

TYPE A WATER LICENSE
2AM-JER0410
Jericho Diamond Mine

2011 ANNUAL REPORT

March 31, 2012



shear
diamonds

TABLE OF CONTENTS

1	INTRODUCTION	4
2	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF WATER OBTAINED FROM CARAT LAKE (SCHEDULE B, ITEM 1A).....	<u>445</u>
3	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF RECYLCED WATER IDENTIFYING BOTH SOURCE AND USE (SCHEDULE B, ITEM 1B)	6
4	MONTHLY AND ANNUAL QUANTITIES OF SOLIDS IN TONNES AND LIQUID FRACTIONS IN CUBIC METERS OF EACH WASTE STREAM DISCHARGED TO THE PROCESSED KIMBERLITE CONTAINMNET AREA (SCHEDULE B, ITEM 1C) 6	
5	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF ANY DISCHARGES FROM THE PROCESSED KIMBERLITE CONTAINMENT AREA (SCHEDULE B, ITEM 1D)	7
6	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF MINE PIT WATER AND DYKE SEEPAGE PUMPED FROM ALL FACILITIES TO THE PROCESSED KIMBERLITE CONTAINMENT AREA (SCHEDULE B, ITEM 1E)	8
7	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF TREATED EFFLUENT DISCHARGED FROM THE WASTEWATER TREATMENT FACILITY (SCHEDULE B, ITEM 1F).....	9
8	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF SEWAGE SOLIDS REMOVED FROM THE WASTEWATER TREATMENT FACILITY (SCHEDULE B, ITEM 1G)	10
9	MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF TREATED EFFLUENT DISCHARGED FROM THE HYDROCARBON CONTACT WATER REMEDIATION UNIT (AS PER NEWLY ISSUED LICENCE 2AM-JER1119).....	11
10	ANNUAL QUANTITIES IN CUBIC METERS OF OVERBURDEN, WASTE ROCK, ORE STOCKPILED, ORE PROCESSED STORED (SCHEDULE B, ITEM 1H	12
11	SUMMARY REPORT WHICH INCLUDES ALL DATA AND INFORMATION GENERATED UNDER THE MONITORING PROGRAM IN AN ELECTRONIC AND PRINTED FORMAT ACCEPTABLE TO THE BOARD(SCHEDULE B, ITEM 1I)	12
12	SUMMARY OF CONSTRUCTION ACTIVITIES AND UPDATED MINE PLAN (SCHEDULE B, ITEM 1J)	12
14	SUMMARY OF ALL WORK CARRIED OUT UNDER THE MANAGEMENT PLANS IN ACCORDANCE WITH THE LICENCE (SCHEDULE B, ITEM 1L).....	<u>131312</u>
15	ADDENDUMS IDENTIFYING WHERE CHANGES HAVE BEEN MADE TO ALL PLANS, REPORTS AND MANUALS (AS PER NEWLY ISSUED LICENCE 2AM-JER1119)	15
16	PROGRESS REPORT AND APPLICABLE REVISIONS TO ANY STUDIES REQUESTED BY THE BOARD THAT RELATE TO WATER USE, WASTE MANAGEMENT OR RECLAMATION AND A BRIEF DESCRIPTION OF ANY FUTURE STUDIES PLANNED BY THE LICENSEE (SCHEDULE B, ITEM 1M)	16
17	REPORT IDENTIFYING WHETHER RECYCLE WILL BE IMPLEMENTED AT THE PROCESSED KIMBERLITE CONTAINMENT AREA FOR THE REMAINING YEARS OF OPERATION, AND IF NOT, PROVIDING A DETAILED RATIONALE WHY RECYCLE IS NOT CONSIDERED A VALID MANAGEMENT PRACTICE AT THIS SITE FOR THAT TIME (SCHEDULE B, ITEM 1N)	17

18	RESULTS OF THE AQUATIC EFFECTS MONITORING PROGRAM IN ACCORDANCE WITH PART L INCLUDING QA/QC MEASURES (SCHEDULE B, ITEM 1 O)	17
19	ANNUAL SEEPAGE SURVEY RESULTS (AS PER NEWLY ISSUED LICENCE 2AM-JER1119)	18 <u>17</u>
20	REVISIONS TO THE APPROVED CONTINGENCY MANAGEMENT PLAN (AKA EMERGENCY RESPONSE PLAN) (SCHEDULE B, ITEM 1P)	18
21	LIST AND DESCRIPTION INCLUDING VOLUMES, SPILL REPORT LINE IDENTIFICATION NUMBER OF ALL UNAUTHORIZED DISCHARGES, SPILLS AND SUMMARIES OF FOLLOW-UP ACTION TAKEN (SCHEDULE B, ITEM 1Q)	19
22	OUTLINE OF SPILL TRAINING EXERCISES CARRIED OUT BY THE LICENSEE (SCHEDULE B, ITEM 1R)	19
23	REVISIONS TO THE APPROVED INTERIM CLOSURE AND RECLAMATION PLAN (SCHEDULE B, ITEM 1S)	19
24	SUMMARY OF ANY CLOSURE AND RECLAMATION WORK UNDERTAKEN AND AN OUTLINE OF ANY WORK ANTICIPATED FOR THE NEXT YEAR, INCLUDING ANY CHANGES TO IMPLEMENTATION AND SCHEDULING (SCHEDULE B, ITEM 1T)	21 <u>20</u>
25	PIT WATER QUALITY MODEL UPDATE (AS PER NEWLY ISSUED LICENCE 2AM-JER1119)	21
26	UPDATED ESTIMATE OF TOTAL CURRENT MINE RESTORATION LIABILITY BASED ON THE RESULTS OF MINE RECLAMATION RESEARCH, MONITORING DURING MINE CONSTRUCTION AND DEVELOPMENT AND ANY MODIFICATION TO THE MINE PLAN (SCHEDULE B, ITEM 1U)	22
27	SUMMARY REPORT DESCRIBING PUBLIC CONSULTATION AND PARTICIPATION WITH LOCAL ORGANIZATION AND THE RESIDENTS OF THE NEARBY COMMUNITIES INCLUDING A SCHEDULE OF UPCOMING COMMUNITY EVENTS AND INFORMATION SESSIONS (SCHEDULE B, ITEM 1V)	22
28	SUMMARY OF ACTIONS TAKEN TO ADDRESS CONCERNS OR DEFICIENCIES LISTED IN THE INSPECTION REPORTS AND/OR COMPLIANCE REPORTS FILED BY AN INSPECTOR (SCHEDULE B, ITEM 1W)	23
29	STATUS OF THE WATER COMPENSATION AGREEMENT WITH THE KITIKMEOT INUIT ASSOCIATION OR OTHER WATER USERS (AS PER NEWLY ISSUED LICENCE 2AM-JER1119)	24 <u>25</u>
30	ASSESSMENT OF OVERALL COMPLIANCE WITH RESPECT TO THE LICENCE (AS PER NEWLY ISSUED LICENCE 2AM-JER1119)	25 <u>26</u>
A	LICENCE CONDITIONS	25 <u>26</u>
B	REPORTING	25 <u>26</u>
C	MONITORING AND ANALYSIS OF THE AEMP AND WATER QUALITY	25 <u>26</u>
D	CURRENT STATUS OF STUDIES TO BE COMPLETED AND IMPLEMENTATION	25 <u>26</u>
E	REVIEW AND CONFIRMATION OR OTHERWISE OF THE PREDICTIVE MODELING	25 <u>26</u>
F	REVIEW OF THE MINE PLAN	25 <u>26</u>
31	ANY OTHER DETAILS ON WATER USE OR WASTE DISPOSAL REQUESTED BY THE BOARD BY NOVEMBER 1ST OF THE YEAR BEING REPORTED (SCHEDULE B, ITEM 1X)	25 <u>26</u>

1 INTRODUCTION

This Annual Report is prepared in accordance with Part B, Item 2 of the Type A Water License 2AM-JER0401, originally issued by the Nunavut Water Board (NWB) on December 21, 2004, to Benachee Resources Inc., a wholly owned subsidiary of Tahera Diamond Corp. The water licence was assigned to Shear Diamonds (Nunavut) Corp. and the term of the water licence was amended to March 01, 2012.

Shear Diamonds Ltd. applied for a renewal application on February 28, 2011. The NWB held a public hearing related to that application on November 30, 2011 and December 1, 2011 in Kugluktuk, NU. License 2AM-JER1119 was issued to Shear Diamonds (Nunavut) Corp., a wholly owned subsidiary of Shear Diamonds Ltd., effective February 7, 2012.

As of the end of 2011, the Jericho site continued to operate under Temporary Closure.

2 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF WATER OBTAINED FROM CARAT LAKE (Schedule B, Item 1a)

During 2011, freshwater was drawn from Carat Lake for domestic water use in the accommodations complex, offices, maintenance complex, dust control and the operation of the process plant. Table 2.1 provides the monthly and annual quantity of freshwater used. A total of 1400.65 m³ of water was drawn from Carat Lake. The Project operated under Temporary Closure status thereby keeping the annual consumption in 2011 well below the 350,400 m³ annual limit.

There has not been a winter road to the Jericho site since 2008. Accordingly, no water has been obtained from either Lynne Lake or Contwoyto Lake since that time.

Table 2.1- CARAT LAKE - Freshwater Use January – December 2011 (m3)

MONTH	DOMESTIC WATER USE	PROCESS PLANT	CUMULATIVE TOTALS
January	N/A	N/A	N/A
February	N/A	N/A	N/A
March	N/A	N/A	N/A
April	121.4	N/A	121.4
May	105	N/A	105
June	97	N/A	97
July	88.75	N/A	88.75
August	62.5	592	654.5
September	126.4	N/A	126.4
October	87.6	N/A	87.6
November	47.1	N/A	47.1
December	72.9	N/A	72.9
ANNUAL TOTALS	808.65	592	1400.65

3 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF RECYCLED WATER IDENTIFYING BOTH SOURCE AND USE (Schedule B, Item 1b)

While operating under Temporary Closure, no recycled water was used from the PKCA. Water pumped from Carat Lake into the Process Plant does get recycled within the Plant continuously until such time that either by evaporation or part of the processing design the water is used up and in some form or another is discharged in to the PKCA (as part of a slurry).

4 MONTHLY AND ANNUAL QUANTITIES OF SOLIDS IN TONNES AND LIQUID FRACTIONS IN CUBIC METERS OF EACH WASTE STREAM DISCHARGED TO THE PROCESSED KIMBERLITE CONTAINMENT AREA (Schedule B, Item 1c)

East Sump

No water was pumped to or from the East Sump in 2011.

Sewage Treatment Plant

Refer to Section 7.

Open Pit

Refer to Section 6.

Process Plant

No water was discharged from the Process Plant in 2011.

Oztek Unit

Refer to Section 9.

Seepage

No collection systems have been constructed and no seepage collected or directed to the PKCA in 2011.

During Temporary Closure activities, production of fine PK was, and will continue to be limited to a small amount produced during the evaluation of the process plant using stockpiled material. Cell A has sufficient capacity for this evaluation work.

5 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF ANY DISCHARGES FROM THE PROCESSED KIMBERLITE CONTAINMENT AREA (Schedule B, Item 1d)

Discharges from the PKCA began on July 4 and concluded on August 29, 2011. Discharging was halted during pit dewatering and for maintenance on the pumps.

A total of 79,619.4 m³ of water was discharged from the PKCA into the receiving environment.

Table 5.1 – Volume of Supernatant Discharge to Receiving Environment

MONTH	VOLUME DISCHARGED FROM THE PKCA (m ³)
January	N/A
February	N/A
March	N/A
April	N/A
May	N/A
June	N/A
July	49,125.08
August	30,494.32
September	N/A
October	N/A
November	N/A
December	N/A
ANNUAL TOTAL	79,619.4

6 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF MINE PIT WATER AND DYKE SEEPAGE PUMPED FROM ALL FACILITIES TO THE PROCESSED KIMBERLITE CONTAINMENT AREA (Schedule B, Item 1e)

Table 6.1 summarizes the monthly and annual volumes of water pumped from the Jericho pit. Mine water was removed from the Jericho Pit directly to the PKCA via a pipeline that was installed in June 2011. Dyke seepage did not occur and therefore no water was pumped to the PKCA in 2011.

Discharge from the PKCA was halted during pit dewatering.

Table 6.1 – Quantities in m³ of pit water pumped to the PKCA

MONTH	VOLUME PUMPED FROM PIT TO PKCA (m³)
January	N/A
February	N/A
March	N/A
April	N/A
May	N/A
June	N/A
July	1,119.63
August	19,024
September	N/A
October	N/A
November	N/A
December	N/A
TOTAL VOLUME PUMPED (m³)	20,143.63

7 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF TREATED EFFLUENT DISCHARGED FROM THE WASTEWATER TREATMENT FACILITY (Schedule B, Item 1f)

Table 7.1 summarizes the monthly and annual volumes of treated effluent discharged from the Wastewater Treatment Facility – Sewage Treatment Plant (STP). All discharges of treated effluent from the STP in 2011 were deposited directly into the PKCA. A total of 769.706 m³ of treated sewage effluent was discharged from the STP to the PKCA.

Table 7.1 – Quantities in m³ discharged from Waste Water Treatment Facility to PKCA

MONTH	Volume Treated – WWTP Treated Effluent (m ³)
January	N/A
February	N/A
March	N/A
April	107
May	85
June	88
July	60.73
August	110.61
September	110.61
October	57.751
November	77.005
December	73
TOTAL VOLUME PUMPED (m³)	769.706

8 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF SEWAGE SOLIDS REMOVED FROM THE WASTEWATER TREATMENT FACILITY (Schedule B, Item 1g)

The removal of sewage solids from the Wastewater Treatment Facility has not been required on a regular basis while operating under Temporary Closure conditions. Settled solids were removed from the aeration tank as required based on camp population in order to maintain efficient functioning of the Sewage Treatment Plant. Settled solids are collected using a vacuum truck and deposited into a designated basin located on the till dump. Table 8.1 summarizes the volume of sewage solids removed from the Wastewater Treatment Facility. A total of 38.034 m³ of settled sludge was deposited into the designated basin on the till dump during 2011.

Table 8.1 Sewage Solids Removed January – December 2011

MONTH	SEWAGE SOLIDS REMOVED (m ³)
January	N/A
February	N/A
March	N/A
April	N/A
May	10
June	11
July	5.678
August	5.678
September	5.678
October	N/A
November	N/A
December	N/A
TOTAL	38.034

9 MONTHLY AND ANNUAL QUANTITIES IN CUBIC METERS OF TREATED EFFLUENT DISCHARGED FROM THE HYDROCARBON CONTACT WATER REMEDIATION UNIT (As per newly issued licence 2AM-Jer1119)

In 2011 Shear Diamonds Ltd. assisted in the design of a mobile hydrocarbon contact water remediation unit (Oztek®). This unit is used to treat water that is pumped from secondary containment areas. Prior to discharge to the PKCA, water is treated, sampled and pumped to the PKCA. Table 9.1 summarizes the volumes of treated and discharged from the Oztek® to the PKCA.

Table 9.1 Volumes of treated effluent discharged from Oztek® to PKCA (m³)

MONTH	VOLUMES OF EFFLUENT DISCHARGED (m ³)
January	N/A
February	N/A
March	N/A
April	N/A
May	N/A
June	N/A
July	21.27
August	26.60
September	N/A
October	N/A
November	N/A
December	N/A
TOTAL	47.87

10 ANNUAL QUANTITIES IN CUBIC METERS OF OVERBURDEN, WASTE ROCK, ORE STOCKPILED, ORE PROCESSED STORED (Schedule B, Item 1h)

The Jericho mine site was operated under Temporary Closure conditions for the entire duration of 2011. There have been no materials mined, stockpiled or stored since Tahera operations ceased in 2008.

11 SUMMARY REPORT WHICH INCLUDES ALL DATA AND INFORMATION GENERATED UNDER THE MONITORING PROGRAM IN AN ELECTRONIC AND PRINTED FORMAT ACCEPTABLE TO THE BOARD(Schedule B, Item 1i)

Tabular Summaries of monitoring station data from site water stations JER-SW1 – JER-SW4 and JER-SW8, including QA/QC data collected in 2011 as required by the Type A Water License are included in Appendix A.

Tabular summaries and a summary report of monitoring station data JER-WQ1 to JER-WQ21, including QA/QC data collected in 2011 as required by the Type A Water License are included in Appendix B.

12 SUMMARY OF CONSTRUCTION ACTIVITIES AND UPDATED MINE PLAN (Schedule B, Item 1j)

The Jericho site was operated under Temporary Closure conditions for the entire duration of 2011. No construction activities took place and there have been no changes to the Mine Plan originally filed by Tahera Diamond Corporation.

13 SUMMARY OF ANY MODIFICATION AND/OR MAJOR MAINTENANCE WORK AND/OR DEMOLITION WORK CARRIED OUT AND ANY ASSOCIATED STRUCTURES (Schedule B, Item 1k)

The Jericho site was operated under Temporary Closure conditions for the entire duration of 2011. No modifications, major maintenance work or demolition work took place in 2011.

14 SUMMARY OF ALL WORK CARRIED OUT UNDER THE MANAGEMENT PLANS IN ACCORDANCE WITH THE LICENCE (Schedule B, Item 11)

Processed Kimberlite Containment Area Management Plan

In April 2011, Shear became aware of the issue of wind dispersion of the fine processed kimberlite (FPK). Immediately Shear added monitoring stations at lakes that could potentially be affected by the FPK. Shear contracted EBA Engineering to assess the situation and provide recommendations.

In December 2011, Shear placed used rock truck tires to build a wall along the dam in an effort to prevent the FPK from being blown beyond the PKCA.

In July 2011, Shear began dewatering the pit. To address the concerns that were raised at the Technical Meeting and in the technical submissions, Shear developed an onsite analysis method for nitrate and Total Suspended Solids (TSS). This was detailed in Technical Memo F, Onsite Nitrate and TSS Analysis Methods, submitted on August 15, 2011 to the NWB.

General Monitoring Plan

Seepage Survey

The Seepage Survey was conducted in early September 2011 by EBA Engineering as a follow up to the survey conducted by field personnel earlier that year in July, in accordance with Part L, Item 9 and Schedule L, Item 3 of the licence. The report was filed in November 2011. The recommendations made in the report were:

- Implementation of a detailed seepage survey program in 2012 that includes seasonal sampling, establishment of monitoring stations in Carat Lake and Lake C1, identification of the sources and fates of identified seeps;
- Conducting surface water dispersion models in Carat Lake to predict the potential impact from the seeps during production and at closure; and,
- Analyzing and pumping ponded water from the south and east side of Waste Rock Dump 2 to the PKCA to prevent overflowing into the receiving environment

Geotechnical Inspection

The Geotechnical Inspection was conducted from July 15 to 18, 2011 and on August 26, 2011, in accordance with Part G, Item 4 of the licence. Structures and their immediate surroundings were visually examined for signs of settlement, seepage, cracking, erosion or other signs of distress.

Monthly thermistor monitoring data was provided to EBA Engineering by field personnel in accordance with Part I, Item 5 of the water licence. The summary of this data can be found in Appendix C.

Site Water Management Plan

Ketek Industries, in collaboration with Shear personnel, designed and built a remediation unit known as the Oztek®. This unit was tested at the site using contaminated water that had accumulated within Phase 1 and Phase 2 containment berms of the fuel farm area. The Oztek® was successful in treating the water and reduced the F3 fraction to below detection levels.

The Oztek® will be used to treat contaminated water on site.

Aquatic Effects Monitoring Plan

In accordance with Part L, Item 10 and Schedule L, Item 4 Shear developed, submitted and implemented an AEM program in 2011. In April Shear conducted the winter, under-ice AEMP water sampling program. Upon discovering the FPK issue, Shear added sampling locations and amended the frequency of sampling in two lakes. These changes included:

- Lynn Lake and Key Lake have been added to the under-ice winter sampling of the AEMP
- Southeast Lake and Shine Lake have been added to the open water AEMP sampling program. Both of these lakes were frozen to the bottom when sampled in April 2011.

Shear filed Technical Memo C, List of Commitments: Proposed Changes to the Aquatic Effects Monitoring Plan, on July 15, 2011 to address the questions that were raised during the review of the AEMP submitted by Shear on February 28, 2011.

In late July, early August, Shear conducted the open water summer sampling program. Shear contracted Rescan Environmental for both the winter and summer AEMP sampling programs.

Landfarm Management Plan

Shear contracted EBA Engineering to select appropriate potential sites for a landfarm at site based on the regulations and what the specific needs and requirements were to handle the historic contaminated soil and potential future spills.

The ideal location was presented at the public hearing in Kugluktuk held November 30 and December 1, 2011.

Landfill Management Plan

The Kitikmeot Inuit Association notified Shear that when the mine resumes commercial production, that the current landfill will need to be decommissioned and that a new landfill location will need to be selected that is not located on Inuit Owned Land.

Shear contracted EBA Engineering to select an appropriate site for a landfill. This location was presented at the public hearing in Kugluktuk.

Waste Management Plan

HWTa – Shear cleaned up and sorted all materials contained within the HWTa. Shear also erected signs and contracted EBA Engineering to inspect the structure. The HWTa is in need of repair and continued organization. This is planned for 2012.

Incinerator – Shear contracted Bear Wise to come to site and conduct a Bear Awareness training program and audit of the waste handling practices and site. Following the advice provided in their report, Shear relocated the incinerators closer to the main camp. The incinerators were left in bad repair and the buildings, which housed them, were filled with numerous types of garbage. This was cleaned up prior to moving the incinerators and significant repairs were made.

Shear also conducted on site training on proper incineration protocols, developed SOPs related to incinerator use, and has been incinerating waste at site according to those SOPs.

15 ADDENDUMS IDENTIFYING WHERE CHANGES HAVE BEEN MADE TO ALL PLANS, REPORTS AND MANUALS (As per newly issued licence 2AM-Jer1119)

On January 31, 2011, Shear filed a Care and Maintenance Plan which included a Processed Kimberlite Containment Area Management Plan, General Monitoring Plan, Site Water Management Plan and Aquatic Effects Monitoring Plan.

