25		-	-
Fecal Coleform	CFU/100 mL	20		-	-
Field Water Temperature	deg C		17.34	10.48	7.31

JER-WQ21

Sample ID	Units	PKCA Discharge Criteria	JER-WQ21	JER-WQ21	JER-WQ21
Date Sampled			01-JUL-07	29-JUL-07	25-AUG-07
Field Conductivity	uS/cm		11	18	12
Field DO	%		141.1	100.2	-
Field DO	mg/L		13.49	10.37	-
Field pH			7.10	7.01	7.02
Field ORP	mV		97.7	282.7	154.9

JER-SW2

Sample ID	Units	PKCA Discharge Criteria	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2
Date Sampled			26-Aug-05	21-Jun-06	11-Jul-06	9-Aug-06	14-Sep-06	27-Jun-07	22-Jul-07	25-Aug-07
Time Sampled								16:20	10:55	17:45
Lab Sample ID							06-11364	L523057-2	L534134-5	L546749-14
Hardness (as CaCO3)	mg/L		158	157	255	173	272	257	381	466
Conductivity	uS/cm		419	609	760	642	852	715	1250	1570
pH	pH	6.0 - 8.8	7.91	7.71	7.82	7.60	8.10	7.87	7.78	7.82
Total Dissolved Solids	mg/L	4000	352	340	552	400	550	452	1010	1200
Total Suspended Solids	mg/L	25	23	15	14	127	3	3.5	26.2	16.7
Turbidity	NTU		140	24	8	170	10	4.13	15.3	10.8
Ammonia as N	mg/L	12	4.2	20.3	8.10	11.5	14.5	8.61	14.0	20.8
Acidity (as CaCO3)	mg/L		50	16	12	9	6	9.4	4.9	8.2
Alkalinity, Bicarbonate (as CaCO3)	mg/L		79	82	107	45	74	75.6	35.9	63.8
Alkalinity, Carbonate (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L		<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L		65	68	88	37	61	75.6	35.9	63.8
Chloride (Cl)	mg/L	1000	24.2	25.3	30.1	11.8	21.3	25.8	88.0	97.4
Fluoride (F)	mg/L		0.14	0.16	0.12	0.13	0.11			
Sulfate (SO4)	mg/L		21.5	13.1	19.6	21.1	41.7	32.3	53.1	52.3
Nitrate (as N)	mg/L	56	17.9	45.9	57.6	55.2	65.9	56.4	92.8	121
Nitrite (as N)	mg/L	5.0	0.82	0.77	1.80	1.62	2.11	1.58	2.98	4.56
Total Kjeldahl Nitrogen	mg N/L							-	-	-
Ortho Phosphate as P	mg/L		<0.2	<0.20	<0.20	<0.20	<0.20	0.0045	<0.0010	<0.0010
Total Dissolved Phosphate As P	mg/L		<0.005					0.0127	0.0059	<0.0020
Total Phosphate as P	mg/L	0.4	<0.050					0.0204	0.0184	0.0026
Aluminum (Al)-Total	mg/L	3.0	3.01	0.162	0.0523	3.02	0.0764	0.0580	0.372	0.216
Antimony (Sb)-Total	mg/L		0.0005	0.00022	0.00050	0.00063	0.00039	0.00094	0.00098	0.00114
Arsenic (As)-Total	mg/L	0.10	0.0038	0.0013	0.0019	0.0011	0.0012	0.00042	0.00038	0.00085
Barium (Ba)-Total	mg/L		0.044	0.304	0.344	0.139	0.442	0.168	0.325	0.283
Beryllium (Be)-Total	mg/L		<0.0005	<0.0001	<0.0001	0.0001	<0.0001	<0.00050	<0.0010	<0.00050
Bismuth (Bi)-Total	mg/L							<0.00050	<0.0010	<0.00050
Boron (B)-Total	mg/L		0.087	0.060	0.079	0.036	0.065	0.096	0.092	0.190
Cadmium (Cd)-Total	mg/L	0.0024	<0.0001	<0.00005	<0.00005	0.00018	<0.00002	<0.000050	<0.00010	0.000073
Calcium (Ca)-Total	mg/L		41.6	33.4	51.3	41.6	54.2	40.1	110	117
Chromium (Cr)-Total	mg/L	0.170	0.005	0.0016	0.0021	0.0124	0.0014	0.00072	0.0043	0.00270
Cobalt (Co)-Total	mg/L		0.0028	0.00168	0.00154	0.00276	0.00182	0.00235	0.00293	0.00327
Copper (Cu)-Total	mg/L	0.04	0.0307	0.0158	0.0138	0.0250	0.0087	0.00596	0.00655	0.0216
Iron (Fe)-Total	mg/L		5.07	0.16	0.13	3.24	0.23	0.123	0.692	0.577
Lead (Pb)-Total	mg/L	0.02	0.0042	0.00240	0.00047	0.00192	0.00023	0.000387	0.00110	0.000658
Lithium (Li)-Total	mg/L				0.010	0.008	0.006	0.0125	<0.010	0.0203
Magnesium (Mg)-Total	mg/L		16.9	16.4	26.3	21.5	38.1	37.5	33.4	47.7
Manganese (Mn)-Total	mg/L		0.19	0.13	0.12	0.34	0.03	0.0256	0.0496	0.255
Mercury (Hg)-Total	mg/L		<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	1.50	0.003	0.00650	0.00974	0.0133	0.0254	0.0189	0.0333	0.0672
Nickel (Ni)-Total	mg/L	0.10	0.0056	0.0158	0.0357	0.0157	0.0358	0.0308	0.0487	0.0768
Potassium (K)-Total	mg/L		5	4.4	6.5	16.4	14.8	7.87	24.4	22.5

JER-SW2

Sample ID	Units	PKCA Discharge Criteria	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2
Date Sampled			26-Aug-05	21-Jun-06	11-Jul-06	9-Aug-06	14-Sep-06	27-Jun-07	22-Jul-07	25-Aug-07
Selenium (Se)-Total	mg/L		<0.0008	<0.0010	0.0017	0.0016	<0.0010	<0.0010	<0.0020	<0.0050
Silicon (Si)-Total	mg/L		11	3.04	3.62	7.32	3.35	4.52	4.94	5.60
Silver (Ag)-Total	mg/L		<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.000040	<0.000050	0.000082
Sodium (Na)-Total	mg/L		11.2	11.7	15.5	11.9	20.7	17.0	49.1	57.1
Strontium (Sr)-Total	mg/L		0.122	0.157	0.360	0.660	2.17	0.499	3.67	2.61
Thallium (Tl)-Total	mg/L		<0.00005	<0.00005	<0.00005	0.00009	<0.00005	0.00012	<0.00020	<0.00010
Tin (Sn)-Total	mg/L				0.0038	0.0007	0.0008	<0.00010	<0.00020	<0.00010
Titanium (Ti)-Total	mg/L				0.0022	0.180	0.0046	<0.010	0.017	0.012
Uranium (U)-Total	mg/L	1.0	0.0717	0.130	0.131	0.00595	0.0174	0.0508	0.0184	0.120
Vanadium (V)-Total	mg/L		0.0105	0.0010	0.0008	0.0072	0.0007	<0.0010	<0.0020	<0.0010
Zinc (Zn)-Total	mg/L	0.50	0.012	0.005	0.012	0.015	0.002	0.0024	<0.0040	<0.0050
Aluminum (Al)-Dissolved	mg/L	2.0	0.063	0.123	0.013	0.568	<0.002	0.0023	<0.0020	<0.0030
Antimony (Sb)-Dissolved	mg/L		0.0006	0.0005	0.00057	0.00074	0.00038	0.00095	0.00096	0.00113
Arsenic (As)-Dissolved	mg/L		0.0016	0.0007	0.0010	0.0015	0.0010	0.00040	0.00032	0.00073
Barium (Ba)-Dissolved	mg/L		0.026	0.277	0.341	0.130	0.412	0.168	0.300	0.280
Beryllium (Be)-Dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00050	<0.0010	<0.00050
Bismuth (Bi)-Dissolved	mg/L							<0.00050	<0.0010	<0.00050
Boron (B)-Dissolved	mg/L		0.086	0.030	0.073	0.037	0.054	0.097	0.085	0.179
Cadmium (Cd)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	0.00004	<0.00002	<0.000050	<0.00010	<0.000050
Calcium (Ca)-Dissolved	mg/L		38.8	33.3		38.2	52.1	40.7	103	111
Chromium (Cr)-Dissolved	mg/L		0.0013	0.0003	0.0011	0.0024	0.0016	<0.00050	<0.0010	<0.00050