On February 28, 2011, Shear filed additional plans in support of the water licence renewal application. These included:

- C1 Diversion Construction Summary;
- Fuel Storage Containment Facility Design Plan;
- Landfill Design Plan;
- Landfill Management Plan;
- Preliminary Landfarm Design Plan;
- Landfarm Management Plan;
- Contingency Management Plan;
- Wastewater Management Plan;
- Operations, Maintenance and Surveillance Manual - PKCA Dams;
- Emergency Preparedness and Response Plan For Dam Emergencies;
- Waste Rock Management Plan;
- Waste Management Plan; and,
- Interim Closure and Reclamation Plan

A number of Technical Memos were submitted in 2011 in support of these plans. These include:

- Technical Memo A Schedule of Monitoring Activities
- Technical Memo B: Current Operational Plans
- Technical Memo C: Proposed Changes to the Aquatic Effects Monitoring Plan

- Technical Memo D: Operational Commitments
- Technical Memo E: Landfill and Sludge Pit Location Addendum to Landfill Management Plan
- Technical Memo F: Onsite Nitrate and TSS Analysis Methods
- Technical Memo G: Proposed PKCA Effluent Discharge Criteria
- Technical Memo H: Final Specifications of the Hydrocarbon Contact Water Remediation Unit (Oztek®)
- Technical Memo I: General Commitment #16, Operation commitment list, Two (2) year Implementation Schedule

On August 15, 2011, Shear filed a revised Processed Kimberlite Containment Area Management Plan to replace all previous submissions. This version incorporated the comments provided in the technical submissions and at the Technical Meeting.

16 PROGRESS REPORT AND APPLICABLE REVISIONS TO ANY STUDIES REQUESTED BY THE BOARD THAT RELATE TO WATER USE, WASTE MANAGEMENT OR RECLAMATION AND A BRIEF DESCRIPTION OF ANY FUTURE STUDIES PLANNED BY THE LICENSEE (Schedule B, Item 1M)

No new studies were required by the NWB relating to water use, waste management or reclamation during 2011.

As reported in Tahera Diamond Corporation's 2007 Annual Report, Dr. Anne Naeth of the University of Alberta had been approached back in 2007 with regards to revegetation research. Due to changing business circumstances the project was cancelled before the experiments got underway. When Shear Diamonds Ltd. acquired the Project, contact was made once again with Dr. Naeth and they picked up with the research. During the summer of 2011 Shear site staff gathered new samples and the experiment process is once again underway. At the time this report was being written, the research team had almost completed set up of the experiment with final seeding to take place within a week or two.

Four substrates, provided by Shear Diamonds Ltd., were being tested including: (Coarse PK, Fine PK, Fine PK With High Clay Content and Till) and eleven amendments (inorganic fertilizer, PK/Sewage, peat (with and without fertilizer), hydrogel (with and without fertilizer), BlackEarth (with and without fertilizer), limestone kiln sludge (with and without fertilizer) and an unamended control). Three grass species were selected to measure plant establishment and growth in each substrate-amendment combination. They are: barley (*Hordeum vulgare*), glaucous blue grass (*Poa glauca*) and broad glumed wheat grass (*Agropyron violaceum*). The greenhouse experiment will run for 12 weeks, ending approximately in mid April. Once the data has been analyzed and a report provided, we will provide the report to the NWB as soon as possible.

During the NWB Public Hearing to review the renewal application, both Environment Canada and Aboriginal Affairs and Northern Development Canada (AANDC) raised concerns associated with residual flocculants and coagulants in the processed water that is

deposited into the PKCA and the effects from the discharge from the PKCA. Shear has committed to undertaking due diligence testing on flocculants to address these concerns. The due diligence testing results will be included in the revised PKCA Management Plan as suggested in the NWB 2AM-JER1119 Reasons for Decision document.

While a plume delineation study has been scheduled for 2 years following the resumption of Commercial Operations, as per licence 2AM-JER1119, during the public hearing, Shear committed to an earlier study if, during dewatering of the pit, trace parameter concentration levels were such that they are good measurable indicators. Should this be the case, the plume delineation study will be conducted late in the discharge season of 2012 and the results submitted to the Board in accordance with Part B, Item 3 of the licence.

17 REPORT IDENTIFYING WHETHER WATER RECYCLING WILL BE IMPLEMENTED AT THE PROCESSED KIMBERLITE CONTAINMENT AREA FOR THE REMAINING YEARS OF OPERATION, AND IF NOT, PROVIDING A DETAILED RATIONALE WHY WATER RECYCLING IS NOT CONSIDERED A VALID MANAGEMENT PRACTICE AT THIS SITE FOR THAT TIME (Schedule B, Item 1n)

The reclaim line is installed downstream of Divider Dyke A, and will eventually be extended to the downstream of the Proposed Divider Dyke B into Cell C after Divider Dyke B is constructed. The reclaim water line is 100 mm diameter. The line is not heat traced, and therefore is not used during the winter.

As per the PKCA Management Plan (EBA, 2011), water will be reclaimed from Cell C or the East Sump, to the process plant, as described in the "Site Water Management Plan" (EBA, 2011). This did not occur in 2011 as planned as no work was done in the Process Plant until after freeze up.

18 RESULTS OF THE AQUATIC EFFECTS MONITORING PROGRAM IN ACCORDANCE WITH PART L INCLUDING QA/QC MEASURES (Schedule B, Item 1 o)

The Aquatic Effects Monitoring Program (AEMP) Annual Report being produced by Rescan Environmental Services is currently being finalized. The report will be forwarded under a separate cover.

During the PKCA discharge, in accordance with Part F, acute toxicity tests were conducted prior to and monthly on discharge effluent. Results are attached in Appendix D.

During the PKCA discharge, in accordance with Schedule I, Item 2 (iv), chronic toxicity tests were conducted monthly from water collected at the edge of the 200 m mixing zone in Lake C3. Results are attached in Appendix D.

19 ANNUAL SEEPAGE SURVEY RESULTS (As per newly issued licence 2AM-Jer1119)

EBA Engineering conducted an annual seepage survey in September 2011, in accordance with Part I, Item 19 (a). A report was submitted as per Part I in November 2011. These data can be found in Appendix E.

20 REVISIONS TO THE APPROVED CONTINGENCY MANAGEMENT PLAN (AKA EMERGENCY RESPONSE PLAN) (Schedule B, Item 1p)

Shear Diamonds (Nunavut) Corp. (“Shear”) assumed control of the Jericho project in August 2010. It was evident early on that comprehensive site infrastructure information along with equipment and chemical inventory was not well maintained nor easily recoverable under previous ownership and management.

The Contingency Management Plan was prepared with information from the previous Contingency Plan (TDC 2008); regulatory comments provided on that plan; external anecdotal information where available; and on the most current legislation, regulations, and guidelines. The plan was developed to reflect Shear’s commitment to the best practices in, health and safety and environmental stewardship.

The plan describes the steps used to prevent, identify, respond to, and remedy spills during the current Temporary Closure activities. As Shear makes the transition from care and maintenance to commercial operations the Contingency Management Plan will be revised to include Emergency Response Procedures that will need to be in place prior to resuming mining. Subsequent revisions of this CMP will be submitted to the NWB for review and approval. The updated CMP will be reviewed annually and further updated as necessary to reflect changes in operation, technology, legislation, and regulations.

The objectives of this plan include:

- Providing a practical source of information required to assess spill risks, develop an effective countermeasures program, and respond in a safe and effective manner to spill incidents;
- Establishing procedures and processes to be followed in the event of a dam emergency; and
- Providing procedures for handling hazardous materials.

The plan covers the care and maintenance activities related to mine and processing infrastructure, and ancillary operations including airstrip, sewage treatment plant, and catering. It encompasses the activities of all Shear and contractor employees as well as visitors to the mine site.

The main purposes of the plan are:

- To provide information and training for personnel at Jericho in spill prevention, response and preparedness;
- To enable personnel to respond in a coordinated manner, minimizing injury, impacts and loss of property;
- To provide information and training in clean up procedures; and
- To ensure the safe and efficient handling of hazardous materials.

21 LIST AND DESCRIPTION INCLUDING VOLUMES, SPILL REPORT LINE IDENTIFICATION NUMBER OF ALL UNAUTHORIZED DISCHARGES, SPILLS AND SUMMARIES OF FOLLOW-UP ACTION TAKEN (Schedule B, Item 1Q)

There were a total number of 3 spills documented in 2011, for a total volume of 18 litres spilled. The spills are as follows:

- 1: 2L, Diesel, July 18, 2011
- 2: 6L, Diesel, July 26, 2011
- 3: 10L, Jet Fuel, August 11, 2011

22 OUTLINE OF SPILL TRAINING EXERCISES CARRIED OUT BY THE LICENSEE (Schedule B, Item 1r)

Spill training was provided to site personnel in April 2011. This training will be provided to all new Site Services personnel and refresher training will be provided annually.

23 REVISIONS TO THE APPROVED INTERIM CLOSURE AND RECLAMATION PLAN (Schedule B, Item 1S)

The Jericho Interim Closure and Reclamation Plan (ICRP) was been developed to provide a framework for the design and construction of works related to the closure of the Jericho Diamond Mine (Jericho). The ICRP is a concept level document, subject to review and modification, based on ongoing mine development, observational data and the results of

progressive reclamation. It is a living document that will be updated and modified as mining progresses.

The closure plan was prepared and submitted as required under the Jericho Mine Water Licence NWB1JER0410 (issued December 21, 2004). The plan was submitted to the Nunavut Water Board (NWB) in the absence of complete historical information as Shear Diamonds (Nunavut) Corp. ("Shear") only assumed control of the project in August 2010. Shear discovered that detailed information on the present site conditions and mine plan was limited. Comprehensive historical monitoring and maintenance records were not well maintained under previous ownership and management, so the available information was incomplete or lacking detail.

Section M, Part 5 of the 2AM-JER0410 licence required that a final closure and reclamation plan be submitted at the time of water licence renewal; however, this project has been on care and maintenance since June of 2008 and was recently acquired by Shear. For this reason, the plan was submitted as an interim plan until such time as Shear was able to determine the economic feasibility of the project and as a result its fate.

In developing this plan, it was assumed that there were no changes to the original mine plan (TDC 2005). It reflected the assumed on-site conditions interpreted from existing plans and drawings, site photographs and anecdotal site knowledge.

The ICRP will be revised and submitted for review and approval prior to resuming mining operations or commencing closure and reclamation activities.

The ICRP was been prepared in accordance with the Mine Site Reclamation Guidelines for the Northwest Territories (INAC 2007), as required in Part M, Section 2 of the 2AM-JER0410 water licence. The Mine Site Reclamation Policy for Nunavut (INAC 2002) was also referenced in its development.

The primary objective of the ICRP was to provide Shear and its designated contractors with a working document to design, plan, and execute the closure of the Jericho Diamond Mine. At the time of the water licence renewal application, mining operations had been suspended and the site was and currently is under Temporary Closure. The ICRP will address closure requirements for the mine in both its current condition and its expected condition at the end of mining, based on the existing mine plan.

The ICRP includes the following:

- A summary of the reclamation objectives;
- An overview of the mine site, including the proposed mine plan;
- A description of the individual site components and proposed reclamation strategy for each;
- An assessment of the required reclamation materials;
- Identification of data gaps and requirement for further studies;
- Plans for progressive reclamation; and
- Requirements for post-closure monitoring.

24 SUMMARY OF ANY CLOSURE AND RECLAMATION WORK UNDERTAKEN AND AN OUTLINE OF ANY WORK ANTICIPATED FOR THE NEXT YEAR, INCLUDING ANY CHANGES TO IMPLEMENTATION AND SCHEDULING (Schedule B, Item 1T)

While in Temporary Closure status, no closure and reclamation work was undertaken in 2011.

As noted earlier in this report, when Shear Diamonds Ltd. acquired the Project in late 2010, contact was made once again with Dr. Naeth and they picked up with the revegetation research originally planned by Tahera. During the summer of 2011 Shear site staff gathered new samples and the experiment process is once again underway. At the time this report was being written, the research team had almost completed set up of the experiment with final seeding to take place within a week or two. Four substrates, provided by Shear Diamonds Ltd., were being tested including: (Coarse PK, Fine PK, Fine PK With High Clay Content and Till) and eleven amendments (inorganic fertilizer, PK/Sewage, peat (with and without fertilizer), hydrogel (with and without fertilizer), BlackEarth (with and without fertilizer), limestone kiln sludge (with and without fertilizer) and an unamended control). Three grass species were selected to measure plant establishment and growth in each substrate-amendment combination. They are: barley (*Hordeum vulgare*), glaucous blue grass (*Poa glauca*) and broad glumed wheat grass (*Agropyron violaceum*). The greenhouse experiment will run for 12 weeks, ending approximately in mid April. Once the data has been analyzed and a report provided, we will provide the report to the NWB as soon as possible.

Shear Diamonds Ltd. will be working on an Updated Closure and Reclamation Plan for submission to the NWB. This Plan will be written in accordance with the provisions outlined in Schedule J Item 1 of the Licence and will begin to consider those items of relevance for years 2013 and 2014 including a Human Health and Ecological Risk Assessment.

25 PIT WATER QUALITY MODEL UPDATE (As per newly issued licence 2AM-Jer1119)

In 2011 Shear contracted EBA Engineering to conduct a pit water quality sampling program using the water that has accumulated in the pit since 2008. This information was used to develop a Pit Dewatering Plan.

During the public hearing in Kugluktuk, Shear committed to providing a Technical Memo, Updated Pit Infill Rates, by April 30, 2012. Shear also committed to providing a Pit Water Quality Model within two (2) years of resuming commercial operations.

26 UPDATED ESTIMATE OF TOTAL CURRENT MINE RESTORATION LIABILITY BASED ON THE RESULTS OF MINE RECLAMATION RESEARCH, MONITORING DURING MINE CONSTRUCTION AND DEVELOPMENT AND ANY MODIFICATION TO THE MINE PLAN (Schedule B, Item 1u)

Shear Diamonds submitted the current mine restoration liability in support of the water licence renewal application. This was presented at the public hearing held in Kugluktuk, NU on November 30 and December 1, 2011. The liability estimate was prepared by a third party that had been approved by the Kitikmeot Inuit Association. AANDC presented their calculations of the mine restoration liability and during the hearing, Shear acknowledged AANDC's calculations.

Shear contacted Dr. Anne Naeth, University of Alberta, to discuss the work that had been initiated by Tahera. Shear accepted a proposal from Dr. Naeth to continue with the re-vegetation studies. This work is ongoing.

Shear has not made any modifications to the mine plan.

27 SUMMARY REPORT DESCRIBING PUBLIC CONSULTATION AND PARTICIPATION WITH LOCAL ORGANIZATION AND THE RESIDENTS OF THE NEARBY COMMUNITIES INCLUDING A SCHEDULE OF UPCOMING COMMUNITY EVENTS AND INFORMATION SESSIONS (Schedule B, Item 1v)

Outlined in the table below are the major public meetings that Shear participated in, within the 2011 calendar year. However, there is ongoing contact with the communities and this is more explicitly outlined in Appendix F.

<u>Date</u>	<u>Location</u>	<u>Type of Meeting</u>	<u>Information Provided</u>
18-Apr-11	Kugluktuk	Public Meeting	Project Update
19-Apr-11	Cambridge Bay	Public Meeting	Project Update
20-Jun-11	Cambridge Bay	Public Meeting	Water License Application update
30-Nov-11	Kugluktuk	Public Meeting	Final Water License Application Hearing

28 SUMMARY OF ACTIONS TAKEN TO ADDRESS CONCERNS OR DEFICIENCIES LISTED IN THE INSPECTION REPORTS AND/OR COMPLIANCE REPORTS FILED BY AN INSPECTOR (Schedule B, Item 1w)

Inspections of the Jericho Mine site were conducted by:

- Aboriginal Affairs and Northern Development Canada (AANDC) Water Resource Officer
June 10, 2011 & Nov 1, 2011
- Environment Canada
September 18, 2010 September 19, 2011
- Kitikmeot Inuit Association
August 24, 2011

The Kitikmeot Inuit Association did not provide any inspection reports in 2011.

Table 28.1 - AANDC Inspections – 2011

Action Items & Comments	Status
Plan required for how Shear will deal with old fuel on site.	Shear had fuel tanks dipped and the fuel tested. A plan is being developed for submission.
Treat and pump water in secondary containment facilities.	Shear assisted in the design of a mobile hydrocarbon water treatment system (Oztek). Water treated, sampled and pumped to the PKCA.
Clean up numerous legacy (minor) spills.	Minor spills and “stains” around site were cleaned up.
Plan for the Hazardous Waste Transfer Area.	Shear will address the HWTa in 2012.
All fuel to be stored in secondary containment, including drummed fuel.	Secondary containment was already en route when the Inspector was on site. All fuel on site is in secondary containment.

Table 28.2 – EC Inspection

Action Items & Comments	Status
EC requested electronic copies of all our plans, but specifically: Sample Monitoring Plan, Containment Pond Inspection Reports, Spill Contingency Plan	All electronic plans have been sent to EC
EC – Requested amounts of all E2 gases on site	All E2 gases on site have been measured and reported to EC
EC noted that we had to register Shear's E2 gases on site (CEPA registration)	Confirmation of registration Nov 15, 2011
Removal of water in the fuel farm berms	Fuel Berms pumped out Sept 23, 2011

29 STATUS OF THE WATER COMPENSATION AGREEMENT WITH THE KITIKMEOT INUIT ASSOCIATION OR OTHER WATER USERS (As per newly issued licence 2AM-Jer1119)

The water compensation agreement is in good standing. Shear has fully paid its fees for the year 2011. The next payment is due in June 2012.

30 ASSESSMENT OF OVERALL COMPLIANCE WITH RESPECT TO THE LICENCE (As per newly issued licence 2AM-Jer1119)

A LICENCE CONDITIONS

B REPORTING

C MONITORING AND ANALYSIS OF THE AEMP AND WATER QUALITY

D CURRENT STATUS OF STUDIES TO BE COMPLETED AND IMPLEMENTATION

E REVIEW AND CONFIRMATION OR OTHERWISE OF THE PREDICTIVE MODELING

F REVIEW OF THE MINE PLAN

This requirement is a new requirement in accordance with the recently issued licence 2AM-Jer1119. Shear has been working diligently to address the non-compliances identified in the Compliance Audit submitted by Shear in November 2010. Shear has submitted a number of management and operating plans that had not been approved prior to acquisition. Shear conducted a site clean up and contracted EBA Engineering to conduct a geotechnical inspection. One of the areas inspected was the Hazardous Waste Transfer Area. The terms require some repairs, which Shear is planning to address in 2012.

Shear has not yet received the Aquatic Effects Monitoring Program 2011 Report from Rescan Environmental. Shear will submit this report as soon as it is available.

31 ANY OTHER DETAILS ON WATER USE OR WASTE DISPOSAL REQUESTED BY THE BOARD BY NOVEMBER 1ST OF THE YEAR BEING REPORTED (Schedule B, Item 1x)

No additional details on water use or waste disposal were requested.

APPENDIX A: JER-SWQ 1, 4 AND 8

JER SWQ-01 INFLUENT (January-June)

		Sample ID	WWTP-INFLUENT	WWTP INFLUENT
3/23/2012		ALS ID	L1016946-2	L1024047-1
Multiple Work Orders		Date Sampled	6/13/2011 8:30:00 AM	6/27/2011 8:00:00 AM
Analyte	Units	LOR	Water	Water
Temperature	Degree C	1	25	25
Total Suspended Solids	mg/L	3	343	335
Total Dissolved Solids	mg/L	5	462	328
Turbidity	NTU	0.1	127	106
Acidity (as CaCO3)	mg/L	5	35.3	45.5
Alkalinity, Total (as CaCO3)	mg/L	5	289	177
Ammonia (as N)	mg/L	0.005	46.8	24.3
Bicarbonate (HCO3)	mg/L	5	352	216
Carbonate (CO3)	mg/L	5	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	53.6	43.7
Conductivity (EC)	uS/cm	0.2	855 *	619 *
Fluoride (F)	mg/L	0.05	<0.050	<0.050
Hardness (as CaCO3)	mg/L	n/a	25.5	32.5
Hydroxide (OH)	mg/L	5	<5.0	<5.0
Ion Balance	%	n/a	95	102
Nitrate and Nitrite (as N)	mg/L	0.006	0.065 *	<0.0060
Nitrate (as N)	mg/L	0.006	<0.063	<0.0060
Nitrite (as N)	mg/L	0.002	0.044 *	0.0054
Total Kjeldahl Nitrogen	mg/L	0.2	67.3	57.5
pH	pH	0.1	7.68	7.05
Orthophosphate-Dissolved (as P)	mg/L	0.001	4.96	3.06
Phosphorus (P)-Total Dissolved	mg/L	0.001	6.86	6.52
Phosphorus (P)-Total	mg/L	0.001	8.15	8.5

TDS (Calculated)	mg/L	n/a	334	225
Sulfate (SO4)	mg/L	0.05	13.9	0.071
Total Inorganic Carbon	mg/L	1	-	22.5
Total Organic Carbon	mg/L	1	-	169
Fecal Coliforms	CFU/100mL	1	120000	22000000 *
Calcium (Ca)-Dissolved	mg/L	0.03	6.25	8.19
Magnesium (Mg)-Dissolved	mg/L	0.03	2.41	2.93
Potassium (K)-Dissolved	mg/L	0.05	16.5	16
Sodium (Na)-Dissolved	mg/L	0.2	67.2	47.4
Biochemical Oxygen Demand	mg/L	2	425	257
Oil and Grease	mg/L	1	26.6	29
* = Result Qualified				

JER-SWQ-01 INFLUENT (July-December)

ALS		Sample ID	SWQ-01	JER SWQ-01 IN	JER-SWQ-01 INFLUENT	WWT P-IN	WWT P-OUT (SWQ-1)	SWQ-1 (WWTP INFLUENT)	SWQ 01-INFLUENT	SWQ1 - INFLUENT	SWQ-02 INFLUENT	SWQ0 1 - INFLUENT	SWQ1 - INFLUENT	JER-SWQ-01 INFLUENT	SWQ-01 INFLUENT	JER-SWQ-01 IN
3/24/2012		ALS ID	L1026 383-1	L1030 756-1	L10358 22-1	L1043 009-9	L1043 009-10	L10495 54-2	L1055 190-1	L1061 615-1	L1068 308-1	L1074 564-1	L1083 096-1	L10879 91-2	L1094 160-1	L1098 177-3
Multiple Work Orders		Date Sampled	7/4/2011 8:00:00 AM	7/11/2011 9:00:00 AM	7/25/2011 12:00:00 AM	8/10/2011 9:30:00 AM	8/10/2011 9:30:00 AM	8/24/2011 8:30:00 AM	9/7/2011 9:00:00 AM	9/21/2011 12:00:00 AM	10/5/2011 9:00:00 AM	10/19/2011 9:00:00 AM	11/8/2011 7:30:00 PM	11/23/2011 7:20:00 AM	12/8/2011 9:00:00 AM	12/21/2011 7:30:00 AM
Analyte	Units	LO R	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	39.9	30.8	-	-	-	-	46.2	-	-	-	-	-	-	-
Temperature	Degree C	1	25	25	25	25	25	25	25	25	25	-	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	276 *	175	277	<3.0	127	262 *	476	376	-	200	352	186	484
Total Dissolved Solids	mg/L	5	336	314	356	330	348	370	486 *	446	410	-	-	537	392	430
Turbidity	NTU	0.1	2.89	84.2	50.8	89.6	2.41	78.5	110	152	178	-	62.6	150	60.2	187
Acidity (as CaCO3)	mg/L	5	6.2	40.6	82	86.9	9.8	46.8	86.9	97.6	19	-	12.4	87.2	23.1	27.2
Alkalinity,	mg/L	5	28	159	142	181	20.4	190 *	170	231	242	215	152 *	247	144	198