Cobalt (Co)-Dissolved	mg/L		0.00063	0.00154	0.00156	0.00196	0.00146	0.00219	0.00201	0.00264
Copper (Cu)-Dissolved	mg/L		0.0221	0.0142	0.0160	0.0167	0.0067	0.00557	0.00431	0.0141
Iron (Fe)-Dissolved	mg/L		0.04	<0.10	<0.10	0.53	0.17	<0.030	<0.030	0.097
Lead (Pb)-Dissolved	mg/L		<0.00005	0.00196	0.00029	0.00088	<0.00005	0.000091	0.00013	0.000159
Lithium (Li)-Dissolved	mg/L				0.0098	0.0072	0.0048	0.0120	<0.010	0.0183
Magnesium (Mg)-Dissolved	mg/L		14.9	18	28.3	18.9	34.5	37.7	29.9	45.8
Manganese (Mn)-Dissolved	mg/L		0.11	0.100	0.134	0.248	0.031	0.0161	0.0295	0.145
Mercury (Hg)-Dissolved	mg/L		<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L		0.0032	0.00648	0.0103	0.0143	0.0233	0.0195	0.0316	0.0645
Nickel (Ni)-Dissolved	mg/L		0.003	0.0144	0.0342	0.0129	0.0289	0.0290	0.0334	0.0664
Potassium (K)-Dissolved	mg/L		3.7	4.3	7.1	14.2	13.2	8.01	23.1	21.6
Selenium (Se)-Dissolved	mg/L		<0.0004	0.0011	0.0023	0.0011	0.0013	<0.0010	<0.0020	<0.0050
Silicon (Si)-Dissolved	mg/L		3.78	3.17	4.07	4.03	3.16	4.23	3.19	4.42
Silver (Ag)-Dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000080	0.000027	0.000061
Sodium (Na)-Dissolved	mg/L		10.6	13.2	16.4	11.2	17.4	17.2	45.4	56.1
Strontium (Sr)-Dissolved	mg/L		0.117	0.134	0.405	0.653	2.09	0.495	3.46	2.53
Thallium (Tl)-Dissolved	mg/L		0.00002	<0.00005	<0.00005	0.00006	0.00013	0.00012	<0.00020	<0.00010
Tin (Sn)-Dissolved	mg/L				0.0038	0.0002	0.0009	<0.00010	<0.00020	<0.00010
Titanium (Ti)-Dissolved	mg/L				0.0009	0.0221	0.0010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	mg/L		0.0622	0.115	0.122	0.00564	0.0171	0.0508	0.0163	0.115
Vanadium (V)-Dissolved	mg/L		0.0032	0.0006	0.0009	0.0022	0.0011	<0.0010	<0.0020	<0.0010
Zinc (Zn)-Dissolved	mg/L		<0.002	<0.001	0.026	0.004	<0.001	0.0022	<0.0020	<0.0010
Oil and Grease	mg/L	5.0						-	-	-
Total Inorganic Carbon	mg/L		15	12.3	17.4	7.8	11.6	13.1	8.11	12.3
Total Organic Carbon	mg/L		16	3.0	4.6	3.3	5.0	3.56	3.66	8.34
BOD	mg/L	25						-	-	-