Total (as CaCO ₃)	L															
Ammonia (as N)	mg/L	0.005	1.05	23.4	18	35.8	0.717	-	35.3	46.2 *	40.2	34.6	20	40.3	18.9	24.8
Bicarbonate (HCO ₃)	mg/L	5	34.2	194	173	221	24.9	232 *	207	281	295	262	186 *	302	176	241
Carbonate (CO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	44.4	36	94.6	65.5	76.8	89.3 *	78.1 *	73.8	51.5	97	45.3	120	93.4	90.3
Conductivity (EC)	uS/cm	0.2	482	513	671	701 *	545	780 *	808	879 *	748 *	842 *	602 *	1030	774	817
Fluoride (F)	mg/L	0.05	<0.050	<0.050	<0.050	0.387	0.06	<0.050	<0.050	0.095	0.436	<0.050	0.132	<0.050	0.151	<0.050
Hardness (as CaCO ₃)	mg/L	n/a	43.3	30.6	38	31.1	49.8	30.1	39.8	25.8	27.6	41.7	24.9	34.5	38.2	30.6
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0	<5.0
Ion Balance	%	n/a	101	115 *	101	108	99	63.1 *	135 *	109	104	107	105	101	101	109
Nitrate and Nitrite (as N)	mg/L	0.006	21.5	<0.0060	<0.060 *	<0.0060	19.5	<0.060 *	<0.030 *	0.0199	0.0169	0.0142	1.81	0.0134	4.52	0.0194 *
Nitrate (as N)	mg/L	0.006	21.5	<0.0060	<0.060	<0.0060	19.5 *	<0.060	<0.030	<0.0063	<0.0063	<0.0063	1.06	<0.0063	4.09	<0.060
Nitrite (as N)	mg/L	0.002	0.054	0.0067	<0.020 *	0.0058	<0.50 *	<0.020 *	0.024 *	0.0194	0.0147	0.0132	0.748	0.0117	0.428	0.0156 *
Total Kjeldahl Nitrogen	mg/L	0.05	-	47.5	-	67.7	3.33	55.7	65.4	87.4	-	68.9	-	-	-	-
pH	pH	0.1	7.38	7.2	7.31	7.07	7.02	7.60 *	6.54	7.38	7.54	7.54	7.71 *	7.33	7.49	7.37
Orthophosphate-Dissolved (as P)	mg/L	0.001	3.64	3.19	4.37	5.40 *	6.69 *	7.29	11.8 *	7.44	5.61	-	5.25	6.25 *	6.28 *	8.37
Phosphorus (P)-Total	mg/L	0.001	3.82	4.07	5.27	6.96	7.41	7.6	13.8	9.04	9.05	-	5.1	7.84	5.54	7.74

Dissolved																
Phosphorus (P)-Total	mg/L	0.001	4.41	7.36	8.36	11.6	7.44	9.82	15	14	12.5	17.1	8.24	12.7	9.22	10.5
TDS (Calculated)	mg/L	n/a	285	219	293	278	299	299	306	315	312	355	271	417	359	357
Sulfate (SO4)	mg/L	0.05	32.6	7.77	7.76	14	20.8	0.503	<0.050	3.61	16.5	4.71	32.4	9.82	33.6	13.8
Total Inorganic Carbon	mg/L	1	5.6	55.6	16.3	32.5	5.2	53.2	32.3	34	57.1	46	7.9	35.2	33.4	33.5
Total Organic Carbon	mg/L	1	19.1	39.2	124	185	16.7	183	362	246	174	228	40.2	197	41	171
Fecal Coliforms	CFU/100 mL	1	1400*	100000*	3700000*	670000*	184*	-	<1*	900000*	450000*	105000	830000	690000	160000	76
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	-	-	-	-	<0.000050	-	-	-	-	-	-	-
Aluminum (Al)-Total	mg/L	0.0002	0.0455	1.23	-	-	-	-	1.16	-	-	-	-	-	-	-
Antimony (Sb)-Total	mg/L	0.000005	0.00163	0.000776	-	-	-	-	0.00146	-	-	-	-	-	-	-
Arsenic (As)-Total	mg/L	0.00002	0.00077	0.00107	-	-	-	-	0.000872	-	-	-	-	-	-	-
Barium (Ba)-Total	mg/L	0.00002	0.00466	0.0173	-	-	-	-	0.0188	-	-	-	-	-	-	-
Beryllium (Be)-Total	mg/L	0.000002	<0.000010*	0.000023	-	-	-	-	0.0000278	-	-	-	-	-	-	-
Bismuth (Bi)-Total	mg/L	0.000001	0.000101	0.0117	-	-	-	-	0.00433	-	-	-	-	-	-	-

Boron (B)-Total	mg/L	0.005	0.104	0.063	-	-	-	-	0.302	-	-	-	-	-	-	-
Cadmium (Cd)-Total	mg/L	0.00005	0.000148	0.000234	-	-	-	-	0.000322	-	-	-	-	-	-	-
Calcium (Ca)-Total	mg/L	0.03	11.2	10.9	-	-	-	-	12.8	-	-	-	-	-	-	-
Cesium (Cs)-Total	mg/L	0.00005	0.000052	0.000067	-	-	-	-	0.0000819	-	-	-	-	-	-	-
Chromium (Cr)-Total	mg/L	0.00005	0.000048	0.00009	-	-	-	-	0.00949	-	-	-	-	-	-	-
Cobalt (Co)-Total	mg/L	0.00005	0.000646	0.0012	-	-	-	-	0.000794	-	-	-	-	-	-	-
Copper (Cu)-Total	mg/L	0.00005	0.12	0.616	-	-	-	-	0.709	-	-	-	-	-	-	-
Gallium (Ga)-Total	mg/L	0.00005	<0.00025 *	0.00034	-	-	-	-	0.000261	-	-	-	-	-	-	-
Iron (Fe)-Total	mg/L	0.01	0.414	4.37	-	-	-	-	5.1	-	-	-	-	-	-	-
Lead (Pb)-Total	mg/L	0.00005	0.00758	0.00606	-	-	-	-	0.00771	-	-	-	-	-	-	-
Lithium (Li)-Total	mg/L	0.0002	0.02	0.0085	-	-	-	-	0.00558	-	-	-	-	-	-	-
Magnesium (Mg)-Total	mg/L	0.03	3.73	3.84	-	-	-	-	4.67	-	-	-	-	-	-	-
Manganese (Mn)-Total	mg/L	0.00005	0.0595	0.121	-	-	-	-	0.0936	-	-	-	-	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00001	0.00391	0.00361	-	-	-	-	0.00485	-	-	-	-	-	-	-
Nickel (Ni)-Total	mg/L	0.00005	0.0168	0.0173	-	-	-	-	0.0136	-	-	-	-	-	-	-
Phosphorus (P)-	mg/L	0.05	4.28	7.48	-	-	-	-	15.3	-	-	-	-	-	-	-

Total																
Potassium (K)-Total	mg/L	0.05	20.2	18.6	-	-	-	-	35.2	-	-	-	-	-	-	-
Rhenium (Re)-Total	mg/L	0.00005	<0.000025 *	<0.000025 *	-	-	-	-	<0.000050	-	-	-	-	-	-	-
Rubidium (Rb)-Total	mg/L	0.00005	0.0186	0.0183	-	-	-	-	0.0218	-	-	-	-	-	-	-
Selenium (Se)-Total	mg/L	0.00004	0.00057	0.00081	-	-	-	-	0.0017	-	-	-	-	-	-	-
Silicon (Si)-Total	mg/L	0.05	4.12	3.88	-	-	-	-	3.13	-	-	-	-	-	-	-
Silver (Ag)-Total	mg/L	0.00005	<0.000025 *	0.000069	-	-	-	-	0.000184	-	-	-	-	-	-	-
Sodium (Na)-Total	mg/L	0.2	60.4	50.1	-	-	-	-	77.7	-	-	-	-	-	-	-
Strontium (Sr)-Total	mg/L	0.00001	0.0161	0.0216	-	-	-	-	0.0235	-	-	-	-	-	-	-
Tellurium (Te)-Total	mg/L	0.00001	<0.000050 *	<0.000050 *	-	-	-	-	<0.000010	-	-	-	-	-	-	-
Thallium (Tl)-Total	mg/L	0.000001	0.0000078	0.0000164	-	-	-	-	0.000018	-	-	-	-	-	-	-
Thorium (Th)-Total	mg/L	0.000005	<0.000025 *	0.000048	-	-	-	-	0.0000311	-	-	-	-	-	-	-
Tin (Sn)-Total	mg/L	0.000001	0.000498	0.00178	-	-	-	-	0.00158	-	-	-	-	-	-	-
Titanium (Ti)-Total	mg/L	0.000005	0.00029	0.0384	-	-	-	-	0.00716	-	-	-	-	-	-	-
Tungsten (W)-Total	mg/L	0.000001	0.000313	0.000653	-	-	-	-	0.000554	-	-	-	-	-	-	-

Uranium (U)-Total	mg/L	0.00001	0.0000478	0.000729	-	-	-	-	0.000998	-	-	-	-	-	-	-
Vanadium (V)-Total	mg/L	0.00001	0.000879	0.00231	-	-	-	-	0.00133	-	-	-	-	-	-	-
Yttrium (Y)-Total	mg/L	0.00005	0.000031	0.000316	-	-	-	-	0.000355	-	-	-	-	-	-	-
Zinc (Zn)-Total	mg/L	0.0001	0.775	0.567	-	-	-	-	0.69	-	-	-	-	-	-	-
Zirconium (Zr)-Total	mg/L	0.00001	0.000124	0.00654	-	-	-	-	0.000593	-	-	-	-	-	-	-
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0188	0.0633	-	-	-	-	0.094	-	-	-	-	-	-	-
Antimony (Sb)-Dissolved	mg/L	0.00005	0.00159	0.000252	-	-	-	-	0.000276	-	-	-	-	-	-	-
Arsenic (As)-Dissolved	mg/L	0.00002	0.000589	0.00053	-	-	-	-	0.000625	-	-	-	-	-	-	-
Barium (Ba)-Dissolved	mg/L	0.00002	0.00318	0.00414	-	-	-	-	0.00349	-	-	-	-	-	-	-
Beryllium (Be)-Dissolved	mg/L	0.00002	<0.000020	<0.000010 *	-	-	-	-	<0.000020	-	-	-	-	-	-	-
Bismuth (Bi)-Dissolved	mg/L	0.00001	0.0000455	0.000303	-	-	-	-	0.0000424	-	-	-	-	-	-	-
Boron (B)-Dissolved	mg/L	0.0005	0.114	<0.050 *	-	-	-	-	0.304	-	-	-	-	-	-	-
Cadmium (Cd)-Dissolved	mg/L	0.00005	0.0000107	<0.000025 *	-	-	-	-	0.0000185	-	-	-	-	-	-	-
Calcium (Ca)-Dissolved	mg/L	0.03	11.2 *	6.90 *	9	6.64 *	13	6.54	9.59 *	5.01	6.25	10.1	5.98	8.11	8.97	6.99

Cesium (Cs)-Dissolved	mg/L	0.00005	0.0000405	0.000057	-	-	-	-	0.0000625	-	-	-	-	-	-	-
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000379	<0.0010 *	-	-	-	-	0.000955	-	-	-	-	-	-	-
Cobalt (Co)-Dissolved	mg/L	0.00005	0.000563	0.000352	-	-	-	-	0.000337	-	-	-	-	-	-	-
Copper (Cu)-Dissolved	mg/L	0.00005	0.0289	0.0433	-	-	-	-	0.0535	-	-	-	-	-	-	-
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.00025 *	-	-	-	-	<0.000050	-	-	-	-	-	-	-
Iron (Fe)-Dissolved	mg/L	0.01	0.227	1.7	-	-	-	-	1.75	-	-	-	-	-	-	-
Lead (Pb)-Dissolved	mg/L	0.00005	0.000855	0.000446	-	-	-	-	0.000356	-	-	-	-	-	-	-
Lithium (Li)-Dissolved	mg/L	0.0002	0.0231	0.0077	-	-	-	-	0.0053	-	-	-	-	-	-	-
Magnesium (Mg)-Dissolved	mg/L	0.03	3.72 *	3.25 *	3.78	3.52 *	4.2	3.35	3.84 *	3.23	2.91	4	2.42	3.45	3.84	3.2
Manganese (Mn)-Dissolved	mg/L	0.00005	0.0565	0.0602	-	-	-	-	0.0953	-	-	-	-	-	-	-
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	-	-	-	-	<0.000050	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00376	0.00146	-	-	-	-	0.000185	-	-	-	-	-	-	-
Nickel	mg/L	0.00	0.010	0.015	-	-	-	-	0.010	-	-	-	-	-	-	-

(Ni)-Dissolved	L	005	4	3					5							
Phosphorus (P)-Dissolved	mg/L	0.05	3.88	5.58	-	-	-	-	11.3	-	-	-	-	-	-	-
Potassium (K)-Dissolved	mg/L	0.05	19.7 *	18.0 *	19.8	22.1 *	21.8	18.8	33.9 *	21.9	19.9	25.7	15.6	26.6	23.4	23
Rhenium (Re)-Dissolved	mg/L	0.00005	<0.000050	<0.000025 *	-	-	-	-	<0.000050	-	-	-	-	-	-	-
Rubidium (Rb)-Dissolved	mg/L	0.00005	0.0173	0.0176	-	-	-	-	0.0214	-	-	-	-	-	-	-
Selenium (Se)-Dissolved	mg/L	0.00004	0.000357	0.00048	-	-	-	-	0.000598	-	-	-	-	-	-	-
Silicon (Si)-Dissolved	mg/L	0.05	3.97	2.44	-	-	-	-	2.17	-	-	-	-	-	-	-
Silver (Ag)-Dissolved	mg/L	0.00005	<0.000050	<0.000025 *	-	-	-	-	<0.000050	-	-	-	-	-	-	-
Sodium (Na)-Dissolved	mg/L	0.2	60.8 *	51.7 *	73.1	57.2 *	63.3	67	78.2 *	68.8	68.8	84.3	70.4	101	89.2	101
Strontium (Sr)-Dissolved	mg/L	0.00001	0.0154	0.0165	-	-	-	-	0.0193	-	-	-	-	-	-	-
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000050 *	-	-	-	-	<0.000010	-	-	-	-	-	-	-
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000039	0.0000075	-	-	-	-	<0.0000010	-	-	-	-	-	-	-
Thorium (Th)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000025 *	-	-	-	-	<0.0000050	-	-	-	-	-	-	-
Tin (Sn)-Dissolved	mg/L	0.000001	0.00000371	0.00000652	-	-	-	-	0.00000124	-	-	-	-	-	-	-

Titanium (Ti)-Dissolved	mg/L	0.00005	0.000078	0.0006	-	-	-	-	0.00047	-	-	-	-	-	-	-
Tungsten (W)-Dissolved	mg/L	0.00001	0.000292	0.000229	-	-	-	-	0.000027	-	-	-	-	-	-	-
Uranium (U)-Dissolved	mg/L	0.00001	0.0000098	0.0000649	-	-	-	-	0.0000506	-	-	-	-	-	-	-
Vanadium (V)-Dissolved	mg/L	0.00001	0.000281	0.000581	-	-	-	-	0.000472	-	-	-	-	-	-	-
Yttrium (Y)-Dissolved	mg/L	0.00005	0.0000214	<0.000025 *	-	-	-	-	0.0000267	-	-	-	-	-	-	-
Zinc (Zn)-Dissolved	mg/L	0.0001	0.493	0.0209	-	-	-	-	0.13	-	-	-	-	-	-	-
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000071	0.00102	-	-	-	-	0.00039	-	-	-	-	-	-	-
Biochemical Oxygen Demand	mg/L	2	3.3	260	1850	315	<2.0	177	1030	486	243	594	159	279	138	369
Oil and Grease	mg/L	1	<1.0	38.1	37.8	33.1	<1.0 *	24.2	16.5	3.5	14.9	27.9	3.9	<1.0	1.3	21
* = Result Qualified																

SWQ-01 EFFLUENT (January-June)

ALS		Sample ID	WASTE WATER TREATMENT OUT	JER-SWQ-01	WWTP-JER-SWQ-01-EFFLUENT	WWTP EFFLUENT (SWQ-1)	WWTP EFFLUENT (TANK)	WWTP EFFLUENT (JER-SWQ-01)
3/23/2012		ALS ID	L995890-1	L1013378-1	L1016946-1	L1020331-1	L1020331-2	L1024047-2
Multiple Work Orders		Date Sampled	4/16/2011 7:30:00 AM	6/5/2011 4:00:00 PM	6/13/2011 8:30:00 AM	6/20/2011 8:00:00 AM	6/20/2011 8:00:00 AM	6/27/2011 8:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	-	49.3	-	-	-	-
pH	pH	0.1	7.75	-	-	-	-	-
Temperature	Degree C	1	-	25	25	25	25	25
Total Suspended Solids	mg/L	3	25	<3.0	<3.0	<3.0	5	<3.0
Total Dissolved Solids	mg/L	5	-	442	443	421	415	361
Turbidity	NTU	0.1	-	4.01	3.8	4	3.61	2.42
Acidity (as CaCO3)	mg/L	5	-	-	7.6	11.4	12.2	6.5
Alkalinity, Total (as CaCO3)	mg/L	5	-	15.1	11.3	15.5	12.2	40
Ammonia (as N)	mg/L	0.005	-	0.848	0.86	1.01	-	0.75
Bicarbonate (HCO3)	mg/L	5	-	18.4	13.8	18.9	14.9	48.7
Carbonate (CO3)	mg/L	5	-	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	-	54.7	61.0 *	57.4	57.7	51.9
Conductivity (EC)	uS/cm	0.2	-	617	633	618	621	514
Fluoride (F)	mg/L	0.05	-	<0.050	<0.050	<0.050	<0.050	<0.050
Hardness (as	mg/L	n/a	-	49.2	41.8	42.4	45.2	33

CaCO3)								
Hydroxide (OH)	mg/L	5	-	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	%	n/a	-	101	87.6 *	96.1	100	91.1
Nitrate and Nitrite (as N)	mg/L	0.006	-	30.3	31.6	30.2	30.7	19.9
Nitrate (as N)	mg/L	0.006	-	30.2 *	31.6 *	30.2 *	30.7 *	19.8 *
Nitrite (as N)	mg/L	0.002	-	0.07	<0.50 *	0.07	0.078	0.117 *
Total Kjeldahl Nitrogen	mg/L	0.2	12.8	-	4.16	5.43	4.19	4.51
pH	pH	0.1	-	6.78	6.8	6.93	6.81	7.41
Orthophosphate-Dissolved (as P)	mg/L	0.001	-	2.84	2.97	3.7	-	3.38
Phosphorus (P)-Total Dissolved	mg/L	0.001	-	3.73	3.57	3.54	-	3.85
Phosphorus (P)-Total	mg/L	0.001	5.1	4.14	3.63	3.94	-	4.29
TDS (Calculated)	mg/L	n/a	-	354	346	347	356	292
Sulfate (SO4)	mg/L	0.05	-	42.6	36.7 *	37	38.5	33.7
Fecal Coliforms	CFU/100mL	1	-	730	4000	11600 *	12800 *	200
Calcium (Ca)-Total	mg/L	0.05	-	12.4	-	-	-	-
Iron (Fe)-Total	mg/L	0.01	-	0.908	-	-	-	-
Magnesium (Mg)-Total	mg/L	0.05	-	4.94	-	-	-	-
Mercury (Hg)-Total	mg/L	0.00005	-	<0.000050	-	-	-	-
Phosphorus (P)-Total	mg/L	0.05	-	4.06	-	-	-	-
Potassium (K)-Total	mg/L	0.2	-	22.2	-	-	-	-
Silicon (Si)-Total	mg/L	0.05	-	6.65	-	-	-	-
Sodium (Na)-Total	mg/L	0.2	-	81.6	-	-	-	-
Aluminum (Al)-Total	mg/L	0.0002	-	0.28	-	-	-	-
Antimony (Sb)-	mg/L	0.00000	-	0.00244	-	-	-	-

Total		5						
Arsenic (As)-Total	mg/L	0.00002	-	0.000722	-	-	-	-
Barium (Ba)-Total	mg/L	0.00002	-	0.0104	-	-	-	-
Beryllium (Be)-Total	mg/L	0.000002	-	0.0000029	-	-	-	-
Bismuth (Bi)-Total	mg/L	0.000001	-	0.000242	-	-	-	-
Boron (B)-Total	mg/L	0.005	-	0.108	-	-	-	-
Cadmium (Cd)-Total	mg/L	0.000005	-	0.0000454	-	-	-	-
Cesium (Cs)-Total	mg/L	0.000005	-	0.0000461	-	-	-	-
Chromium (Cr)-Total	mg/L	0.00005	-	0.00126	-	-	-	-
Cobalt (Co)-Total	mg/L	0.000005	-	0.000768	-	-	-	-
Copper (Cu)-Total	mg/L	0.00005	-	0.102	-	-	-	-
Gallium (Ga)-Total	mg/L	0.00005	-	<0.000050	-	-	-	-
Lead (Pb)-Total	mg/L	0.000005	-	0.000852	-	-	-	-
Lithium (Li)-Total	mg/L	0.0002	-	0.00581	-	-	-	-
Manganese (Mn)-Total	mg/L	0.000005	-	0.101	-	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00001	-	0.000927	-	-	-	-
Nickel (Ni)-Total	mg/L	0.00005	-	0.0238	-	-	-	-
Rhenium (Re)-Total	mg/L	0.000005	-	<0.0000050	-	-	-	-
Rubidium (Rb)-Total	mg/L	0.000005	-	0.0201	-	-	-	-
Selenium (Se)-Total	mg/L	0.00004	-	0.000459	-	-	-	-
Silver (Ag)-Total	mg/L	0.000005	-	0.0000172	-	-	-	-
Strontium (Sr)-Total	mg/L	0.00001	-	0.0207	-	-	-	-
Tellurium (Te)-Total	mg/L	0.00001	-	<0.000010	-	-	-	-