JER-SW2

Sample ID	Units	PKCA Discharge Criteria	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2	JER-SW2
Date Sampled			26-Aug-05	21-Jun-06	11-Jul-06	9-Aug-06	14-Sep-06	27-Jun-07	22-Jul-07	25-Aug-07
Fecal Coleform	CFU/100 mL	20						-	-	-
Field Water Temperature	deg C			5.71	4.76	9.9	3.02	18.15	13.32	11.7
Field Conductivity	uS/cm			794	800	582	654	782	1290	1239
Field DO	%							101.4	108.8	N/A
Field DO	mg/L			12.23	10.90	9.82	13.04	9.6	11.2	N/A
Field pH				7.73	7.15	7.53	8.16	7.69	7.82	8.12
Field ORP	mV			182.60	312.10	432.70	254.80	208.9	145.5	118.3
Ion Balance	Ratio		0.98	0.67	0.83	0.77	0.87			

APPENDIX C

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Review of Total Dissolved Solids in Proposed Discharge from the Jericho Diamond Project

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Nunavvt

Submitted to:

Tahera Corporation
Toronto, Ontario

Submitted by:

AMEC Earth & Environmental,
a division of AMEC Americas Limited

Burnaby, BC

June 2004

AMEC File: VE51295

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IMPORTANT NOTICE

This report was prepared exclusively for Tahera Corporation by AMEC Earth & Environmental Limited. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in AMEC services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by Tahera Corporation only, subject to the terms and conditions of its contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

1.0 INTRODUCTION

Tahera Corporation is in the process of applying for a water license to discharge water from the proposed Jericho Diamond Mine. Discharge from the mine will contain elevated concentrations of total dissolved solids (TDS) relative to the receiving environment and, consequently, this review was conducted to evaluate whether the concentrations that are likely to be observed in the receiving environment are of toxicological significance.

TDS reflects the sum of materials that are dissolved in a solution. These materials are primarily comprised of four cations (calcium, magnesium, sodium and potassium) and three anions (sulphate, chloride, and bicarbonate/carbonate), all of which are important in biological structures and functions. A significant number of other trace materials can also contribute to TDS; however, for the sake of this assessment, we will only be considering the major ions.

Toxicity associated with elevated concentrations of TDS generally results from one of three mechanisms:

- The overall ionic strength associated with the combination of ions comprising the TDS can result in toxicity as a result of the inability of organisms to osmoregulate.

- Adverse effects can occur as a result of one or more of the ions which make-up TDS reaching toxicologically significant concentrations.

- An imbalance in the ratio between particular ions can result in toxicity because of disruption of biological mechanisms.

Toxicity test data for cationic components of TDS are always derived from tests with solutions containing an associated anionic component, and vice versa. These ions are present as salts, such as calcium carbonate, calcium sulphate, potassium chloride, etc, which are introduced into the test solutions. Consequently, the degree to which one or other of the co-ions comprising each salt, or any interactions associated with their combined presence, is responsible for toxicity is not entirely known.

Ions which comprise TDS each exhibit a differing degree of toxicological effect. A study on acute toxicity to larval fathead minnows and two species of cladocerans demonstrated that the order of relative ion toxicity is $K^+ > HCO_3^- \approx Mg^{2+} > Cl^- > SO_4^{2-}$. Sodium and calcium ions were generally unrelated to toxicity; toxicity associated with salts containing these two cations was generally caused by the corresponding anions (Mount et al., 1997).

2.0 EFFLUENT DESCRIPTION

Water from mining operations will be contained in the PKCA pond and will be discharged each year while weather conditions permit. Discharge from the PKCA is expected to contain elevated concentrations of TDS. In particular, under average precipitation conditions, average and maximum TDS concentrations are projected to be 1074 and 1635 mg/L, respectively (SRK, 2004). The projected composition of TDS in the effluent under these scenarios is provided in Table 1.

The anionic composition of the effluent is dominated by chloride, which comprises 40 to 45% of the total TDS by weight. Sulphate also contributes substantially to the total TDS (17 to 23%). Cationic components of the effluent collectively contribute approximately 30% of the TDS.

Table 1. Projected average and maximum contributions of major ions to TDS in water in the PKCA under conditions of average rainfall (from SRK, 2004).

	Average concentration (mg/L)	Maximum concentration (mg/L)	Average Composition (%)	Maximum Composition (%)
Calcium	101	202	9%	12%
Magnesium	175	206	16%	13%
Sodium	21	36	2%	2%
Potassium	36	64	3%	4%
Alkalinity	42	70	4%	4%
Chloride	487	647	45%	40%
Sulphate	184	380	17%	23%
TDS	1074	1635	--	--

3.0 RECEIVING ENVIRONMENT DESCRIPTION

Effluent from the PKCA will be discharged through a small stream into Lake C3, which subsequently drains into Carat Lake. These lakes are oligotrophic and very low in TDS (typically less than 20 mg/L). Dilution rates provided by Lake C3 and Carat Lake are estimated to be 50- and 58-fold, although higher concentrations of effluent would be expected to occur proximate to the discharge point.

The biological community in the lakes that will receive input from the mine is limited by the low productivity of the lakes. Periphyton and phytoplankton are dominated by Bacillariophyta (diatoms), Cyanophyta (cyanobacteria), Chrysophyta (golden-brown algae) and Chlorophyta (green algae). Zooplankton are comprised of cladocerans (52 to 86% of biomass), copepods and rotifers, and benthic invertebrates are predominantly comprised of benthic copepods and chironomid larvae. Smaller numbers of hydracarina, nematodes, oligochaetes, ostracods,

pelecypods and turbellarians are also observed. Fish populations present in Lake C3 and Carat Lake are comprised mainly of lake trout, round whitefish and Arctic char (data from a 1999 survey [RL&L, 2000]).

4.0 POTENTIAL FOR TOXICOLOGICAL EFFECTS ASSOCIATED WITH TDS

Evaluations of TDS with respect to potential for toxicological effects are complicated by the fact that they generally rely on laboratory data from toxicity tests with individual ion pairs (i.e., salts). Data from each of these tests must be considered in the context of the possibility that the toxicity was caused by one or other of the pair of ions, or some combination of the two. Furthermore, extrapolation of these effects data to mixtures of all seven of the major ions is complicated by the potential for interaction of the ions with one another. In some cases, the combined presence of multiple ions can reduce the toxicity of individual ions (Mount et al, 1997); however, the combined presence of multiple ions increases the overall ionic strength of the water, and may result in toxicity in cases where the individual ions would not have, if tested alone.

4.1 Anionic contributors to TDS

Sulphate

There are currently no Canadian or USEPA guidelines for the protection of aquatic life for sulphate; however, the BC Ministry of Water Land and Air Protection has established a water quality criterion for this parameter of 100 mg/L (BCMELP, 2000). This guideline is primarily based on sensitivity data for *Hyalella azteca*, a freshwater amphipod, and aquatic mosses.

The BC criteria document for sulphate contains a significant amount of toxicity data that are not published elsewhere; these data were generated in support of the guideline derivation. A subset of these results which are of particular relevance to Jericho have been summarized in Table 2. Although amphipods such as *H. azteca* would not be expected to occur in these lakes, the data for this species have also been included in Table 2 because of the reliance of the guideline on data from this species.

Adverse effects on the cladocerans *Ceriodaphnia dubia* and *Daphnia magna*, the chironomid *Chironomus tentans*, the salmonid *Oncorhynchus mykiss* and the unicellular alga *Selenastrum capricornutum* occurred at substantially higher concentrations than the maximum sulphate concentrations projected in the PKCA of 380 mg/L (i.e., not allowing for any dilution by lakes downstream of the discharge point). Concentrations of sulphate in the PKCA are expected to exceed the lowest effect value presented for *H. azteca*; however, it should be noted that the sensitivity of this species to sulphate is highly hardness dependant, and the toxicity of sulfate is more than an order of magnitude lower at a hardness of 100 mg/L than it is at a hardness of 25 mg/L. Moreover, elevated sulphate concentrations in discharges from the Jericho mine will co-occur with higher hardnesses: for example, at a sulphate concentration of 205 mg/L (the LC50

for *H azteca* in 25 mg/L hardness water), we would anticipate that the discharge would have a hardness of more than 700 mg/L. Thus, even if *Hyalella* were present, we would not anticipate observing adverse effects on survival, and it would appear that the BC criterion for this parameter is overly protective in this instance.