Thallium (Tl)-Total	mg/L	0.000001	-	0.0000061	-	-	-	-
Thorium (Th)-Total	mg/L	0.000005	-	0.0000051	-	-	-	-
Tin (Sn)-Total	mg/L	0.00001	-	0.000501	-	-	-	-
Titanium (Ti)-Total	mg/L	0.00005	-	0.000413	-	-	-	-
Tungsten (W)-Total	mg/L	0.00001	-	0.000222	-	-	-	-
Uranium (U)-Total	mg/L	0.000001	-	0.0000358	-	-	-	-
Vanadium (V)-Total	mg/L	0.00001	-	0.000374	-	-	-	-
Yttrium (Y)-Total	mg/L	0.000005	-	0.0000685	-	-	-	-
Zinc (Zn)-Total	mg/L	0.0001	-	2.07	-	-	-	-
Zirconium (Zr)-Total	mg/L	0.00001	-	0.000665	-	-	-	-
Aluminum (Al)-Dissolved	mg/L	0.0002	-	0.287	-	-	-	-
Antimony (Sb)-Dissolved	mg/L	0.000005	-	0.0024	-	-	-	-
Arsenic (As)-Dissolved	mg/L	0.00002	-	0.000749	-	-	-	-
Barium (Ba)-Dissolved	mg/L	0.00002	-	0.0103	-	-	-	-
Beryllium (Be)-Dissolved	mg/L	0.000002	-	0.000003	-	-	-	-
Bismuth (Bi)-Dissolved	mg/L	0.000001	-	0.000245	-	-	-	-
Boron (B)-Dissolved	mg/L	0.005	-	0.106	-	-	-	-
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	0.0000493	-	-	-	-
Calcium (Ca)-Dissolved	mg/L	0.03	-	12.4 *	10.9 *	10.6	11.4	8.08

Cesium (Cs)-Dissolved	mg/L	0.000005	-	0.0000453	-	-	-	-
Chromium (Cr)-Dissolved	mg/L	0.00005	-	0.00125	-	-	-	-
Cobalt (Co)-Dissolved	mg/L	0.000005	-	0.000812	-	-	-	-
Copper (Cu)-Dissolved	mg/L	0.00005	-	0.106	-	-	-	-
Gallium (Ga)-Dissolved	mg/L	0.00005	-	<0.000050	-	-	-	-
Iron (Fe)-Dissolved	mg/L	0.01	-	0.916	-	-	-	-
Lead (Pb)-Dissolved	mg/L	0.000005	-	0.000871	-	-	-	-
Lithium (Li)-Dissolved	mg/L	0.0002	-	0.00574	-	-	-	-
Magnesium (Mg)-Dissolved	mg/L	0.03	-	4.89 *	3.54 *	3.88	4.07	3.12
Manganese (Mn)-Dissolved	mg/L	0.000005	-	0.105	-	-	-	-
Mercury (Hg)-Dissolved	mg/L	0.00005	-	<0.000050	-	-	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.00001	-	0.000919	-	-	-	-
Nickel (Ni)-Dissolved	mg/L	0.00005	-	0.0246	-	-	-	-
Phosphorus (P)-Dissolved	mg/L	0.05	-	4.07	-	-	-	-
Potassium (K)-Dissolved	mg/L	0.05	-	18.8 *	19.0 *	21.1	22.2	18.9
Rhenium (Re)-Dissolved	mg/L	0.000005	-	<0.0000050	-	-	-	-
Rubidium (Rb)-Dissolved	mg/L	0.000005	-	0.0196	-	-	-	-
Selenium (Se)-Dissolved	mg/L	0.00004	-	0.000417	-	-	-	-
Silicon (Si)-Dissolved	mg/L	0.05	-	6.65	-	-	-	-
Silver (Ag)-	mg/L	0.00000	-	0.0000182	-	-	-	-

Dissolved		5						
Sodium (Na)-Dissolved	mg/L	0.2	-	81.3 *	68.2 *	73.8	78.4	64.3
Strontium (Sr)-Dissolved	mg/L	0.00001	-	0.021	-	-	-	-
Tellurium (Te)-Dissolved	mg/L	0.00001	-	<0.000010	-	-	-	-
Thallium (Tl)-Dissolved	mg/L	0.000001	-	0.0000058	-	-	-	-
Thorium (Th)-Dissolved	mg/L	0.000005	-	<0.0000050	-	-	-	-
Tin (Sn)-Dissolved	mg/L	0.00001	-	0.000511	-	-	-	-
Titanium (Ti)-Dissolved	mg/L	0.00005	-	0.000377	-	-	-	-
Tungsten (W)-Dissolved	mg/L	0.00001	-	0.000234	-	-	-	-
Uranium (U)-Dissolved	mg/L	0.000001	-	0.0000379	-	-	-	-
Vanadium (V)-Dissolved	mg/L	0.00001	-	0.000381	-	-	-	-
Yttrium (Y)-Dissolved	mg/L	0.000005	-	0.0000689	-	-	-	-
Zinc (Zn)-Dissolved	mg/L	0.0001	-	2.07	-	-	-	-
Zirconium (Zr)-Dissolved	mg/L	0.00001	-	0.000669	-	-	-	-
Biochemical Oxygen Demand	mg/L	2	36	7.3	4.8	5.9	-	<2.0
Oil and Grease	mg/L	1	<1.0	<1.0	<1.0	<1.0	-	<1.0

* = Result Qualified

SWQ-01 EFFLUENT (July- Sept)

ALS		Sample ID	JER SWQ-01 OUT	JER-SWQ-01 (WTP EFFLUENT)	JER-SWQ-01 EFFLUENT	SWQ-1 (WWTP EFFLUENT)	SWQ-01	SWQ-1 (WWTP EFFLUENT)	SWQ-1 EFFLUENT	SWQ01-EFFLUENT	SWQ01-EFFLUENT
3/24/2012		ALS ID	L1030756-2	L1032733-1	L1035822-2	L1038778-1	L1046971-1	L1049554-1	L1052600-2	L1055190-2	L1058340-1
Multiple Work Orders		Date Sampled	7/11/2011 9:15:00 AM	7/18/2011 8:00:00 AM	7/25/2011 12:00:00 AM	8/1/2011 9:30:00 AM	8/17/2011 12:00:00 AM	8/24/2011 8:30:00 AM	8/31/2011 8:00:00 AM	9/7/2011 9:00:00 AM	9/14/2011 12:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	39.5	-	-	-	51.2	-	-	56.2	-
Temperature	Degree C	1	25	25	25	25	25	25	25	25	25
Total Suspended Solids	mg/L	3	6	6	21	13	-	<3.0	16	15	15
Total Dissolved Solids	mg/L	5	340	355	347	370	331	355	-	361	323
Turbidity	NTU	0.1	6.72	3.49	11.6	5.4	3.52	3.13	11.8	11.6	9.49
Acidity (as CaCO3)	mg/L	5	9.9	8.2	19.4	6.6	11.5	10.4	18.9	18.8	15
Alkalinity, Total (as CaCO3)	mg/L	5	21.8	23.9	85.5	37.7	14.2	13.8	6.4	8.3	12.8
Ammonia (as N)	mg/L	0.005	0.64	0.66	2.15	1.19	1.17	-	4.33	2.54	1.08
Bicarbonate (HCO3)	mg/L	5	26.6	29.2	104	45.9	17.3	16.8	7.8	10.1	15.6
Carbonate (CO3)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	43.9	68.8	91.4	98.4	67.9	83	72.9	77.6	80.3 *
Conductivity (EC)	uS/cm	0.2	469	519	575	591	501	585	572	590	570
Fluoride (F)	mg/L	0.05	<0.050	0.051	0.067	0.059	<0.050	<0.050	<0.050	0.062	0.101 *

Hardness (as CaCO ₃)	mg/L	n/a	40.7	43.3	34.2	35.7	49.1	49.8	52.1	49.9	45.9
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	%	n/a	102	96.9	91.4	91	99.8	92.6	101	105	107
Nitrate and Nitrite (as N)	mg/L	0.006	22.6	19.8	4.42	14.7	21.5	23.8	27	25	23.2
Nitrate (as N)	mg/L	0.006	22.5	19.5	1.68	14.4	21.2	23.7	26.8	24.9	23.1
Nitrite (as N)	mg/L	0.002	0.089	0.259	2.74	0.27	0.315	0.114	0.167	0.161	0.126
Total Kjeldahl Nitrogen	mg/L	0.05	3.66	4.53	-	3.85	3.68	4.23	-	<0.20 *	-
pH	pH	0.1	6.92	7.03	7.42	7.31	6.79	6.92	6.3	6.58	6.66
Orthophosphate-Dissolved (as P)	mg/L	0.001	4.78	4.69	7.13	4.85	6.37	6.82	7.66	8.06	8.31
Phosphorus (P)-Total Dissolved	mg/L	0.001	5	5.54	7.88 *	5.4	6.2	7.1	8.08	8.06	8.57
Phosphorus (P)-Total	mg/L	0.001	5.33	5.75	6.94 *	6.28	6.73	7.19	8.87	8.45	8.86
TDS (Calculated)	mg/L	n/a	286	299	283	317	283	316	316	328	331
Sulfate (SO ₄)	mg/L	0.05	33	27.5	16.3	23.3	16.2	16.9	18.5	22	21.6 *
Total Inorganic Carbon	mg/L	1	5.8	8.1	13	10.7	5.9	2.8	3	6.6	2.5
Total Organic Carbon	mg/L	1	20.3	20.6	24.6	20	16.9	21.8	16.1	19.8	14.5
Fecal Coliforms	CFU/100 mL	1	<1	66 *	3300 *	30 *	248 *	-	7	6 *	1500 *
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	-	-	-	<0.000050	-	-	<0.000050	-
Aluminum (Al)-Total	mg/L	0.0002	0.124	-	-	-	0.0289	-	-	0.0903	-
Antimony (Sb)-	mg/L	0.000	0.00131	-	-	-	0.00134	-	-	0.00122	-

Total		005									
Arsenic (As)-Total	mg/L	0.00002	0.000789	-	-	-	0.00066	-	-	0.000735	-
Barium (Ba)-Total	mg/L	0.00002	0.00385	-	-	-	0.00258	-	-	0.00535	-
Beryllium (Be)-Total	mg/L	0.000002	0.0000021	-	-	-	<0.000020 *	-	-	<0.0000040 *	-
Bismuth (Bi)-Total	mg/L	0.000001	0.00021	-	-	-	0.000084	-	-	0.000408	-
Boron (B)-Total	mg/L	0.005	0.0767	-	-	-	<0.050 *	-	-	0.045	-
Cadmium (Cd)-Total	mg/L	0.000005	0.0000352	-	-	-	<0.000050 *	-	-	0.000142	-
Calcium (Ca)-Total	mg/L	0.03	10.7	-	-	-	13.8	-	-	13.6	-
Cesium (Cs)-Total	mg/L	0.000005	0.0000556	-	-	-	0.000068	-	-	0.000073	-
Chromium (Cr)-Total	mg/L	0.00005	0.000736	-	-	-	<0.00050 *	-	-	0.00091	-
Cobalt (Co)-Total	mg/L	0.000005	0.000817	-	-	-	0.000695	-	-	0.000994	-
Copper (Cu)-Total	mg/L	0.00005	0.112	-	-	-	0.0376	-	-	0.235	-
Gallium (Ga)-Total	mg/L	0.00005	0.000058	-	-	-	<0.00050 *	-	-	<0.00010 *	-
Iron (Fe)-Total	mg/L	0.01	0.386	-	-	-	0.201	-	-	0.651	-
Lead (Pb)-Total	mg/L	0.000005	0.000766	-	-	-	0.000278	-	-	0.000697	-
Lithium (Li)-Total	mg/L	0.00002	0.0131	-	-	-	0.0074	-	-	0.0056	-
Magnesium (Mg)-Total	mg/L	0.03	3.51	-	-	-	4.09	-	-	4.55	-
Manganese (Mn)-Total	mg/L	0.000005	0.0708	-	-	-	0.103	-	-	0.147	-
Molybdenum (Mo)-Total	mg/L	0.00001	0.00369	-	-	-	0.00158	-	-	0.000921	-
Nickel (Ni)-Total	mg/L	0.00005	0.0136	-	-	-	0.015	-	-	0.0231	-
Phosphorus	mg/L	0.05	5.47	-	-	-	6.96	-	-	8.52	-

(P)-Total											
Potassium (K)-Total	mg/L	0.05	21.7	-	-	-	22	-	-	28.4	-
Rhenium (Re)-Total	mg/L	0.000005	<0.0000050	-	-	-	<0.0000050 *	-	-	<0.0000010 *	-
Rubidium (Rb)-Total	mg/L	0.000005	0.0201	-	-	-	0.0216	-	-	0.0222	-
Selenium (Se)-Total	mg/L	0.00004	0.00059	-	-	-	<0.000040 *	-	-	0.000344	-
Silicon (Si)-Total	mg/L	0.05	2.89	-	-	-	0.361	-	-	1.11	-
Silver (Ag)-Total	mg/L	0.000005	0.0000122	-	-	-	<0.0000050 *	-	-	<0.0000010 *	-
Sodium (Na)-Total	mg/L	0.2	61.6	-	-	-	60	-	-	67.1	-
Strontium (Sr)-Total	mg/L	0.00001	0.0145	-	-	-	0.0214	-	-	0.024	-
Tellurium (Te)-Total	mg/L	0.00001	<0.0000010	-	-	-	<0.000010 *	-	-	<0.0000020 *	-
Thallium (Tl)-Total	mg/L	0.000001	0.00000043	-	-	-	0.0000011	-	-	0.00000122	-
Thorium (Th)-Total	mg/L	0.000005	<0.0000050	-	-	-	<0.0000050 *	-	-	0.0000024	-
Tin (Sn)-Total	mg/L	0.00001	0.000963	-	-	-	<0.000010 *	-	-	0.0183	-
Titanium (Ti)-Total	mg/L	0.00005	0.000914	-	-	-	<0.000050 *	-	-	0.00097	-
Tungsten (W)-Total	mg/L	0.00001	0.000291	-	-	-	<0.000010 *	-	-	0.000057	-
Uranium (U)-Total	mg/L	0.000001	0.00000419	-	-	-	0.000002	-	-	0.00000512	-
Vanadium (V)-Total	mg/L	0.00001	0.00091	-	-	-	0.00053	-	-	0.000581	-
Yttrium (Y)-Total	mg/L	0.000005	0.00000393	-	-	-	<0.0000050 *	-	-	0.0000044	-

Zinc (Zn)-Total	mg/L	0.0001	0.861	-	-	-	1.69	-	-	4.91	-
Zirconium (Zr)-Total	mg/L	0.00001	0.000559	-	-	-	<0.00010*	-	-	0.000378	-
Aluminum (Al)-Dissolved	mg/L	0.0002	0.127	-	-	-	0.0285	-	-	0.0992	-
Antimony (Sb)-Dissolved	mg/L	0.000005	0.00132	-	-	-	0.0013	-	-	0.00122	-
Arsenic (As)-Dissolved	mg/L	0.00002	0.000931	-	-	-	0.00067	-	-	0.000561	-
Barium (Ba)-Dissolved	mg/L	0.00002	0.00388	-	-	-	0.00272	-	-	0.00708	-
Beryllium (Be)-Dissolved	mg/L	0.000002	<0.0000020	-	-	-	<0.000020*	-	-	0.0000045	-
Bismuth (Bi)-Dissolved	mg/L	0.000001	0.00021	-	-	-	0.000078	-	-	0.000275	-
Boron (B)-Dissolved	mg/L	0.005	0.0797	-	-	-	<0.050 *	-	-	0.045	-
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.0000293	-	-	-	<0.0000050*	-	-	0.000147	-
Calcium (Ca)-Dissolved	mg/L	0.03	10.6 *	11.1	8.67	8.99	13.8 *	13.3	13.9	13.2 *	11.8
Cesium (Cs)-Dissolved	mg/L	0.000005	0.0000549	-	-	-	0.000064	-	-	0.000071	-
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000722	-	-	-	<0.00050*	-	-	0.00046	-
Cobalt (Co)-Dissolved	mg/L	0.000005	0.000862	-	-	-	0.000755	-	-	0.000881	-
Copper (Cu)-Dissolved	mg/L	0.00005	0.112	-	-	-	0.0353	-	-	0.0587	-
Gallium (Ga)-Dissolved	mg/L	0.00005	0.000063	-	-	-	<0.00050*	-	-	<0.00010*	-
Iron (Fe)-Dissolved	mg/L	0.01	0.381	-	-	-	0.189	-	-	0.468	-
Lead (Pb)-Dissolved	mg/L	0.000005	0.000528	-	-	-	0.000152	-	-	0.000658	-
Lithium (Li)-Dissolved	mg/L	0.0002	0.0137	-	-	-	0.0074	-	-	0.00556	-
Magnesium	mg/L	0.03	3.46 *	3.78	3.05	3.23	4.09 *	4.03	4.23	4.12 *	3.99

(Mg)-Dissolved											
Manganese (Mn)-Dissolved	mg/L	0.000005	0.0739	-	-	-	0.108	-	-	0.131	-
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	-	-	-	<0.000050	-	-	<0.000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00387	-	-	-	0.00157	-	-	0.000794	-
Nickel (Ni)-Dissolved	mg/L	0.00005	0.014	-	-	-	0.0149	-	-	0.0194	-
Phosphorus (P)-Dissolved	mg/L	0.05	5.5	-	-	-	6.99	-	-	8.39	-
Potassium (K)-Dissolved	mg/L	0.05	21.5 *	20.3	20.6	19	22.1 *	20.4	23.4	27.1 *	28.5
Rhenium (Re)-Dissolved	mg/L	0.000005	<0.0000050	-	-	-	<0.0000050 *	-	-	<0.0000010 *	-
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.0203	-	-	-	0.0216	-	-	0.0227	-
Selenium (Se)-Dissolved	mg/L	0.00004	0.000613	-	-	-	<0.000040 *	-	-	0.00014	-
Silicon (Si)-Dissolved	mg/L	0.05	2.87	-	-	-	0.372	-	-	1.02	-
Silver (Ag)-Dissolved	mg/L	0.000005	0.0000114	-	-	-	<0.0000050 *	-	-	<0.0000010 *	-
Sodium (Na)-Dissolved	mg/L	0.2	60.4 *	65.2	72.5	76.4	59.1 *	64.5	60	67.8 *	74.6
Strontium (Sr)-Dissolved	mg/L	0.00001	0.015	-	-	-	0.0219	-	-	0.024	-
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	-	-	-	<0.000010 *	-	-	<0.0000020 *	-
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000043	-	-	-	0.0000013	-	-	0.00000119	-
Thorium (Th)-Dissolved	mg/L	0.000005	<0.0000050	-	-	-	<0.0000050 *	-	-	<0.0000010 *	-

Tin (Sn)-Dissolved	mg/L	0.00001	0.000487	-	-	-	0.0001	-	-	0.00692	-
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000811	-	-	-	<0.00050*	-	-	0.00011	-
Tungsten (W)-Dissolved	mg/L	0.00001	0.000292	-	-	-	<0.00010*	-	-	0.000046	-
Uranium (U)-Dissolved	mg/L	0.000001	0.0000405	-	-	-	0.000019	-	-	0.0000398	-
Vanadium (V)-Dissolved	mg/L	0.00001	0.000893	-	-	-	0.00068	-	-	0.000587	-
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000403	-	-	-	<0.000050*	-	-	0.000049	-
Zinc (Zn)-Dissolved	mg/L	0.0001	0.884	-	-	-	1.79	-	-	4.48	-
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000531	-	-	-	<0.00010*	-	-	0.000039	-
Biochemical Oxygen Demand	mg/L	2	3.8	2.4	11.1	2.9	4.2	2.6	4.7	3	2.7
Oil and Grease	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
* = Result Qualified											

SWQ-01 EFFLUENT (September – December)

ALS		Sample ID	SWQ1 - EFFLUENT	SWQ-1 EFFLUENT	SWQ-02 EFFLUENT	SWQ01-EFFLUENT	SWQ01 - EFFLUENT	SWQ01-EFFLUENT	SWQ1-EFFLUENT	JER-SWQ-01 EFFLUENT	SWQ-01 EFFLUENT	JER-SWQ-01 OUT
3/24/2012		ALS ID	L1061615-2	L1065311-1	L1068308-2	L1071730-1	L1074564-2	L1081311-7	L1083096-2	L1087991-3	L1094160-2	L1098177-2
Multiple Work Orders		Date Sampled	9/21/2011 12:00:00 AM	9/28/2011 12:00:00 AM	10/5/2011 9:00:00 AM	10/13/2011 12:00:00 AM	10/19/2011 9:00:00 AM	11/2/2011 10:00:00 AM	11/8/2011 7:30:00 PM	11/23/2011 7:20:00 AM	12/8/2011 9:00:00 AM	12/21/2011 7:30:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	-	-	-	48	-	56.3	-	-	52	-
Temperature	Degree C	1	25	25	25	25	-	25	25	25	25	25
Total Suspended Solids	mg/L	3	5	8	125	9	-	113	91	6	24	10
Total Dissolved Solids	mg/L	5	416	262	318	369	-	430	-	473	488	466
Turbidity	NTU	0.1	4.26	6.36	58.6	5.91	-	47.1	43.2	4.28	9.2	5.66
Acidity (as CaCO3)	mg/L	5	11.1	8.3	24.4	18.8	-	28.9	24	11.6	27.3	9.4
Alkalinity, Total (as CaCO3)	mg/L	5	16.5	15.3	7.7	<5.0	17.3	<5.0	<5.0 *	5.7	<5.0	<5.0
Ammonia (as N)	mg/L	0.005	1.1	1.57	0.871	2.09	3.66	1.28	1.91	1.03	0.592	0.674
Bicarbonate (HCO3)	mg/L	5	20.2	18.7	9.4	5.8	21.1	<5.0	<5.0 *	7	5.9	<5.0
Carbonate (CO3)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	84.6	44.2	47.9	52.1	76.3	85	70.4	87.6	98.3	103