The only other adverse effect data reported in the BC criteria document that were reported at concentrations below the maximum sulphate concentration predicted in the PKCA under average precipitation conditions (380 mg/L) were for larval striped bass (*Morone saxatilus*) which exhibited a 96-hr LC50 of 250 mg/L SO_4; this species does not occur in the receiving environment at the Jericho mine. In addition, evidence has been reported of adverse effects on aquatic mosses, in particular *Fontinalis antipyretica*, at concentrations of sulphate as low as 100 mg/L (Frahm, 1975, cited by BCMELP, 2000); however, these tests were apparently conducted using potassium sulphate rather than sodium sulphate, and it is likely that any observed effect was related to the potassium co-ion rather than to sulphate.

Thus, on the basis of a "worst case" analysis, it would appear that adverse effects associated with elevated concentrations of sulphate would not be likely to occur, even within the PKCA. Furthermore, given the 50-fold dilution available in Lake C3, projected sulphate concentrations in the receiving environment should be well under any known thresholds for toxicity.

Table 2. Effects concentrations for sulphate for selected data generated as part of derivation of the BC criteria for this parameter.

	Species	Endpoint	Hardness (mg/L)	Effect concentration (mg/L SO_4)
Cladoceran	*C. dubia*	7-d reproduction IC25	100	1267
	D. magna	21-day reproduction IC25	100	883
		48 hr survival LC50	25	537
		48 hr survival LC50	100	6281
Amphipod	*H. azteca*	96-hr survival LC50	25	205
		96-hr survival LC50	100	3711
		96-hr survival LC50	250	6787
Chironomid	*C. tentans*	96-hr survival LC50	25	6667
Salmonid	*O. mykiss*	96-hr survival LC50	25	5000
		7-day embryo EC25	100	1280
Alga	*S. capricornutum*	72-hr IC25	NR	2210

NR = Not reported

Chloride

The USEPA has established an ambient water quality criterion for chloride of 230 mg/L (USEPA, 1988). This value is based on laboratory toxicity tests using sodium chloride (NaCl). Chlorides of other co-ions (e.g., potassium, magnesium) are expected to exhibit a greater degree of toxicity; however, mixtures of ions are expected to exhibit lower overall toxicity than solutions of individual salts. Invertebrates were generally more sensitive to chloride than vertebrates, and *Daphnia* (a cladoceran) was the most sensitive genus evaluated.

There is currently no Canadian water quality guideline for chloride; however, Environment Canada have produced a report on use of road de-icing salts in which an HC_5 (the concentration that would be expected to protect 95% of the potentially exposed taxonomic groups) value of 212.6 mg/L chloride was reported (Environment Canada, 2001).

The BC water quality criterion for chloride is 150 mg/L (BCMWLAP, 2003). This was derived based on dividing data for the most sensitive species for which data were available (*C. dubia*) by a safety factor of five. The AMEC toxicity laboratory in Fife, Washington, uses sodium chloride as a reference toxicant in chronic tests with this cladocerans species. Based on the last twenty tests, a 50% reduction in reproductive output of *C. dubia* was observed at 1083 ± 329 mg/L NaCl (657 ± 200 mg/L Cl^-). Bailey et al. (2000) reported results for reference toxicant tests for the same species using potassium chloride (KCl) of 192 ± 23 mg/L (92 ± 11 mg/L Cl^-). The higher toxicity observed with the use of KCl, rather than NaCl, suggests that toxicity in the KCl tests was related primarily to the presence of potassium rather than chloride.

A risk assessment has recently been conducted for the Ekati mine in which a site-specific species sensitivity distribution was calculated for chloride for organisms that occur in the receiving environment (EVS, 2004). This approach involved calculating a threshold value designed to protect 95 percent of the species by extrapolation of the distribution of toxicity data for taxonomic groups (or reasonable surrogates) that occur in the community. It should be noted that this derivation relied largely on acute toxicity data, and used the acute to chronic ratio published in the EPA criteria document for this parameter to determine the chronic HC_5 from the acute HC_5. The acute and chronic values were 1369 and 180 mg/L chloride, respectively.

Cladocerans, in particular, *C. dubia*, are the most sensitive taxonomic group for which data are available. A substantial amount of data from the AMEC toxicity laboratory for *C. dubia* (n=20) indicates that the IC50 occurs at or above 257 mg/L chloride (i.e., two standard deviations less than the mean response) in 97.5% of the tests. Thus, the EPA and BC criteria values (230 and 150 mg/L, respectively), and the site-specific species sensitivity distribution conducted for Ekati (180 mg/L) appear to be protective of effects to this species.

Based on the site-specific value for chloride of 180 mg/L prepared for Ekati, concentrations in the PKCA (up to 650 mg/L) exceed effects levels for chloride by nearly 4-fold. However, these

concentrations will be rapidly diluted to levels well below toxicity thresholds once the discharge reaches Lake C3.

Alkalinity (bicarbonate/carbontate)

The alkalinity in the water associated with discharge from the PKCA is relatively low even under worst-case scenarios and well-within the range tolerated by freshwater organisms. Consequently, no adverse effects associated with alkalinity would be anticipated.

4.2 Cationic contributors to TDS

Data used for assessment of chloride toxicity have generally been obtained from tests using sodium chloride. The effect concentrations associated with the USEPA and BC water quality criteria for chloride (230 and 150 mg/L chloride, respectively) and the chronic value from the risk assessment conducted for Ekati for this parameter (180 mg/L chloride) correspond to sodium concentrations of 149, 97 and 115 mg/L, respectively. These values exceed the maximum sodium concentration in the PKCA, indicating that no toxicological effects would be associated with the concentrations of sodium in the discharge.

As described in the section above with regard to chloride, laboratory reference toxicant tests with potassium chloride (Bailey et al., 2000) were more sensitive than data for sodium chloride (AMEC laboratory, unpublished data) by a factor of seven when presented on the basis of chloride. This suggests that potassium is primarily responsible for toxicity in *C. dubia* tests with KCl; the 50% effect concentration in these tests calculated on the basis of potassium was 100 ± 12 mg/L.

The US EPA Ecotox database was reviewed for other toxicity data associated with exposure to potassium chloride. The lowest reported 50% effect value was 61 mg/L, which was obtained from a 21-d survival and reproduction test using *D. magna* (Biesinger and Christensen, 1972). Concentrations of potassium in the PKCA (36 – 64 mg/L) will approach this most sensitive value under worst-case conditions.

Biesinger and Christensen (1972) also reported 21-d EC50 estimates for calcium (220 mg/L Ca^{2+}) and magnesium (125 mg/L Mg^{2+}) for *D. magna*, which were also the most sensitive values reported in the US EPA Ecotox database for their corresponding chloride salts. Concentrations of calcium in the PKCA (101 – 202 mg/L) will approach this effect level for calcium; concentrations of magnesium in the PKCA (175 – 206 mg/L) will exceed the value for magnesium by a maximum factor of 1.6.

Collectively, these data indicate that cladocerans, such as *D. magna* and *C. dubia*, are among the most sensitive species to elevated concentrations of major cations, and that the concentrations of major cations in the PKCA may approach or exceed those associated with adverse effects under worst-case conditions. However, even under worst-case concentrations,

a two- to three-fold dilution of the cationic components of TDS present in the PKCA should be sufficient to remove the risk of adverse toxicological effects in the receiving environment.