Conductivity (EC)	uS/cm	0.2	631	408	461	558	637	706	675 *	725	749	728
Fluoride (F)	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Hardness (as CaCO ₃)	mg/L	n/a	-	36.9	43.4	51.8	50.5	56.2	45	42.2	53.9	50.7
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0	<5.0
Ion Balance	%	n/a	-	106	95.4	109	97.1	109	96.6	104	107	104
Nitrate and Nitrite (as N)	mg/L	0.006	22.6	17.8	23.6	29.4	26.8	33.0 *	33	29.5	31.4	29.2
Nitrate (as N)	mg/L	0.006	22.4	17.6	23.6	29.1	26.6	33	33	29.5 *	31.4 *	29.2
Nitrite (as N)	mg/L	0.002	0.197	0.177	0.0313	0.316	0.216	0.0124 *	0.041 *	<0.50 *	<0.050	0.0307
Total Kjeldahl Nitrogen	mg/L	0.05	4.74	-	-	-	5.73	-	-	-	-	-
pH	pH	0.1	6.91	7.08	6.47	6.27	6.81	5.82	6.05 *	6.25	6.07	6.04
Orthophosphate-Dissolved (as P)	mg/L	0.001	7.69	5.33	6.75	7.07	-	7.29 *	8.14	6.74 *	8.6	7.87
Phosphorus (P)-Total Dissolved	mg/L	0.001	8.48	5.45	7.47	7.17	-	8.36	9.21	8.19	7.18	7.58
Phosphorus (P)-Total	mg/L	0.001	8.63	5.57	8.05	7.22	7.09	11	10.5	7.38	7.29	7.74
TDS (Calculated)	mg/L	n/a	-	232	269	322	348	407	368	401	433	411
Sulfate (SO ₄)	mg/L	0.05	23.4	20.4	28.1	31.1	32	35.4	36.3	41.8	42.9	35.5
Total Inorganic Carbon	mg/L	1	3.4	4.9	<1.0	3.2	1.6	<1.0	<1.0	<1.0	<1.0	<1.0
Total Organic Carbon	mg/L	1	16.8	16.7	19.6	17.5	21.3	19.5	23.1	19.8	17.4	18.8
Fecal Coliforms	CFU/100 mL	1	1500 *	1470 *	10 *	<1 *	59	34 *	22	27	22	600000
Mercury (Hg)-Total	mg/L	0.00005	-	-	-	<0.000050	-	<0.000050	-	-	<0.000050	-
Aluminum (Al)-Total	mg/L	0.0002	-	-	-	0.0818	-	1.53	-	-	0.302	-
Antimony	mg/L	0.000	-	-	-	0.00253	-	0.00351	-	-	0.00255	-

(Sb)-Total		005										
Arsenic (As)-Total	mg/L	0.00002	-	-	-	0.000578	-	0.00073	-	-	0.00062	-
Barium (Ba)-Total	mg/L	0.00002	-	-	-	0.00398	-	0.0434	-	-	0.00727	-
Beryllium (Be)-Total	mg/L	0.00002	-	-	-	0.0000028	-	0.000036	-	-	<0.000010 *	-
Bismuth (Bi)-Total	mg/L	0.00001	-	-	-	0.000825	-	0.00411	-	-	0.00107	-
Boron (B)-Total	mg/L	0.005	-	-	-	0.0313	-	0.0325	-	-	0.05	-
Cadmium (Cd)-Total	mg/L	0.00005	-	-	-	0.000264	-	0.00122	-	-	0.000278	-
Calcium (Ca)-Total	mg/L	0.03	-	-	-	13.7	-	15.3	-	-	14.6	-
Cesium (Cs)-Total	mg/L	0.00005	-	-	-	0.0000684	-	0.0000816	-	-	0.000072	-
Chromium (Cr)-Total	mg/L	0.00005	-	-	-	0.00055	-	0.00516	-	-	0.00086	-
Cobalt (Co)-Total	mg/L	0.00005	-	-	-	0.000707	-	0.00103	-	-	0.000859	-
Copper (Cu)-Total	mg/L	0.00005	-	-	-	0.0889	-	0.717	-	-	0.22	-
Gallium (Ga)-Total	mg/L	0.00005	-	-	-	<0.000050	-	0.000276	-	-	<0.00025 *	-
Iron (Fe)-Total	mg/L	0.01	-	-	-	0.293	-	5.55	-	-	0.767	-
Lead (Pb)-Total	mg/L	0.00005	-	-	-	0.00237	-	0.00746	-	-	0.00138	-
Lithium (Li)-Total	mg/L	0.0002	-	-	-	0.0052	-	0.00449	-	-	0.0039	-
Magnesium (Mg)-Total	mg/L	0.03	-	-	-	4.33	-	4.97	-	-	4.9	-
Manganese (Mn)-Total	mg/L	0.00005	-	-	-	0.106	-	0.12	-	-	0.102	-
Molybdenum	mg/L	0.000	-	-	-	0.000548	-	0.00263	-	-	0.00178	-

(Mo)-Total		01										
Nickel (Ni)-Total	mg/L	0.00005	-	-	-	0.0199	-	0.0229	-	-	0.0185	-
Phosphorus (P)-Total	mg/L	0.05	-	-	-	7.88	-	12.2	-	-	9.43	-
Potassium (K)-Total	mg/L	0.05	-	-	-	23.3	-	26.4	-	-	31.8	-
Rhenium (Re)-Total	mg/L	0.000005	-	-	-	<0.0000050	-	<0.0000050	-	-	<0.0000025 *	-
Rubidium (Rb)-Total	mg/L	0.000005	-	-	-	0.0209	-	0.0218	-	-	0.0267	-
Selenium (Se)-Total	mg/L	0.00004	-	-	-	0.000362	-	0.0012	-	-	0.00044	-
Silicon (Si)-Total	mg/L	0.05	-	-	-	4.25	-	4.85	-	-	6.09	-
Silver (Ag)-Total	mg/L	0.000005	-	-	-	<0.0000050	-	0.000183	-	-	<0.0000025 *	-
Sodium (Na)-Total	mg/L	0.2	-	-	-	68.2	-	86.5	-	-	108	-
Strontium (Sr)-Total	mg/L	0.00001	-	-	-	0.0215	-	0.0314	-	-	0.022	-
Tellurium (Te)-Total	mg/L	0.00001	-	-	-	<0.000010	-	<0.000010	-	-	<0.0000050 *	-
Thallium (Tl)-Total	mg/L	0.000001	-	-	-	0.0000112	-	0.0000362	-	-	0.0000221	-
Thorium (Th)-Total	mg/L	0.000005	-	-	-	<0.0000050	-	0.0000188	-	-	<0.0000025 *	-
Tin (Sn)-Total	mg/L	0.00001	-	-	-	0.000131	-	0.00219	-	-	0.00101	-
Titanium (Ti)-Total	mg/L	0.00005	-	-	-	0.00108	-	0.00728	-	-	0.00112	-
Tungsten (W)-Total	mg/L	0.00001	-	-	-	0.000033	-	0.000422	-	-	0.000098	-
Uranium (U)-Total	mg/L	0.000001	-	-	-	0.0000274	-	0.000601	-	-	0.000109	-
Vanadium (V)-Total	mg/L	0.00001	-	-	-	0.000499	-	0.00122	-	-	0.000802	-
Yttrium (Y)-Total	mg/L	0.000005	-	-	-	0.0000339	-	0.000548	-	-	0.000093	-

Zinc (Zn)-Total	mg/L	0.0001	-	-	-	3.46	-	5.08	-	-	2.68	-
Zirconium (Zr)-Total	mg/L	0.00001	-	-	-	0.000092	-	0.000383	-	-	0.000173	-
Aluminum (Al)-Dissolved	mg/L	0.0002	-	-	-	0.0213	-	0.0186	-	-	0.0177	-
Antimony (Sb)-Dissolved	mg/L	0.000005	-	-	-	0.0027	-	0.00234	-	-	0.00257	-
Arsenic (As)-Dissolved	mg/L	0.00002	-	-	-	0.000504	-	0.000576	-	-	0.00046	-
Barium (Ba)-Dissolved	mg/L	0.00002	-	-	-	0.00323	-	0.00333	-	-	0.00211	-
Beryllium (Be)-Dissolved	mg/L	0.000002	-	-	-	<0.0000020	-	0.0000098	-	-	<0.000010 *	-
Bismuth (Bi)-Dissolved	mg/L	0.000001	-	-	-	0.000367	-	0.000865	-	-	0.000593	-
Boron (B)-Dissolved	mg/L	0.005	-	-	-	0.0303	-	0.0375	-	-	0.047	-
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	-	-	0.000252	-	0.000648	-	-	0.000391	-
Calcium (Ca)-Dissolved	mg/L	0.03	11.1	9.23	11.5	13.7 *	13.2	14.5 *	11.7	10.9	14.0 *	13.1
Cesium (Cs)-Dissolved	mg/L	0.000005	-	-	-	0.0000619	-	0.0000672	-	-	0.000068	-
Chromium (Cr)-Dissolved	mg/L	0.00005	-	-	-	0.000375	-	0.000763	-	-	0.00043	-
Cobalt (Co)-Dissolved	mg/L	0.000005	-	-	-	0.00068	-	0.000787	-	-	0.000744	-
Copper (Cu)-Dissolved	mg/L	0.00005	-	-	-	0.0857	-	0.127	-	-	0.179	-
Gallium (Ga)-Dissolved	mg/L	0.00005	-	-	-	<0.000050	-	<0.000050	-	-	<0.00025 *	-
Iron (Fe)-	mg/L	0.01	-	-	-	0.097	-	0.063	-	-	0.077	-

Dissolved												
Lead (Pb)-Dissolved	mg/L	0.000005	-	-	-	0.000345	-	0.00021	-	-	0.000279	-
Lithium (Li)-Dissolved	mg/L	0.0002	-	-	-	0.0046	-	0.00402	-	-	0.0036	-
Magnesium (Mg)-Dissolved	mg/L	0.03	3.91	3.36	3.56	4.28 *	4.27	4.39 *	3.83	3.64	4.61 *	4.36
Manganese (Mn)-Dissolved	mg/L	0.000005	-	-	-	0.115	-	0.124	-	-	0.0937	-
Mercury (Hg)-Dissolved	mg/L	0.00005	-	-	-	<0.000050	-	<0.000050	-	-	<0.000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.00001	-	-	-	0.000729	-	0.00071	-	-	0.00191	-
Nickel (Ni)-Dissolved	mg/L	0.00005	-	-	-	0.0201	-	0.0218	-	-	0.0181	-
Phosphorus (P)-Dissolved	mg/L	0.05	-	-	-	7.69	-	8.25	-	-	8.53	-
Potassium (K)-Dissolved	mg/L	0.05	28.4	17.8	17.5	23.2 *	23.4	27.1 *	24.1	27.9	30.5 *	30.8
Rhenium (Re)-Dissolved	mg/L	0.000005	-	-	-	<0.0000050	-	0.0000063	-	-	<0.000025 *	-
Rubidium (Rb)-Dissolved	mg/L	0.000005	-	-	-	0.0191	-	0.0222	-	-	0.0249	-
Selenium (Se)-Dissolved	mg/L	0.00004	-	-	-	0.000281	-	0.000292	-	-	<0.00020 *	-
Silicon (Si)-Dissolved	mg/L	0.05	-	-	-	4.15	-	3.92	-	-	5.84	-
Silver (Ag)-Dissolved	mg/L	0.000005	-	-	-	<0.0000050	-	0.0000052	-	-	<0.000025 *	-
Sodium (Na)-Dissolved	mg/L	0.2	75.9	49.4	51.1	67.5 *	70.3	89.3 *	75.2	95.3	104 *	94.8
Strontium (Sr)-Dissolved	mg/L	0.00001	-	-	-	0.023	-	0.0259	-	-	0.0198	-

Tellurium (Te)-Dissolved	mg/L	0.00001	-	-	-	<0.000010	-	0.000023	-	-	<0.000050 *	-
Thallium (Tl)-Dissolved	mg/L	0.000001	-	-	-	0.0000104	-	0.0000636	-	-	0.0000254	-
Thorium (Th)-Dissolved	mg/L	0.000005	-	-	-	<0.0000050	-	0.000111	-	-	<0.000025 *	-
Tin (Sn)-Dissolved	mg/L	0.00001	-	-	-	0.000069	-	0.00051	-	-	0.000193	-
Titanium (Ti)-Dissolved	mg/L	0.00005	-	-	-	0.000057	-	0.000106	-	-	<0.000025 *	-
Tungsten (W)-Dissolved	mg/L	0.00001	-	-	-	0.000041	-	0.000058	-	-	0.00009	-
Uranium (U)-Dissolved	mg/L	0.000001	-	-	-	0.0000095	-	0.000006	-	-	0.0000115	-
Vanadium (V)-Dissolved	mg/L	0.00001	-	-	-	0.000523	-	0.000403	-	-	0.000624	-
Yttrium (Y)-Dissolved	mg/L	0.000005	-	-	-	0.0000087	-	0.0000139	-	-	<0.000025 *	-
Zinc (Zn)-Dissolved	mg/L	0.0001	-	-	-	4.21	-	4.94	-	-	2.47	-
Zirconium (Zr)-Dissolved	mg/L	0.00001	-	-	-	0.00005	-	0.000107	-	-	<0.000050 *	-
Biochemical Oxygen Demand	mg/L	2	3.5	7.1	5.8	5.9	8	-	15.7	2.6	4.1	3
Oil and Grease	mg/L	1	5.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	46.2	<1.0	<1.0
* = Result Qualified												

SWQ-04 (January – June)

ALS		Sample ID	JER-SWQ-04	JER-SWQ-04 (BEFORE DISCHARGE)
3/23/2012		ALS ID	L1010621-9	L1024033-1
Multiple Work Orders		Date Sampled	5/30/2011 12:00:00 AM	6/27/2011 9:00:00 AM
Analyte	Units	LOR	Water	Water
Hardness (as CaCO ₃)	mg/L	0.5	12.8	49.3
Temperature	Degree C	1	25	25
Total Suspended Solids	mg/L	3	<3.0	-
Total Dissolved Solids	mg/L	5	24	-
Turbidity	NTU	0.1	2.53	-
Acidity (as CaCO ₃)	mg/L	5	<5.0	<5.0
Alkalinity, Total (as CaCO ₃)	mg/L	5	9.9	49.9
Ammonia (as N)	mg/L	0.005	0.0293	<0.0050
Bicarbonate (HCO ₃)	mg/L	5	12.1	60.9
Carbonate (CO ₃)	mg/L	5	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	1.22	5.33
Conductivity (EC)	uS/cm	0.2	35.1	163
Fluoride (F)	mg/L	0.05	<0.050	0.073
Hardness (as CaCO ₃)	mg/L	n/a	12.2	57.8
Hydroxide (OH)	mg/L	5	<5.0	<5.0
Ion Balance	%	n/a	Low EC	101
Nitrate and Nitrite (as N)	mg/L	0.006	0.305	1.09
Nitrate (as N)	mg/L	0.006	0.302	1.09
Nitrite (as N)	mg/L	0.002	0.0025	0.0027
pH	pH	0.1	7.26	8.08
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.0031	0.0038

Phosphorus (P)-Total	mg/L	0.001	0.0194	0.0086
TDS (Calculated)	mg/L	n/a	18.3	87.2
Sulfate (SO4)	mg/L	0.05	2.93	16.5
Total Inorganic Carbon	mg/L	1	-	11.6
Total Organic Carbon	mg/L	1	-	3.7
Fecal Coliforms	CFU/100mL	1	<1	-
Calcium (Ca)-Total	mg/L	0.05	2.69	-
Iron (Fe)-Total	mg/L	0.01	0.098	-
Magnesium (Mg)-Total	mg/L	0.05	1.51	-
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050
Phosphorus (P)-Total	mg/L	0.05	<0.050	-
Potassium (K)-Total	mg/L	0.2	1.27	-
Silicon (Si)-Total	mg/L	0.05	0.532	-
Sodium (Na)-Total	mg/L	0.2	1.4	-
Aluminum (Al)-Total	mg/L	0.0002	0.128	0.0194
Antimony (Sb)-Total	mg/L	0.000005	0.0000282	0.000114
Arsenic (As)-Total	mg/L	0.00002	0.000219	0.000344
Barium (Ba)-Total	mg/L	0.00002	0.00697	0.0273
Beryllium (Be)-Total	mg/L	0.000002	0.0000086	0.0000022
Bismuth (Bi)-Total	mg/L	0.000001	0.0000014	<0.0000010
Boron (B)-Total	mg/L	0.005	<0.0050	0.0203
Cadmium (Cd)-Total	mg/L	0.000005	0.0000057	<0.0000050
Calcium (Ca)-Total	mg/L	0.03	-	11.5
Cesium (Cs)-Total	mg/L	0.000005	0.0000144	0.0000307
Chromium (Cr)-Total	mg/L	0.00005	0.000196	0.000103
Cobalt (Co)-Total	mg/L	0.000005	0.000139	0.0000804
Copper (Cu)-Total	mg/L	0.00005	0.0014	0.00204
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050
Iron (Fe)-Total	mg/L	0.01	-	0.04
Lead (Pb)-Total	mg/L	0.000005	0.000168	0.0000275
Lithium (Li)-Total	mg/L	0.0002	0.00037	0.00075
Magnesium (Mg)-Total	mg/L	0.03	-	7.31

Manganese (Mn)-Total	mg/L	0.000005	0.0187	0.0227
Molybdenum (Mo)-Total	mg/L	0.00001	0.000494	0.00245
Nickel (Ni)-Total	mg/L	0.00005	0.00111	0.00176
Phosphorus (P)-Total	mg/L	0.05	-	<0.050
Potassium (K)-Total	mg/L	0.05	-	5.28
Rhenium (Re)-Total	mg/L	0.000005	<0.0000050	0.0000109
Rubidium (Rb)-Total	mg/L	0.000005	0.00261	0.0104
Selenium (Se)-Total	mg/L	0.00004	<0.000040	0.00008
Silicon (Si)-Total	mg/L	0.05	-	0.525
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050
Sodium (Na)-Total	mg/L	0.2	-	6.99
Strontium (Sr)-Total	mg/L	0.00001	0.0404	0.197
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.0000031	0.0000047
Thorium (Th)-Total	mg/L	0.000005	0.000043	0.0000069
Tin (Sn)-Total	mg/L	0.00001	0.000039	<0.000010
Titanium (Ti)-Total	mg/L	0.00005	0.00283	0.000444
Tungsten (W)-Total	mg/L	0.00001	0.000021	0.000104
Uranium (U)-Total	mg/L	0.000001	0.000964	0.00292
Vanadium (V)-Total	mg/L	0.00001	0.000209	0.000125
Yttrium (Y)-Total	mg/L	0.000005	0.000167	0.0000492
Zinc (Zn)-Total	mg/L	0.0001	0.00173	0.00059
Zirconium (Zr)-Total	mg/L	0.00001	0.0002	0.000037
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0632	0.00878
Antimony (Sb)-Dissolved	mg/L	0.000005	0.0000285	0.000113
Arsenic (As)-Dissolved	mg/L	0.00002	0.000175	0.000269
Barium (Ba)-Dissolved	mg/L	0.00002	0.0065	0.0262
Beryllium (Be)-Dissolved	mg/L	0.000002	0.0000045	<0.0000020
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010	0.000001
Boron (B)-Dissolved	mg/L	0.005	<0.0050	0.0218
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.0000058	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	2.69 *	11.3 *
Cesium (Cs)-Dissolved	mg/L	0.000005	0.0000082	0.0000288
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000142	0.000087
Cobalt (Co)-Dissolved	mg/L	0.000005	0.000108	0.0000626

Copper (Cu)-Dissolved	mg/L	0.00005	0.00115	0.00177
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	0.033	0.021
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000671	0.0000097
Lithium (Li)-Dissolved	mg/L	0.0002	0.00031	0.00069
Magnesium (Mg)-Dissolved	mg/L	0.03	1.49 *	7.18 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.0168	0.0184
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.0005	0.00262
Nickel (Ni)-Dissolved	mg/L	0.00005	0.000919	0.00164
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	1.23 *	5.18 *
Rhenium (Re)-Dissolved	mg/L	0.000005	<0.0000050	0.0000106
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.00254	0.01
Selenium (Se)-Dissolved	mg/L	0.00004	<0.000040	0.000071
Silicon (Si)-Dissolved	mg/L	0.05	0.3	0.446
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	1.41 *	6.84 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.0417	0.194
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.000003	0.0000057
Thorium (Th)-Dissolved	mg/L	0.000005	0.0000313	0.0000052
Tin (Sn)-Dissolved	mg/L	0.00001	0.000016	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000629	0.000102
Tungsten (W)-Dissolved	mg/L	0.00001	0.00002	0.000116
Uranium (U)-Dissolved	mg/L	0.000001	0.000942	0.00291
Vanadium (V)-Dissolved	mg/L	0.00001	0.000128	0.000093
Yttrium (Y)-Dissolved	mg/L	0.000005	0.000118	0.0000352
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00478	0.00237
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000057	0.000025
Biochemical Oxygen Demand	mg/L	2	<2.0	-
Oil and Grease	mg/L	1	1.4	-

* = Result Qualified				

SWQ-04 (July – December)

ALS		Sample ID	SWQ-04	JER SWQ-04	JER-SWQ-04	JER-SWQ-04	SWQ-4	SWQ-4	SWQ-04
3/24/2012		ALS ID	L1026383-2	L1030756-3	L1032734-2	L1035822-4	L1038778-2	L1043009-1	L1046971-2
Multiple Work Orders		Date Sampled	7/4/2011 1:00:00 PM	7/11/2011 10:00:00 AM	7/18/2011 10:00:00 AM	7/25/2011 12:00:00 AM	8/1/2011 9:30:00 AM	8/10/2011 9:30:00 AM	8/17/2011 12:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO ₃)	mg/L	0.5	45	60.4	58	53.5	56.2	63.6	67
Temperature	Degree C	1	25	25	25	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	<3.0	4	-	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L	5	93	91	98	-	100	101	122
Turbidity	NTU	0.1	0.93	0.68	1.3	0.5	0.48	0.66	0.7
Acidity (as CaCO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO ₃)	mg/L	5	43.6	48.4	49.2	51.6	50.4	49.8	49.6
Ammonia (as N)	mg/L	0.005	0.0132	0.0145	0.0203	0.0131	0.0179	0.0168	0.0112
Bicarbonate (HCO ₃)	mg/L	5	53.1	59	60.1	63	61.5	60.8	60.5
Carbonate (CO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	4.21	5.14	5.1	5.18	5.16	5.87	6.82
Conductivity (EC)	uS/cm	0.2	141	159	159	163	164	181	191
Fluoride (F)	mg/L	0.05	0.068	0.085	0.074	0.079	0.082	<0.050	0.104
Hardness (as CaCO ₃)	mg/L	n/a	48.5	54.2	55.1	57.6	58.5	63.5	64.3
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Ion Balance	%	n/a	98.4	97.9	99.5	99	102	103	97.3
Nitrate and Nitrite (as N)	mg/L	0.006	0.828	0.948	0.924	0.951	0.973	2.65	3.56
Nitrate (as N)	mg/L	0.006	0.825	0.943	0.919	0.946	0.968	2.64	3.56
Nitrite (as N)	mg/L	0.002	0.0036	0.0044	0.0051	0.0049	0.0053	0.015	<0.050
Total Kjeldahl Nitrogen	mg/L	0.05	-	0.26	-	-	-	-	-
pH	pH	0.1	7.89	7.98	8.03	8.18	8.13	7.99	8
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.0026	0.0016	0.0012	0.0027	0.0013	0.002	0.0016
Phosphorus (P)-Total	mg/L	0.001	0.0085	0.0062	0.0157 *	0.0073	0.0074	0.007	0.0068
TDS (Calculated)	mg/L	n/a	73.6	83.9	84.4	87.2	87.7	97.7	103
Sulfate (SO4)	mg/L	0.05	14.1	16.6	16.1	16.4	17	16.7	17.3
Total Inorganic Carbon	mg/L	1	9.3	11.7	14	14.2	13	11.5	13.3
Total Organic Carbon	mg/L	1	5	4	4.6	4.3	5	4.1	4.5
Fecal Coliforms	CFU/100mL	1	<1	<1	<1	<1	<1	<1	<1
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Aluminum (Al)-Total	mg/L	0.0002	0.0435	0.0189	0.06	0.0203	0.0188	0.018	0.0239
Antimony (Sb)-Total	mg/L	0.000005	0.000116	0.000117	0.000109	0.000126	0.000127	0.000156	0.000165
Arsenic (As)-Total	mg/L	0.00002	0.000466	0.000389	0.000568	0.000481	0.0005	0.000485	0.000478
Barium (Ba)-Total	mg/L	0.00002	0.0246	0.0245	0.0242	0.025	0.0247	0.0274	0.0286
Beryllium (Be)-Total	mg/L	0.000002	0.0000046	<0.0000020	0.0000038	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Bismuth (Bi)-Total	mg/L	0.000001	<0.0000010	0.0000025	0.0000026	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Total	mg/L	0.005	0.0229	0.0212	0.021	0.0214	0.0211	0.025	0.0297
Cadmium (Cd)-Total	mg/L	0.00000	<0.0000050	0.0000223	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050

		5							
Calcium (Ca)-Total	mg/L	0.03	10.1	10.8	11	11.3	11.4	13	13.4
Cesium (Cs)-Total	mg/L	0.000005	0.0000298	0.0000329	0.0000392	0.0000377	0.0000398	0.0000473	0.0000504
Chromium (Cr)-Total	mg/L	0.00005	0.000172	0.000122	0.000209	0.000131	0.000104	0.000083	0.000105
Cobalt (Co)-Total	mg/L	0.000005	0.000117	0.000128	0.000233	0.000135	0.000122	0.000124	0.00012
Copper (Cu)-Total	mg/L	0.00005	0.0025	0.00204	0.00211	0.00203	0.00205	0.00187	0.00185
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Total	mg/L	0.01	0.023	0.056	0.134	0.082	0.095	0.096	0.089
Lead (Pb)-Total	mg/L	0.000005	0.000045	0.0000404	0.0000893	0.0000241	0.0000315	0.0000259	0.0000335
Lithium (Li)-Total	mg/L	0.0002	0.001	0.00073	0.00079	0.00088	0.00088	0.00112	0.00134
Magnesium (Mg)-Total	mg/L	0.03	6.17	6.78	6.91	7.24	7.22	7.65	7.76
Manganese (Mn)-Total	mg/L	0.000005	0.024	0.0277	0.0457	0.0414	0.0248	0.025	0.0203
Molybdenum (Mo)-Total	mg/L	0.00001	0.00205	0.0028	0.00276	0.00319	0.00329	0.00427	0.00474
Nickel (Ni)-Total	mg/L	0.00005	0.00194	0.00172	0.00187	0.00159	0.00159	0.00173	0.0017
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.05	4.38	4.91	5.11	5.28	5.32	5.42	5.39
Rhenium (Re)-Total	mg/L	0.000005	0.0000095	0.0000097	0.0000104	0.0000113	0.0000111	0.0000121	0.0000126
Rubidium (Rb)-Total	mg/L	0.000005	0.0103	0.00987	0.00979	0.0106	0.0107	0.0118	0.0123
Selenium (Se)-Total	mg/L	0.00004	0.000096	0.000072	0.000062	0.000078	0.000073	0.00011	0.000144
Silicon (Si)-Total	mg/L	0.05	0.661	0.321	0.347	0.263	0.271	0.418	0.525
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Total	mg/L	0.2	5.94	6.73	6.83	6.79	6.86	7.71	7.99
Strontium (Sr)-Total	mg/L	0.00001	0.181	0.186	0.184	0.195	0.195	0.232	0.244
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.0000043	0.0000047	0.0000057	0.0000051	0.0000051	0.0000057	0.0000073
Thorium (Th)-Total	mg/L	0.000005	0.000021	0.0000082	0.000021	0.000009	0.0000078	0.0000061	0.0000075

Tin (Sn)-Total	mg/L	0.00001	<0.000010	0.000013	<0.000010	<0.000020	<0.000020	0.000013	<0.000010
Titanium (Ti)-Total	mg/L	0.00005	0.000502	0.000311	0.00234	0.000306	0.000316	0.000286	0.000789
Tungsten (W)-Total	mg/L	0.00001	0.000074	0.000139	0.000099	0.000144	0.000136	0.000154	0.000157
Uranium (U)-Total	mg/L	0.00000 1	0.0021	0.00299	0.00281	0.00361	0.00426	0.0104	0.0126
Vanadium (V)-Total	mg/L	0.00001	0.000165	0.000135	0.000274	0.000173	0.000196	0.000213	0.000212
Yttrium (Y)-Total	mg/L	0.00000 5	0.000139	0.0000447	0.0000921	0.0000447	0.0000448	0.0000452	0.0000596
Zinc (Zn)-Total	mg/L	0.0001	0.00169	0.00143	0.00105	0.00141	0.00309	0.00033	0.0008
Zirconium (Zr)-Total	mg/L	0.00001	0.000138	0.000071	0.000073	0.000032	0.000025	0.000025	0.000029
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0277	0.0151	0.0116	0.0148	0.0135	0.012	0.0107
Antimony (Sb)-Dissolved	mg/L	0.00000 5	0.0000973	0.000112	0.000112	0.000121	0.000124	0.000148	0.000164
Arsenic (As)-Dissolved	mg/L	0.00002	0.000382	0.000356	0.000422	0.000459	0.000412	0.000425	0.000422
Barium (Ba)-Dissolved	mg/L	0.00002	0.0216	0.0242	0.0235	0.0243	0.0241	0.0272	0.0285
Beryllium (Be)-Dissolved	mg/L	0.00000 2	0.0000039	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Bismuth (Bi)-Dissolved	mg/L	0.00000 1	<0.0000010	0.0000013	0.0000023	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	0.0197	0.0225	0.025	0.0217	0.0233	0.0259	0.0305
Cadmium (Cd)-Dissolved	mg/L	0.00000 5	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	9.62 *	10.7 *	10.8 *	11.3 *	11.5 *	12.9 *	13.7 *
Cesium (Cs)-Dissolved	mg/L	0.00000 5	0.0000249	0.0000322	0.0000328	0.0000371	0.0000387	0.0000457	0.0000486
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000128	0.000101	0.000096	0.000111	0.000085	0.000067	0.000067
Cobalt (Co)-Dissolved	mg/L	0.00000 5	0.0000948	0.000122	0.000107	0.000116	0.000101	0.000097	0.0000688
Copper (Cu)-Dissolved	mg/L	0.00005	0.00202	0.00177	0.00152	0.00176	0.00176	0.00163	0.00157

Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	0.035	0.036	0.056	0.058	0.063	0.037	0.023
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000249	0.0000178	0.0000156	0.0000163	0.0000164	0.0000098	0.0000075
Lithium (Li)-Dissolved	mg/L	0.0002	0.00075	0.00073	0.00073	0.00085	0.00084	0.00109	0.00133
Magnesium (Mg)-Dissolved	mg/L	0.03	5.95 *	6.67 *	6.82 *	7.14 *	7.24 *	7.61 *	7.97 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.0209	0.0278	0.0202	0.0305	0.0211	0.015	0.0071
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00222	0.00281	0.00292	0.00324	0.00337	0.00424	0.00477
Nickel (Ni)-Dissolved	mg/L	0.00005	0.00153	0.0016	0.00134	0.00141	0.00137	0.0016	0.0016
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	4.13 *	4.83 *	5.07 *	5.21 *	5.32 *	5.38 *	5.48 *
Rhenium (Re)-Dissolved	mg/L	0.000005	0.0000091	0.0000102	0.0000098	0.0000112	0.0000112	0.0000116	0.0000118
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.00904	0.0102	0.00984	0.0105	0.0107	0.0115	0.0127
Selenium (Se)-Dissolved	mg/L	0.00004	0.000082	0.000075	0.000078	0.000047	0.000076	0.000133	0.000132
Silicon (Si)-Dissolved	mg/L	0.05	0.638	0.306	0.225	0.247	0.252	0.398	0.481
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	5.68 *	6.66 *	6.79 *	6.69 *	6.86 *	7.66 *	8.14 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.159	0.207	0.184	0.189	0.195	0.232	0.249
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000051	0.000005	0.0000054	0.0000048	0.000005	0.0000057	0.0000061

Thorium (Th)-Dissolved	mg/L	0.000005	0.0000239	<0.0000050	0.0000066	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Tin (Sn)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000020	<0.000020	0.000013	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000252	0.000233	0.000138	0.000141	0.000111	0.000067	<0.000050
Tungsten (W)-Dissolved	mg/L	0.00001	0.000083	0.000111	0.000104	0.000134	0.000135	0.000155	0.000153
Uranium (U)-Dissolved	mg/L	0.000001	0.0022	0.00305	0.00256	0.00358	0.00419	0.0108	0.0124
Vanadium (V)-Dissolved	mg/L	0.00001	0.000113	0.000114	0.000126	0.000147	0.000149	0.000138	0.000125
Yttrium (Y)-Dissolved	mg/L	0.000005	0.000115	0.0000438	0.0000343	0.0000336	0.0000304	0.0000209	0.0000191
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00109	0.00055	0.00028	0.00202	0.00395 *	0.00085	0.00075
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000114	0.000024	0.000028	0.000041	0.00002	0.000015	0.000018
Biochemical Oxygen Demand	mg/L	2	<2.0	<2.0	<2.0	88.8 *	<2.0	<2.0	<2.0
Oil and Grease	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 *	<1.0
* = Result Qualified									

SWQ-07 (January - December)

		Sample ID	EAST SUMP (JER-SWQ-07)	JER-SWQ-07	SWQ-07	SWQ7	SWQ07
3/23/2012		ALS ID	L1020328-1	L1032734-1	L1046971-3	L1052600-3	L1058340-2
Multiple Work Orders		Date Sampled	6/20/2011 11:00:00 AM	7/18/2011 9:30:00 AM	8/17/2011 12:00:00 AM	8/31/2011 8:00:00 AM	9/14/2011 12:00:00 AM

Analyte	Units	LOR	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	53.8	82.3	88.1	-	88.6
Temperature	Degree C	1	25	25	25	-	25
Total Suspended Solids	mg/L	3	<3.0	5	<3.0	-	<3.0
Total Dissolved Solids	mg/L	5	123	177	193	-	-
Turbidity	NTU	0.1	1.88	1.16	1.74	-	1.4
Acidity (as CaCO3)	mg/L	5	<5.0	<5.0	<5.0	-	<5.0
Alkalinity, Total (as CaCO3)	mg/L	5	44.9	68.7	69.8	-	66.1
Ammonia (as N)	mg/L	0.005	0.075	0.0343	0.0336	-	0.113
Bicarbonate (HCO3)	mg/L	5	54.7	83.9	85.2	-	80.7
Carbonate (CO3)	mg/L	5	<5.0	<5.0	<5.0	-	<5.0
Chloride (Cl)	mg/L	0.5	11.1	15.1	15.8	-	14.2 *
Conductivity (EC)	uS/cm	0.2	223	291	314	-	322
Fluoride (F)	mg/L	0.05	0.088	0.111	0.166	-	0.149 *
Hardness (as CaCO3)	mg/L	n/a	62.1	84.4	85.6	-	88.8
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	-	<5.0
Ion Balance	%	n/a	98.9	99.9	98.2	-	97.1
Nitrate and Nitrite (as N)	mg/L	0.006	3.69	3.08	3.18	-	4.58
Nitrate (as N)	mg/L	0.006	3.67	3.05	3.18	-	4.55
Nitrite (as N)	mg/L	0.002	0.0233	0.0336	<0.050	-	0.0357
pH	pH	0.1	7.84	8.28	8.06	-	8.1
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010	-	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.0036	0.0022	-	<0.0010	0.003
Phosphorus (P)-Total	mg/L	0.001	0.0351	0.0118	0.012	-	0.0092
TDS (Calculated)	mg/L	n/a	122	160	173	-	180
Sulfate (SO4)	mg/L	0.05	26.9	34.7	41.9	-	46.3 *
Total Inorganic Carbon	mg/L	1	10.9	18.9	-	17.2	16.3
Total Organic Carbon	mg/L	1	4.7	7.2	6.5	-	4.7
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	-	<0.000050
Aluminum (Al)-Total	mg/L	0.0002	0.0513	0.0221	0.0393	-	0.0314
Antimony (Sb)-Total	mg/L	0.000005	0.00012	0.000184	0.000179	-	0.000171

Arsenic (As)-Total	mg/L	0.00002	0.00027	0.000506	0.000407	-	0.000321
Barium (Ba)-Total	mg/L	0.00002	0.033	0.0426	0.0386	-	0.0368
Beryllium (Be)-Total	mg/L	0.000002	0.0000029	<0.0000020	0.0000028	-	0.0000021
Bismuth (Bi)-Total	mg/L	0.000001	<0.0000010	0.000002	<0.0000010	-	<0.0000010
Boron (B)-Total	mg/L	0.005	0.0276	0.0288	0.0374	-	0.0353
Cadmium (Cd)-Total	mg/L	0.000005	<0.0000050	<0.0000050	0.0000465	-	0.0000267
Calcium (Ca)-Total	mg/L	0.03	12.9	17.5	18.6	-	20.1
Cesium (Cs)-Total	mg/L	0.000005	0.0000529	0.000072	0.000109	-	0.0001
Chromium (Cr)-Total	mg/L	0.00005	0.000449	0.000286	0.000562	-	0.000462
Cobalt (Co)-Total	mg/L	0.000005	0.000142	0.000165	0.000195	-	0.000184
Copper (Cu)-Total	mg/L	0.00005	0.00176	0.0026	0.00205	-	0.00212
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	-	<0.000050
Iron (Fe)-Total	mg/L	0.01	0.12	0.132	0.143	-	0.125
Lead (Pb)-Total	mg/L	0.000005	0.000103	0.000054	0.0000674	-	0.000082
Lithium (Li)-Total	mg/L	0.0002	0.00116	0.00167	0.00182	-	0.00184
Magnesium (Mg)-Total	mg/L	0.03	7.57	10.2	10.5	-	11.2
Manganese (Mn)-Total	mg/L	0.000005	0.017	0.0351	0.0458	-	0.024
Molybdenum (Mo)-Total	mg/L	0.00001	0.00342	0.00587	0.00793	-	0.00878
Nickel (Ni)-Total	mg/L	0.00005	0.00532	0.0057	0.0052	-	0.00466
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	-	<0.050
Potassium (K)-Total	mg/L	0.05	6.5	8.96	10.1	-	10.1
Rhenium (Re)-Total	mg/L	0.000005	0.0000378	0.0000462	0.0000552	-	0.0000542
Rubidium (Rb)-Total	mg/L	0.000005	0.0146	0.021	0.0251	-	0.0235
Selenium (Se)-Total	mg/L	0.00004	0.000103	0.000192	0.000205	-	0.000325
Silicon (Si)-Total	mg/L	0.05	0.498	0.269	0.432	-	0.629
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050
Sodium (Na)-Total	mg/L	0.2	14.1	19.5	22.2	-	21
Strontium (Sr)-Total	mg/L	0.00001	0.242	0.33	0.382	-	0.395
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	-	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.000014	0.0000172	0.0000168	-	0.0000139
Thorium (Th)-Total	mg/L	0.000005	0.0000212	0.0000083	0.0000088	-	0.000012
Tin (Sn)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	-	<0.000010

Titanium (Ti)-Total	mg/L	0.00005	0.00172	0.000582	0.0018	-	0.00149
Tungsten (W)-Total	mg/L	0.00001	0.000034	0.000058	0.000069	-	0.000081
Uranium (U)-Total	mg/L	0.000001	0.00716	0.00881	0.00903	-	0.0182
Vanadium (V)-Total	mg/L	0.00001	0.00022	0.000284	0.000245	-	0.00025
Yttrium (Y)-Total	mg/L	0.000005	0.0000739	0.0000524	0.0000528	-	0.0000631
Zinc (Zn)-Total	mg/L	0.0001	0.00091	0.00059	0.00052	-	0.00079
Zirconium (Zr)-Total	mg/L	0.00001	0.000087	0.000049	0.000052	-	0.000059
Aluminum (Al)-Dissolved	mg/L	0.0002	0.00706	0.00944	0.00696	-	0.00565
Antimony (Sb)-Dissolved	mg/L	0.000005	0.000122	0.00018	0.000178	-	0.000181
Arsenic (As)-Dissolved	mg/L	0.00002	0.000238	0.000417	0.000386	-	0.000338
Barium (Ba)-Dissolved	mg/L	0.00002	0.0307	0.0401	0.0372	-	0.0359
Beryllium (Be)-Dissolved	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	-	<0.0000020
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010	0.0000021	<0.0000010	-	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	0.0229	0.0314	0.0415	-	0.0369
Cadmium (Cd)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	0.0000508	-	<0.000010 *
Calcium (Ca)-Dissolved	mg/L	0.03	12.7 *	17.3 *	18.2 *	-	20.0 *
Cesium (Cs)-Dissolved	mg/L	0.000005	0.0000455	0.000069	0.000102	-	0.0000946
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000138	0.000191	0.000151	-	0.000148
Cobalt (Co)-Dissolved	mg/L	0.000005	0.0000567	0.000114	0.0000931	-	0.0000714
Copper (Cu)-Dissolved	mg/L	0.00005	0.00155	0.00211	0.00172	-	0.00178
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	-	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	0.04	0.061	0.051	-	0.044
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000919	0.0000221	0.0000179	-	0.0000253
Lithium (Li)-Dissolved	mg/L	0.0002	0.001	0.00163	0.00178	-	0.0018
Magnesium (Mg)-Dissolved	mg/L	0.03	7.37 *	10.0 *	10.3 *	-	10.9 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.0109	0.0135	0.0253	-	0.00682
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	-	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00361	0.00593	0.00842	-	0.00885
Nickel (Ni)-Dissolved	mg/L	0.00005	0.00363	0.00462	0.00363	-	0.00311
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	<0.050	-	<0.050
Potassium (K)-Dissolved	mg/L	0.05	6.44 *	8.83 *	10.1 *	-	9.77 *
Rhenium (Re)-Dissolved	mg/L	0.000005	0.0000386	0.0000444	0.0000526	-	0.0000516
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.0143	0.0206	0.0251	-	0.0233

Selenium (Se)-Dissolved	mg/L	0.00004	0.000099	0.000168	0.000138	-	0.000269
Silicon (Si)-Dissolved	mg/L	0.05	0.305	0.221	0.303	-	0.501
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	-	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	13.9 *	19.1 *	22.2 *	-	20.4 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.246	0.318	0.38	-	0.39
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	-	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000132	0.0000174	0.0000161	-	0.000013
Thorium (Th)-Dissolved	mg/L	0.000005	0.000006	<0.0000050	<0.0000050	-	0.0000067
Tin (Sn)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	-	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000157	0.000122	0.000127	-	0.000128
Tungsten (W)-Dissolved	mg/L	0.00001	0.000036	0.000056	0.000068	-	0.00008
Uranium (U)-Dissolved	mg/L	0.000001	0.00681	0.00882	0.00927	-	0.018
Vanadium (V)-Dissolved	mg/L	0.00001	0.000125	0.000175	0.000133	-	0.000149
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000336	0.0000265	0.0000217	-	0.0000296
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00192	0.00018	0.00074	-	0.00104
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000032	0.000031	0.00003	-	0.000033
* = Result Qualified							

APPENDIX B: AEM 1-21

AEM 1 -21 (January – June)

		Sample ID	JER-AEM-01, 1M	JER-AEM-01, BOTTOM	JER-AEM-03, 1M	JER-AEM-03, BOTTOM	JER-AEM-06, 1M	JER-AEM-06, BOTTOM	JER-AEM-07, C3 OUTLET, 1M
3/23/2012		ALS ID	L995889-1	L995889-2	L995804-1	L995804-4	L995804-12	L995804-13	L995804-11
Multiple Work		Date	4/15/2011	4/15/2011	4/13/2011	4/13/2011	4/14/2011	4/14/2011	4/14/2011

Orders		Sample d	12:00:00 AM	12:00:00 AM	12:00:00 PM	12:00:00 PM	12:00:00 AM	12:00:00 AM	12:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO ₃)	mg/L	0.5	7	6.4	6	6.82	7.25	6.98	8.77
Temperature	Degree C	1	25	25	25	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L	5	14	14	12	8	11	17	14
Turbidity	NTU	0.1	0.15	0.17	0.13	0.19	0.12	0.16	<0.10
Acidity (as CaCO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO ₃)	mg/L	5	6.9	6.1	<5.0	5.3	5.8	6	7
Ammonia (as N)	mg/L	0.005	0.0117	0.0143	-	-	-	-	-
Bicarbonate (HCO ₃)	mg/L	5	8.4	7.4	6	6.5	7.1	7.3	8.5
Carbonate (CO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Conductivity (EC)	uS/cm	0.2	13.9	12.4	11.7	13.5	14.1	13.1	17.1
Fluoride (F)	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Hardness (as CaCO ₃)	mg/L	n/a	7	6.7	6.1	6.8	7.4	7	8.7
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	%	n/a	Low EC	Low EC	Low EC	Low EC	Low EC	Low EC	Low EC
Nitrate+Nitrite-N	mg/L	0.006	<0.0060	0.0105	0.0224	0.031	0.0277	0.0719	0.0405
Nitrate-N	mg/L	0.006	<0.0060	0.0105	0.0224	0.031	0.0277	0.0719	0.0405
Nitrite-N	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
pH	pH	0.1	6.94	6.84	7.01	7.01	7.03	6.91	7.03
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.0015	<0.0010	0.0012	0.0015	<0.0010	<0.0010	<0.0010
Phosphorus (P)-	mg/L	0.001	0.0032	0.0028	0.0038	0.0041	0.002	0.0026	0.0022