4.3 Ion ratios

The ratios of cations present in the discharge are somewhat unusual. In natural waters, calcium concentrations typically exceed magnesium, and sodium typically exceeds potassium. However, the reverse is true in the case of this discharge. Calcium to magnesium ratios in natural waters typically range from 1.6:1 to 8:1 (Naddy et al., 2002) on a mass-balance basis. Conversely, in this discharge the ratios will range from approximately 1:1 to 1:2. Potassium is generally present at low concentrations in surface waters and generally well below the concentration of sodium (Stumm and Morgan, 1981), whereas in the discharge from the PKCA, potassium concentrations exceed sodium by up to a factor of two.

It should be noted that the fact that ratios between specific ions are somewhat different than most natural waterbodies does not imply that adverse effects would result. For example, at the EC50 for KCl reported by Biesinger and Christensen (1972) for *D. magna*, the sodium to potassium ratio was 1:60. Thus, this species was able to survive and reproduce normally in waters with potassium concentrations exceeding sodium by a considerable margin.

In general, the ratios of calcium to magnesium and sodium to potassium do not exceed a factor of two and, therefore, it would be unlikely that adverse toxicological responses would occur as a result.

4.4 Other effects

The lake systems associated with the Jericho Diamond mining project are very low in productivity, largely as a result of cold temperatures and low concentrations of nutrients. Consequently, the types of species that can occur in these lakes and their abundances are limited. Increasing the concentration of dissolved solids may result in improved production of some species, which may result in a change in the balance of species that are present; however, these effects are not associated with toxicology but, rather, ecology. While data are available on the response of oligotrophic systems to nutrient enrichment, there is limited information that can be used to reliably predict changes to community structure that are likely to result in response to an increase in TDS. Regardless, the concentrations of TDS predicted in the receiving environment, while different from those currently present in these lakes, are well within those associated with water bodies supporting healthy aquatic ecosystems.

5.0 DIFFERENCES IN CLADOCERAN POPULATIONS OBSERVED IN THE LONG LAKE CONTAINMENT FACILITY, EKATI MINE

A study conducted at the Ekati mine in 2003 demonstrated that cladoceran populations tended to increase with distance from the discharge (Rescan, 2004). In particular, larger populations of cladocerans were observed in Cell E relative to Cell D within the Long Lake Containment Facility. Because cladocerans are relatively sensitive to elevated concentrations of TDS, it is worthwhile evaluating whether this difference could have been related to elevated concentrations of TDS.

Samples from Cell D collected in the summer of 2003 had mean values of approximately 40 mg/L sulphate and 123 mg/L TDS. While these values were higher than those observed in Cell E (approximately 25 mg/L sulphate and 65 mg/L TDS), they are well within the range of tolerance of cladocerans for these parameters. In fact, standardized laboratory reconstituted water for culturing *C. dubia* and *D. magna* is typically prepared to moderately hard standards of 80 – 100 mg/L as $CaCO_3$, and involves addition of more than 200 mg/L of various salts, incorporating more than 80 mg/L of sulphate (USEPA, 2002). Thus, standardized culture water for two sensitive cladoceran species contains higher concentrations of sulphate and overall TDS than that observed in Cell D in the Long Lake Containment Facility. Thus, it appears highly unlikely that differences in cladoceran populations observed between Cell D and Cell E in the 2003 monitoring program at Ekati were a result of toxicological responses to sulphate or TDS.

It should be noted that the differences in community composition observed between Cell D and Cell E in Long Lake at Ekati were only measured on one occasion in 2003. Thus, the differences observed on that occasion may be related to the patchiness or temporal variability inherent in zooplankton populations. Alternatively, they could also be related to the presence of a trace contaminant associated with the discharge or an ecological shift in the balance of the populations associated with nutrient enrichment.

6.0 SUMMARY

From the available toxicity data for TDS and the projected dilution rates available in Lake C3 and Carat Lake, it appears highly unlikely that TDS associated with discharge from the PKCA pond will result in toxicological effects on organisms in the receiving lakes. Conservatively, a three-fold dilution of the effluent under average discharge conditions and a four-fold dilution under worst-case discharge conditions should provide sufficient dilution to remove the risk of any toxicological effects associated with the major ions contributing to TDS, and result in a TDS values of approximately 400 mg/L.

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