Total									
TDS (Calculated)	mg/L	n/a	8.3	7.7	4.1	7.2	7.6	7.7	10.5
Sulfate (SO4)	mg/L	0.05	0.883	0.784	1.06	1.22	1.21	1.09	1.4
Total Organic Carbon	mg/L	1	3.8	3.7	4.3	4.2	4.2	3.6	4.7
Calcium (Ca)-Total	mg/L	0.05	1.61	1.53	1.32	1.63	1.58	1.53	1.89
Iron (Fe)-Total	mg/L	0.01	<0.010	<0.010	0.016	0.019	<0.010	0.023	0.02
Magnesium (Mg)-Total	mg/L	0.05	0.755	0.708	0.712	0.769	0.825	0.774	0.979
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.2	0.41	0.36	0.35	0.41	0.38	0.36	0.47
Silicon (Si)-Total	mg/L	0.05	0.549	0.542	0.546	0.612	0.636	0.729	0.764
Sodium (Na)-Total	mg/L	0.2	0.62	0.59	0.61	0.69	0.62	0.57	0.76
Aluminum (Al)-Total	mg/L	0.0002	0.0115	0.0114	0.0244	0.0298	0.021	0.0197	0.0235
Antimony (Sb)-Total	mg/L	0.000005	0.0000069	0.0000072	0.0000087	0.0000996	0.0000098	0.0000088	0.0000101
Arsenic (As)-Total	mg/L	0.00002	0.000174	0.000159	0.000242	0.000271	0.000215	0.00019	0.000251
Barium (Ba)-Total	mg/L	0.00002	0.00181	0.00246	0.00203	0.00314	0.0026	0.00308	0.00299
Beryllium (Be)-Total	mg/L	0.000002	0.000002	<0.0000020	0.0000038	0.0000034	0.0000032	0.0000026	0.0000031
Bismuth (Bi)-Total	mg/L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Total	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (Cd)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	0.0000177	<0.0000050	<0.0000050	<0.0000050
Cesium (Cs)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000051
Chromium (Cr)-Total	mg/L	0.00005	0.000087	0.000082	0.00011	0.00016	0.000105	0.000087	0.000115
Cobalt (Co)-Total	mg/L	0.00000	0.0000103	0.0000129	0.0000217	0.0000246	0.0000196	0.000027	0.0000255

		5							
Copper (Cu)-Total	mg/L	0.00005	0.00119	0.00118	0.00135	0.00192	0.00132	0.00124	0.0015
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lead (Pb)-Total	mg/L	0.000005	0.0000178	0.0000554	0.0000233	0.000393	0.000127	0.000065	0.0000242
Lithium (Li)-Total	mg/L	0.0002	0.00056	0.00058	0.00065	0.00078	0.00063	0.00061	0.00084
Manganese (Mn)-Total	mg/L	0.000005	0.000693	0.0014	0.000861	0.00112	0.00129	0.00355	0.00233
Molybdenum (Mo)-Total	mg/L	0.00001	0.000022	0.000019	0.000019	0.000023	0.000022	0.000014	0.000026
Nickel (Ni)-Total	mg/L	0.00005	0.000243	0.00023	0.000409	0.00056	0.000391	0.000337	0.000449
Rhenium (Re)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Total	mg/L	0.000005	0.000939	0.000861	0.000898	0.00103	0.000959	0.000855	0.00117
Selenium (Se)-Total	mg/L	0.00004	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Strontium (Sr)-Total	mg/L	0.00001	0.00584	0.00544	0.00582	0.00665	0.007	0.00705	0.00856
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.0000033	0.0000022	0.0000038	0.0000063	0.0000035	0.0000037	0.0000037
Thorium (Th)-Total	mg/L	0.000005	0.0000162	0.0000172	0.00002	0.0000259	0.0000243	0.0000207	0.0000275
Tin (Sn)-Total	mg/L	0.00001	0.000012	0.000064	<0.000010	0.000042	<0.000010	0.000032	<0.000010
Titanium (Ti)-Total	mg/L	0.00005	0.000067	0.000055	0.00008	0.000165	0.000076	0.000096	0.000061
Tungsten (W)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-Total	mg/L	0.000001	0.000162	0.000157	0.000207	0.000228	0.000215	0.000178	0.00025
Vanadium (V)-Total	mg/L	0.00001	0.000026	0.000025	0.000034	0.00004	0.000032	0.00003	0.000035
Yttrium (Y)-Total	mg/L	0.000005	0.0000592	0.0000582	0.0000838	0.0000913	0.0000913	0.0000879	0.000104
Zinc (Zn)-Total	mg/L	0.0001	0.0018	0.00333	0.00133	0.00636	0.00116	0.00235	0.00203
Zirconium (Zr)-Total	mg/L	0.00001	0.000053	0.00004	0.000056	0.000091	0.000056	0.000051	0.000069

Aluminum (Al)-Dissolved	mg/L	0.0002	0.0103	0.00961	0.0224	0.0236	0.0196	0.0177	0.022
Antimony (Sb)-Dissolved	mg/L	0.000005	0.0000064	0.0000064	0.0000077	0.0000574	0.0000075	0.000007	0.0000075
Arsenic (As)-Dissolved	mg/L	0.00002	0.000161	0.00015	0.000225	0.000244	0.000204	0.00018	0.000253
Barium (Ba)-Dissolved	mg/L	0.00002	0.00181	0.00215	0.0021	0.00269	0.00237	0.00258	0.00308
Beryllium (Be)-Dissolved	mg/L	0.000002	<0.0000020	<0.0000020	0.0000034	0.0000034	0.0000033	0.0000032	0.0000032
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (Cd)-Dissolved	mg/L	0.000005	0.0000103	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	1.58 *	1.53 *	1.31 *	1.46 *	1.58 *	1.52 *	1.91 *
Cesium (Cs)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000069	0.000056	0.000091	0.000102	0.000084	0.000075	0.000092
Cobalt (Co)-Dissolved	mg/L	0.000005	0.0000088	0.0000089	0.0000159	0.0000187	0.000017	0.0000214	0.0000219
Copper (Cu)-Dissolved	mg/L	0.00005	0.00114	0.00109	0.00155	0.00148	0.00126	0.00114	0.00144
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	0.015
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000144	0.0000308	0.0000286	0.000122	0.0000919	0.0000292	0.0000173
Lithium (Li)-Dissolved	mg/L	0.0002	0.00053	0.00055	0.00062	0.00072	0.00072	0.00061	0.00076
Magnesium (Mg)-Dissolved	mg/L	0.03	0.734 *	0.709 *	0.699 *	0.772 *	0.806 *	0.774 *	0.974 *

Manganese (Mn)-Dissolved	mg/L	0.000005	0.000202	0.000259	0.000505	0.000627	0.000999	0.00275	0.0021
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.000023	0.000019	0.000018	0.000021	0.000025	0.000017	0.000029
Nickel (Ni)-Dissolved	mg/L	0.00005	0.000245	0.00022	0.000371	0.000428	0.000365	0.000325	0.000423
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	0.42 *	0.40 *	0.37 *	0.46 *	0.39 *	0.39 *	0.51 *
Rhenium (Re)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.000915	0.000874	0.000879	0.00103	0.000948	0.000869	0.00117
Selenium (Se)-Dissolved	mg/L	0.00004	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si)-Dissolved	mg/L	0.05	0.536	0.539	0.542	0.615	0.626	0.713	0.763
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	0.61 *	0.59 *	0.59 *	0.69 *	0.62 *	0.57 *	0.76 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.00579	0.00549	0.00595	0.00653	0.00704	0.00695	0.00845
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000022	0.0000021	0.0000028	0.0000063	0.0000035	0.0000036	0.0000044
Thorium (Th)-Dissolved	mg/L	0.000005	0.0000162	0.0000161	0.00002	0.0000246	0.000022	0.0000181	0.0000254
Tin (Sn)-Dissolved	mg/L	0.00001	0.000013	0.000043	0.000011	0.000017	<0.000010	<0.000010	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	0.000063	0.000059	<0.000050	<0.000050	0.000055
Tungsten (W)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-Dissolved	mg/L	0.000001	0.000154	0.000151	0.000199	0.000228	0.000198	0.00016	0.000229

Vanadium (V)-Dissolved	mg/L	0.00001	0.000038	0.000031	0.000035	0.000036	0.000036	0.000028	0.000038
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000558	0.0000554	0.0000781	0.0000848	0.0000871	0.0000799	0.0000989
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00245	0.00444	0.00518	0.00603	0.00246	0.0031	0.00321
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.00007	0.000046	0.00006	0.000067	0.000065	0.000056	0.000077
* = Result Qualified									

		Sample ID	JER-AEM-15, CARAT LAKE CENTER BASIN-1M	JER-AEM-15, CARAT LAKE CENTER BASIN-BOTTOM	JER-AEM-16, CARAT LAKE OUTLET-1M	JER-AEM-17, JERICHO LAKE, 1M	JER-AEM-18, JERICHO RIVER DOWNSTREAM OF JERICHO LAKE, 1M	KEY LAKE 1M	JER-AEM-24, LYNNE LAKE, 1M	JER-AEM-24, LYNNE LAKE-BOTTOM
3/23/2012		ALS ID	L995804-2	L995804-5	L995804-3	L995804-14	L995804-15	L996599-1	L995804-9	L995804-10
Multiple Work Orders		Date Sampled	4/12/2011 12:00:00 PM	4/12/2011 12:00:00 PM	4/12/2011 12:00:00 PM	4/14/2011 12:00:00 PM	4/14/2011 12:00:00 PM	4/16/2011 2:30:00 PM	4/12/2011 12:00:00 PM	4/12/2011 12:00:00 PM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	8.13	6.87	8.84	8.65	10.7	21.7	11.2	11.2
Temperature	Degree C	1	25	25	25	25	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

d Solids										
Total Dissolved Solids	mg /L	5	12	<5.0	10	16	29	34	15	19
Turbidity	NT U	0.1	0.13	<0.10	0.36	0.14	0.23	<0.10	0.16	0.22
Acidity (as CaCO3)	mg /L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg /L	5	6.7	<5.0	7.6	7.8	8	16.8	8.8	8.4
Ammonia-N	mg /L	0.005	0.0251	0.021	0.0402	0.0249	0.0161	-	0.0416	0.0273
Bicarbonate (HCO3)	mg /L	5	8.2	5.5	9.3	9.5	9.8	20.5	10.7	10.3
Carbonate (CO3)	mg /L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg /L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	0.51	<0.50
Conductivity (EC)	uS /cm	0.2	15.5	11.6	19.4	17.1	22.3	51	21.8	20.4
Fluoride (F)	mg /L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Hardness (as CaCO3)	mg /L	n/a	7.6	6	9.4	8.9	10.6	19.3	11.2	10.5
Hydroxide (OH)	mg /L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	%	n/a	Low EC	Low EC	Low EC	Low EC	Low EC	Low EC	Low EC	Low EC
Nitrate+Nitrite-N	mg /L	0.006	0.0684	0.112	0.0993	0.0407	0.151	-	0.0923	0.0885
Nitrate-N	mg /L	0.006	0.0684	0.112	0.0993	0.0407	0.151	-	0.0923	0.0885
Nitrite-N	mg /L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	<0.0020	<0.0020
pH	pH	0.1	7.11	6.94	7.14	7.08	7.02	7.17	7.24	7.16
Orthophos	mg	0.00	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010

phate-Dissolved (as P)	/L	1						0		
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.001	<0.0010	<0.0010	0.001	<0.0010	0.0012	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.001	0.0033	0.0032	0.0049	0.0056	0.0044	0.0029	0.0039	0.0027
TDS (Calculated)	mg/L	n/a	8.5	3.8	10.2	9.7	11.1	26.2	11.6	10.4
Sulfate (SO4)	mg/L	0.05	1.27	1	1.49	1.37	1.59	4.02	1.33	1.2
Total Organic Carbon	mg/L	1	4.7	3.4	5.2	4.3	4.9	6	4.6	4.5
Calcium (Ca)-Total	mg/L	0.05	1.73	1.74	2.01	1.89	2.42	4.72	2.54	2.44
Iron (Fe)-Total	mg/L	0.01	0.01	<0.010	0.022	0.012	0.047	0.029	0.018	0.018
Magnesium (Mg)-Total	mg/L	0.05	0.885	0.899	1.04	0.96	1.21	2.52	1.2	1.15
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.2	0.46	0.44	0.66	0.46	0.59	0.78	0.5	0.38
Silicon (Si)-Total	mg/L	0.05	0.457	0.471	0.532	0.464	0.723	1.24	0.729	0.7
Sodium (Na)-Total	mg/L	0.2	0.86	0.73	0.95	0.71	0.91	2.32	0.88	0.74
Aluminum (Al)-Total	mg/L	0.0002	0.0203	0.022	0.03	0.0193	0.0239	0.0282	0.025	0.0257
Antimony	mg	0.00	0.0000281	0.0000147	0.000089	0.0000111	0.0000293	0.0000	0.0000162	0.0000221

(Sb)-Total	/L	0005						176		
Arsenic (As)-Total	mg/L	0.00002	0.000233	0.000249	0.00029	0.000257	0.000275	0.000273	0.000211	0.000204
Barium (Ba)-Total	mg/L	0.00002	0.00283	0.0024	0.00522	0.00321	0.00496	0.00563	0.00267	0.00265
Beryllium (Be)-Total	mg/L	0.000002	0.000003	0.0000029	0.0000048	0.0000034	0.0000042	0.0000045	0.0000031	0.0000033
Bismuth (Bi)-Total	mg/L	0.000001	<0.0000010	<0.0000010	0.0000011	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Total	mg/L	0.00005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (Cd)-Total	mg/L	0.000005	0.0000089	<0.0000050	0.0000181	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Cesium (Cs)-Total	mg/L	0.000005	<0.0000050	<0.0000050	0.0000069	0.0000054	0.0000074	0.0000055	<0.0000050	<0.0000050
Chromium (Cr)-Total	mg/L	0.000005	0.000118	0.000116	0.000227	0.000109	0.00017	0.000148	0.000123	0.000195
Cobalt (Co)-Total	mg/L	0.000005	0.000018	0.0000182	0.000043	0.0000232	0.0000576	0.0000296	0.0000223	0.0000242
Copper (Cu)-Total	mg/L	0.000005	0.00171	0.00145	0.00281	0.00147	0.00205	0.0026	0.00204	0.00192
Gallium (Ga)-Total	mg/L	0.000005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lead (Pb)-Total	mg/L	0.000005	0.000178	0.0000218	0.000157	0.0000577	0.00166	0.0000824	0.0000194	0.0000278
Lithium (Li)-Total	mg/L	0.00002	0.00071	0.0007	0.00079	0.00072	0.00082	0.00048	0.00032	0.00029
Manganese (Mn)-Total	mg/L	0.000005	0.000957	0.000858	0.00425	0.00143	0.0173	0.00165	0.00173	0.00188
Molybdenum (Mo)-Total	mg/L	0.00001	0.000042	0.00003	0.000037	0.000026	0.000026	0.000054	0.000031	0.000029

Nickel (Ni)-Total	mg /L	0.00005	0.000456	0.000469	0.000663	0.000453	0.000607	0.000782	0.000581	0.000527
Rhenium (Re)-Total	mg /L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Total	mg /L	0.000005	0.00108	0.00112	0.00143	0.00115	0.00137	0.00135	0.000821	0.000774
Selenium (Se)-Total	mg /L	0.00004	<0.000040	<0.000040	0.00004	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silver (Ag)-Total	mg /L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Strontium (Sr)-Total	mg /L	0.00001	0.00749	0.00734	0.0089	0.00807	0.0103	0.0144	0.00692	0.00645
Tellurium (Te)-Total	mg /L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg /L	0.000001	0.0000033	0.0000055	0.0000041	0.0000054	0.0000051	0.0000079	0.0000038	0.000004
Thorium (Th)-Total	mg /L	0.000005	0.000025	0.0000269	0.0000262	0.0000248	0.0000258	0.0000231	0.0000208	0.00002
Tin (Sn)-Total	mg /L	0.00001	0.00002	0.000018	0.000128	<0.000010	0.000028	0.000011	<0.000010	0.000015
Titanium (Ti)-Total	mg /L	0.00005	0.000063	0.000319	0.000495	0.000069	0.000165	0.000134	0.00007	0.000085
Tungsten (W)-Total	mg /L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-Total	mg /L	0.000001	0.000216	0.000224	0.000269	0.000201	0.000215	0.000162	0.000121	0.000118
Vanadium (V)-Total	mg /L	0.00001	0.000043	0.00005	0.000066	0.000035	0.000041	0.000072	0.000053	0.000056
Yttrium (Y)-Total	mg /L	0.00000	0.0000999	0.0000977	0.00013	0.0000956	0.00011	0.000151	0.000105	0.000103

		5								
Zinc (Zn)-Total	mg /L	0.0001	0.00378	0.0021	0.014	0.0018	0.00328	0.0057	0.00291	0.00138
Zirconium (Zr)-Total	mg /L	0.00001	0.000087	0.000056	0.000083	0.000064	0.000078	0.000097	0.000064	0.000066
Aluminum (Al)-Dissolved	mg /L	0.0002	0.0196	0.0168	0.0214	0.0181	0.0209	0.0262	0.0227	0.0234
Antimony (Sb)-Dissolved	mg /L	0.000005	0.0000174	0.0000074	0.0000357	0.0000089	0.0000141	0.0000183	0.0000119	0.0000137
Arsenic (As)-Dissolved	mg /L	0.00002	0.000243	0.000196	0.000266	0.000242	0.000228	0.000265	0.000206	0.0002
Barium (Ba)-Dissolved	mg /L	0.00002	0.00344	0.00656	0.00359	0.00332	0.00426	0.00533	0.00291	0.00443
Beryllium (Be)-Dissolved	mg /L	0.000002	0.0000035	0.0000026	0.0000041	0.0000029	0.000004	0.0000048	0.0000038	0.0000033
Bismuth (Bi)-Dissolved	mg /L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Dissolved	mg /L	0.00005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (Cd)-Dissolved	mg /L	0.000005	<0.0000050	<0.0000050	0.0000139	<0.0000050	0.0000053	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg /L	0.03	1.75 *	1.49 *	1.92 *	1.89 *	2.36 *	4.62 *	2.53 *	2.53 *
Cesium (Cs)-Dissolved	mg /L	0.000005	<0.0000050	<0.0000050	0.0000053	0.0000052	0.0000072	0.0000054	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg /L	0.00005	0.000132	0.000089	0.000164	0.000096	0.000107	0.000126	0.00013	0.000136
Cobalt (Co)-	mg /L	0.00000	0.0000184	0.0000141	0.0000181	0.0000164	0.0000497	0.0000288	0.0000165	0.0000173

Dissolved		5								
Copper (Cu)-Dissolved	mg /L	0.00005	0.00161	0.00118	0.00236	0.0014	0.00163	0.00249	0.00184	0.00201
Gallium (Ga)-Dissolved	mg /L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg /L	0.01	<0.010	<0.010	<0.010	<0.010	0.024	0.016	0.015	0.01
Lead (Pb)-Dissolved	mg /L	0.000005	0.0000383	0.0000089	0.00141	0.0000224	0.000793	0.00003	0.00002	0.0000367
Lithium (Li)-Dissolved	mg /L	0.0002	0.00071	0.00063	0.00076	0.00075	0.00081	0.00044	0.00026	0.00026
Magnesium (Mg)-Dissolved	mg /L	0.03	0.915 *	0.768 *	0.984 *	0.958 *	1.18 *	2.47 *	1.20 *	1.18 *
Manganese (Mn)-Dissolved	mg /L	0.000005	0.000605	0.00117	0.000785	0.000916	0.015	0.000987	0.000484	0.000462
Mercury (Hg)-Dissolved	mg /L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg /L	0.00001	0.000033	0.000025	0.000039	0.000026	0.000023	0.000055	0.000029	0.000057
Nickel (Ni)-Dissolved	mg /L	0.00005	0.000439	0.000376	0.000547	0.000428	0.00054	0.000759	0.000548	0.000556
Phosphorus (P)-Dissolved	mg /L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg /L	0.05	0.44 *	0.30 *	0.63 *	0.51 *	0.56 *	0.91 *	0.33 *	0.32 *

Rhenium (Re)-Dissolved	mg /L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Dissolved	mg /L	0.000005	0.00114	0.000919	0.00135	0.00111	0.00138	0.00132	0.000828	0.000804
Selenium (Se)-Dissolved	mg /L	0.00004	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si)-Dissolved	mg /L	0.05	0.468	0.431	0.517	0.46	0.701	1.22	0.714	0.716
Silver (Ag)-Dissolved	mg /L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg /L	0.2	0.81 *	0.59 *	0.85 *	0.71 *	0.90 *	2.24 *	0.80 *	0.76 *
Strontium (Sr)-Dissolved	mg /L	0.00001	0.00778	0.00649	0.00841	0.00813	0.0101	0.0148	0.00684	0.00678
Tellurium (Te)-Dissolved	mg /L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg /L	0.000001	0.0000036	0.0000042	0.0000034	0.0000042	0.0000054	0.0000075	0.000004	0.0000039
Thorium (Th)-Dissolved	mg /L	0.000005	0.0000234	0.0000193	0.0000246	0.0000222	0.0000231	0.0000214	0.0000195	0.0000185
Tin (Sn)-Dissolved	mg /L	0.000001	0.000025	0.000104	0.000075	0.000014	<0.000010	0.000014	0.000016	0.000026
Titanium (Ti)-Dissolved	mg /L	0.000005	0.000057	<0.000050	0.000052	0.000075	0.000056	0.000083	0.000059	0.000068
Tungsten (W)-Dissolved	mg /L	0.000001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-	mg /L	0.00000	0.000221	0.000181	0.000225	0.000192	0.000202	0.000155	0.000118	0.000122

Dissolved		1								
Vanadium (V)-Dissolved	mg /L	0.00001	0.000043	0.000044	0.000047	0.000037	0.000038	0.000065	0.000051	0.000049
Yttrium (Y)-Dissolved	mg /L	0.00005	0.0000965	0.000082	0.000102	0.000089	0.000102	0.000144	0.000103	0.000102
Zinc (Zn)-Dissolved	mg /L	0.0001	0.00534	0.0286	0.00925	0.00358	0.00351	0.00678	0.00517	0.00401
Zirconium (Zr)-Dissolved	mg /L	0.0001	0.000065	0.000056	0.000099	0.000069	0.000079	0.000104	0.00009	0.000073
* = Result Qualified										

AEM-12 (January-June)

		Sample ID	JER-AEM-12, CARAT LAKE FW INTAKE,1M	JER-AEM-12	CARAT INTAKE
3/23/2012		ALS ID	L995804-8	L1010621-10	L1016952-1
Multiple Work Orders		Date Sampled	4/12/2011 12:00:00 PM	5/30/2011 12:00:00 AM	6/11/2011 12:00:00 AM
Analyte	Units	LOR	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	-	5.11	6.2
Temperature	Degree C	1	25	25	25
Total Suspended Solids	mg/L	3	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L	5	11	10	15

Turbidity	NTU	0.1	0.22	3.16	12.8
Acidity (as CaCO3)	mg/L	5	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L	5	7.1	<5.0	6.7
Ammonia (as N)	mg/L	0.005	-	0.0158	<0.0050
Ammonia-N	mg/L	0.005	0.0261	-	-
Bicarbonate (HCO3)	mg/L	5	8.7	5.7	8.2
Carbonate (CO3)	mg/L	5	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	<0.50	<0.50	<0.50
Conductivity (EC)	uS/cm	0.2	16.3	11.6	13.9
Fluoride (F)	mg/L	0.05	<0.050	<0.050	<0.050
Hardness (as CaCO3)	mg/L	n/a	8.1	5.2	6.2
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0
Ion Balance	%	n/a	Low EC	Low EC	Low EC
Nitrate and Nitrite (as N)	mg/L	0.006	-	0.0508	0.0472
Nitrate+Nitrite-N	mg/L	0.006	0.0876	-	-
Nitrate (as N)	mg/L	0.006	-	0.0508	0.0472
Nitrate-N	mg/L	0.006	0.0876	-	-
Nitrite (as N)	mg/L	0.002	-	<0.0020	<0.0020
Nitrite-N	mg/L	0.002	<0.0020	-	-
pH	pH	0.1	7.07	6.97	7.13
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.001	0.002	0.0071	0.0064
TDS (Calculated)	mg/L	n/a	9.1	3	7.1
Sulfate (SO4)	mg/L	0.05	1.3	0.638	0.431
Total Organic Carbon	mg/L	1	4.3	-	2.1
Fecal Coliforms	CFU/100m L	1	-	<1	-
Calcium (Ca)-Total	mg/L	0.05	-	1.18	1.84
Iron (Fe)-Total	mg/L	0.01	-	0.114	0.594
Magnesium (Mg)-Total	mg/L	0.05	-	0.589	0.848
Mercury (Hg)-Total	mg/L	0.00005	-	<0.000050	<0.000050
Phosphorus (P)-Total	mg/L	0.05	-	<0.050	<0.050
Potassium (K)-Total	mg/L	0.2	-	0.37	0.35

Silicon (Si)-Total	mg/L	0.05	-	0.581	1.43
Sodium (Na)-Total	mg/L	0.2	-	0.52	0.47
Aluminum (Al)-Total	mg/L	0.0002	-	0.09	0.284
Antimony (Sb)-Total	mg/L	0.000005	-	0.0000258	0.0000653
Arsenic (As)-Total	mg/L	0.00002	-	0.000174	0.000129
Barium (Ba)-Total	mg/L	0.00002	-	0.0024	0.0037
Beryllium (Be)-Total	mg/L	0.000002	-	0.0000055	0.0000153
Bismuth (Bi)-Total	mg/L	0.000001	-	0.0000023	0.0000041
Boron (B)-Total	mg/L	0.005	-	<0.0050	<0.0050
Cadmium (Cd)-Total	mg/L	0.000005	-	0.0000065	<0.0000050
Cesium (Cs)-Total	mg/L	0.000005	-	0.0000165	0.0000518
Chromium (Cr)-Total	mg/L	0.00005	-	0.000336	0.000373
Cobalt (Co)-Total	mg/L	0.000005	-	0.0000943	0.000269
Copper (Cu)-Total	mg/L	0.00005	-	0.00249	0.00548
Gallium (Ga)-Total	mg/L	0.00005	-	<0.000050	0.00016
Lead (Pb)-Total	mg/L	0.000005	-	0.000288	0.000718
Lithium (Li)-Total	mg/L	0.0002	-	0.00042	0.00078
Manganese (Mn)-Total	mg/L	0.000005	-	0.00711	0.0104
Molybdenum (Mo)-Total	mg/L	0.00001	-	0.000052	0.00022
Nickel (Ni)-Total	mg/L	0.00005	-	0.00123	0.0012
Rhenium (Re)-Total	mg/L	0.000005	-	<0.0000050	<0.0000050
Rubidium (Rb)-Total	mg/L	0.000005	-	0.000778	0.000819
Selenium (Se)-Total	mg/L	0.00004	-	<0.000040	0.000041
Silver (Ag)-Total	mg/L	0.000005	-	<0.0000050	<0.0000050
Strontium (Sr)-Total	mg/L	0.00001	-	0.00419	0.00538
Tellurium (Te)-Total	mg/L	0.00001	-	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	-	0.0000023	0.0000037
Thorium (Th)-Total	mg/L	0.000005	-	0.0000382	0.0000672
Tin (Sn)-Total	mg/L	0.00001	-	0.000014	0.000014
Titanium (Ti)-Total	mg/L	0.00005	-	0.0026	0.00889
Tungsten (W)-Total	mg/L	0.00001	-	<0.000010	0.000012
Uranium (U)-Total	mg/L	0.000001	-	0.000632	0.00305

Vanadium (V)-Total	mg/L	0.00001	-	0.000224	0.000757
Yttrium (Y)-Total	mg/L	0.000005	-	0.000156	0.000404
Zinc (Zn)-Total	mg/L	0.0001	-	0.00241	0.0016
Zirconium (Zr)-Total	mg/L	0.00001	-	0.000175	0.000174
Aluminum (Al)-Dissolved	mg/L	0.0002	-	0.0197	0.0131
Antimony (Sb)-Dissolved	mg/L	0.000005	-	0.00002	0.0000573
Arsenic (As)-Dissolved	mg/L	0.00002	-	0.00014	0.000079
Barium (Ba)-Dissolved	mg/L	0.00002	-	0.00163	0.00162
Beryllium (Be)-Dissolved	mg/L	0.000002	-	<0.0000020	<0.0000020
Bismuth (Bi)-Dissolved	mg/L	0.000001	-	<0.0000010	0.0000016
Boron (B)-Dissolved	mg/L	0.005	-	<0.0050	0.0103
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	0.0000077	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	1.76	1.17 *	1.73 *
Cesium (Cs)-Dissolved	mg/L	0.000005	-	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	0.00005	-	0.000104	0.000114
Cobalt (Co)-Dissolved	mg/L	0.000005	-	0.0000323	0.0000232
Copper (Cu)-Dissolved	mg/L	0.00005	-	0.00203	0.00321
Gallium (Ga)-Dissolved	mg/L	0.00005	-	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	-	0.015	<0.010
Lead (Pb)-Dissolved	mg/L	0.000005	-	0.000072	<0.000030 *
Lithium (Li)-Dissolved	mg/L	0.0002	-	0.00033	0.00031
Magnesium (Mg)-Dissolved	mg/L	0.03	0.89	0.530 *	0.549 *
Manganese (Mn)-Dissolved	mg/L	0.000005	-	0.00545	0.00592
Mercury (Hg)-Dissolved	mg/L	0.00005	-	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	-	0.000048	0.000258
Nickel (Ni)-Dissolved	mg/L	0.00005	-	0.000511	0.00056
Phosphorus (P)-Dissolved	mg/L	0.05	-	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	0.5	0.44 *	0.28 *
Rhenium (Re)-Dissolved	mg/L	0.000005	-	<0.0000050	<0.0000050
Rubidium (Rb)-Dissolved	mg/L	0.000005	-	0.000637	0.000406
Selenium (Se)-Dissolved	mg/L	0.00004	-	<0.000040	<0.000040
Silicon (Si)-Dissolved	mg/L	0.05	-	0.276	0.165
Silver (Ag)-Dissolved	mg/L	0.000005	-	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	<1.0	0.54 *	0.36 *
Strontium (Sr)-Dissolved	mg/L	0.00001	-	0.00412	0.00474

Tellurium (Te)-Dissolved	mg/L	0.00001	-	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	-	0.0000017	<0.0000010
Thorium (Th)-Dissolved	mg/L	0.000005	-	0.0000203	0.0000185
Tin (Sn)-Dissolved	mg/L	0.00001	-	0.000017	<0.000020 *
Titanium (Ti)-Dissolved	mg/L	0.00005	-	0.000222	0.000155
Tungsten (W)-Dissolved	mg/L	0.00001	-	<0.000010	0.000013
Uranium (U)-Dissolved	mg/L	0.000001	-	0.000521	0.00195
Vanadium (V)-Dissolved	mg/L	0.00001	-	0.000103	0.000119
Yttrium (Y)-Dissolved	mg/L	0.000005	-	0.0000977	0.0000333
Zinc (Zn)-Dissolved	mg/L	0.0001	-	0.00515	<0.0040
Zirconium (Zr)-Dissolved	mg/L	0.00001	-	0.000076	<0.0015
Biochemical Oxygen Demand	mg/L	2	-	<2.0	-
Oil and Grease	mg/L	1	-	1.5	1.7
Benzene	mg/L	0.0005	-	-	<0.00050
Ethylbenzene	mg/L	0.0005	-	-	<0.00050
Toluene	mg/L	0.0005	-	-	<0.00050
o-Xylene	mg/L	0.0005	-	-	<0.00050
m+p-Xylene	mg/L	0.0005	-	-	<0.00050
Xylenes	mg/L	0.00071	-	-	<0.00071
F1(C6-C10)	mg/L	0.1	-	-	<0.10
F1-BTEX	mg/L	0.1	-	-	<0.10
* = Result Qualified					

AEM 1 – 21 (July-December)

ALS		Sample ID	JER WQ2 (AEM-04)	AEM-4	AEM-04	AEM-4	AEM-4	AEM4
3/24/2012		ALS ID	L1030756-4	L1043009-2	L1046971-4	L1049554-3	L1052600-1	L1055190-3
Multiple Work Orders		Date	7/11/2011	8/10/2011	8/17/2011	8/24/2011	8/31/2011	9/7/2011

		Sampled	10:20:00 AM	9:30:00 AM	12:00:00 AM	10:00:00 AM	8:00:00 AM	9:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	53.5	57.8	62.5	64.4	65.3	55.1
Temperature	Degree C	1	25	25	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	5	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L	5	93	96	111	114	-	90
Turbidity	NTU	0.1	0.92	0.95	0.58	0.7	0.68	1.78
Acidity (as CaCO3)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L	5	46.4	53	48.9	50.5	51.6	44.4
Ammonia (as N)	mg/L	0.005	0.0138	0.012	0.0157	-	0.0411	0.0182
Bicarbonate (HCO3)	mg/L	5	56.6	64.7	59.7	61.7	63	54.2
Carbonate (CO3)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	5.15	4.92	6.35	6.31	6.34	4.98
Conductivity (EC)	uS/cm	0.2	151	161	180	186	187	155
Fluoride (F)	mg/L	0.05	0.081	0.084	0.101	0.083	0.079	0.089
Hardness (as CaCO3)	mg/L	n/a	51.4	54.8	60	60.8	67.7	55.1
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	%	n/a	98.7	99.2	97	98.1	105	101
Nitrate and Nitrite (as N)	mg/L	0.006	0.661	0.367	2.79	2.44	2.85	2.22
Nitrate (as N)	mg/L	0.006	0.656	0.362	2.79	2.44	2.84	2.21
Nitrite (as N)	mg/L	0.002	0.0049	0.0055	<0.050	0.0085	0.0125	0.0044
Total Kjeldahl Nitrogen	mg/L	0.05	0.32	-	-	-	-	-
pH	pH	0.1	8.02	8.04	7.92	7.97	7.99	7.88
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.0016	0.0022	0.0021	0.0015	0.0039	0.0018
Phosphorus (P)-Total	mg/L	0.001	0.0053	0.0057	0.0064	0.0053	0.0071	0.0055
TDS (Calculated)	mg/L	n/a	78.6	81.6	95.8	95.3	101	83.1
Sulfate (SO4)	mg/L	0.05	15.2	14.1	16.1	15.8	15.9	13.2
Total Inorganic Carbon	mg/L	1	11.3	12.2	13	12.6	13.2	12.1

Total Organic Carbon	mg/L	1	4.3	5	4.7	7.2	4.5	5.6
Fecal Coliforms	CFU/10 0mL	1	<1	<1	<1	-	<1 *	<1
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	-	<0.000050
Aluminum (Al)-Total	mg/L	0.0002	0.0159	0.0136	0.017	0.0215	0.0131	0.0566
Antimony (Sb)-Total	mg/L	0.000005	0.000115	0.000102	0.00014	0.000147	0.000149	0.000119
Arsenic (As)-Total	mg/L	0.00002	0.000494	0.000727	0.000445	0.000383	0.000398	0.000425
Barium (Ba)-Total	mg/L	0.00002	0.0207	0.0176	0.0254	0.0228	0.0242	0.02
Beryllium (Be)-Total	mg/L	0.000002	<0.0000020	<0.0000020	0.0000021	<0.0000020	<0.0000020	0.0000042
Bismuth (Bi)-Total	mg/L	0.000001	0.0000015	<0.0000010	<0.0000010	0.0000014	<0.0000010	0.0000012
Boron (B)-Total	mg/L	0.005	0.0203	0.0203	0.0268	0.0296	0.0268	0.0301
Cadmium (Cd)-Total	mg/L	0.000005	<0.0000050	<0.0000050	0.0000336	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	0.03	10.4	11.7	12.8	13.2	14.1	11.4
Cesium (Cs)-Total	mg/L	0.000005	0.0000318	0.0000336	0.0000394	0.0000404	0.0000423	0.0000366
Chromium (Cr)-Total	mg/L	0.00005	0.000106	0.000066	0.000089	0.000066	0.000078	0.000209
Cobalt (Co)-Total	mg/L	0.000005	0.0000757	0.000176	0.0000966	0.0000696	0.0000828	0.000117
Copper (Cu)-Total	mg/L	0.00005	0.00157	0.00146	0.00152	0.00145	0.00168	0.0024
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Total	mg/L	0.01	0.149	0.325	0.104	0.063	0.101	0.099
Lead (Pb)-Total	mg/L	0.000005	0.0000203	0.000012	0.0000237	0.0000155	0.0000194	0.0000518
Lithium (Li)-Total	mg/L	0.0002	0.00076	0.00077	0.00111	0.00122	0.00107	0.00092
Magnesium (Mg)-Total	mg/L	0.03	6.3	7.06	7.57	7.74	8.04	6.57
Manganese (Mn)-Total	mg/L	0.000005	0.00816	0.0389	0.0112	0.00743	0.00802	0.006
Molybdenum (Mo)- Total	mg/L	0.00001	0.00257	0.00265	0.0039	0.00418	0.00383	0.00277
Nickel (Ni)-Total	mg/L	0.00005	0.00121	0.00107	0.00132	0.00119	0.00186	0.00119
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.05	4.6	4.97	5.14	5.3	5.41	4.21
Rhenium (Re)-Total	mg/L	0.000005	0.0000105	0.0000111	0.0000116	0.0000115	0.000012	0.000009
Rubidium (Rb)-Total	mg/L	0.000005	0.00951	0.00993	0.011	0.0111	0.0115	0.00936
Selenium (Se)-Total	mg/L	0.00004	0.000062	0.000087	0.000102	<0.000040	0.000099	0.000067
Silicon (Si)-Total	mg/L	0.05	0.27	0.31	0.51	0.428	0.411	0.816

Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Total	mg/L	0.2	6.46	7.04	7.64	8.21	8.07	6.25
Strontium (Sr)-Total	mg/L	0.00001	0.172	0.182	0.221	0.234	0.236	0.192
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.0000049	0.0000047	0.0000055	0.000004	0.0000043	0.0000044
Thorium (Th)-Total	mg/L	0.000005	0.0000083	0.0000061	0.0000071	<0.0000050	0.0000071	0.0000365
Tin (Sn)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Titanium (Ti)-Total	mg/L	0.00005	0.000278	0.000227	0.000434	0.000288	0.000203	0.00187
Tungsten (W)-Total	mg/L	0.00001	0.000104	0.000056	0.000092	0.000088	0.000087	0.000053
Uranium (U)-Total	mg/L	0.000001	0.00185	0.0019	0.00627	0.0064	0.00776	0.00427
Vanadium (V)-Total	mg/L	0.00001	0.000138	0.000133	0.000151	0.000111	0.000108	0.000159
Yttrium (Y)-Total	mg/L	0.000005	0.0000464	0.0000476	0.0000545	0.0000398	0.0000422	0.000146
Zinc (Zn)-Total	mg/L	0.0001	0.00086	0.00029	0.00044	0.00035	0.00097	0.0011
Zirconium (Zr)-Total	mg/L	0.00001	0.00005	0.000032	0.000036	0.000032	0.00003	0.000158
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0111	0.00892	0.00741	0.0104	0.0091	0.0243
Antimony (Sb)-Dissolved	mg/L	0.000005	0.000105	0.000107	0.00014	0.00014	0.000155	0.000119
Arsenic (As)-Dissolved	mg/L	0.00002	0.000475	0.000632	0.000396	0.000326	0.00039	0.000376
Barium (Ba)-Dissolved	mg/L	0.00002	0.0208	0.0176	0.024	0.0213	0.0248	0.0196
Beryllium (Be)-Dissolved	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000025
Bismuth (Bi)-Dissolved	mg/L	0.000001	0.000002	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	0.0221	0.0208	0.028	0.0341	0.0287	0.0288
Cadmium (Cd)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	0.000105	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	10.3 *	11.6 *	12.6 *	13.1 *	14.0 *	11.4 *
Cesium (Cs)-Dissolved	mg/L	0.000005	0.0000305	0.0000338	0.0000386	0.0000384	0.0000426	0.0000304
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000081	0.000056	0.000089	0.000052	0.000069	0.000126
Cobalt (Co)-Dissolved	mg/L	0.000005	0.0000686	0.00014	0.0000737	0.0000452	0.0000609	0.0000785
Copper (Cu)-Dissolved	mg/L	0.00005	0.00149	0.00122	0.00129	0.00118	0.00149	0.00189
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	0.106	0.143	0.036	0.025	0.062	0.057
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000141	0.0000094	0.000008	0.0000063	0.000008	0.0000365

Lithium (Li)-Dissolved	mg/L	0.0002	0.00073	0.00078	0.00111	0.00139	0.00107	0.00087
Magnesium (Mg)-Dissolved	mg/L	0.03	6.24 *	6.99 *	7.52 *	7.70 *	7.95 *	6.47 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.00688	0.0281	0.00621	0.0011	0.00222	0.00294
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.0025	0.00273	0.00392	0.0043	0.00389	0.00283
Nickel (Ni)-Dissolved	mg/L	0.00005	0.00117	0.000966	0.00124	0.00114	0.00117	0.00101
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	4.53 *	4.97 *	5.14 *	5.28 *	5.41 *	4.21 *
Rhenium (Re)-Dissolved	mg/L	0.000005	0.0000093	0.0000107	0.0000114	0.0000111	0.0000112	0.0000088
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.0092	0.01	0.0111	0.0109	0.0117	0.00919
Selenium (Se)-Dissolved	mg/L	0.00004	0.000065	0.000046	0.0001	<0.000040	0.00009	0.000067
Silicon (Si)-Dissolved	mg/L	0.05	0.249	0.281	0.481	0.396	0.41	0.748
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	6.37 *	7.01 *	7.66 *	8.14 *	8.01 *	6.27 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.174	0.18	0.215	0.227	0.236	0.189
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000046	0.0000046	0.0000054	0.0000043	0.0000044	0.0000036
Thorium (Th)-Dissolved	mg/L	0.000005	0.000005	<0.0000050	<0.0000050	<0.0000050	0.0000057	0.0000285
Tin (Sn)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000113	0.000062	0.000107	0.000146	0.000084	0.000308
Tungsten (W)-Dissolved	mg/L	0.00001	0.000098	0.000054	0.000097	0.000092	0.00009	0.000052
Uranium (U)-Dissolved	mg/L	0.000001	0.0018	0.00187	0.00632	0.00633	0.0078	0.00427

Vanadium (V)-Dissolved	mg/L	0.00001	0.000109	0.000083	0.000089	0.000079	0.000079	0.000088
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000356	0.000026	0.0000315	0.0000268	0.0000331	0.000126
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00067	0.00146	0.00151	0.00077	0.0011	0.00171
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000035	0.000024	0.00003	0.000022	0.00003	0.000112
Biochemical Oxygen Demand	mg/L	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
* = Result Qualified								

ALS		Sample ID	JER WQ-3(AEM05)	JER-AEM6-MIXING ZONE	(WQ4)JER-AEM07-TOP	(WQ4)JER-AEM07-BOTTOM (2MOFF)	JER WQ-5(AEM08)
3/24/2012		ALS ID	L1030756-9	L1034745-1	L1034745-2	L1034745-3	L1030756-8
Multiple Work Orders		Date Sampled	7/11/2011 11:00:00 AM	7/20/2011 11:00:00 AM	7/20/2011 11:20:00 AM	7/20/2011 11:30:00 AM	7/11/2011 9:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	50	4.7	4.7	4.5	5.4
Temperature	Degree C	1	25	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	<3.0	4	<3.0	<3.0
Total Dissolved Solids	mg/L	5	79	23	29	16	17
Turbidity	NTU	0.1	0.56	0.28	0.24	0.41	0.6
Acidity (as CaCO3)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L	5	41.1	<5.0	<5.0	<5.0	<5.0
Ammonia (as N)	mg/L	0.005	<0.0050	<0.0050	<0.0050	0.0077	<0.0050
Bicarbonate (HCO3)	mg/L	5	50.1	5.3	<5.0	<5.0	5.1
Carbonate (CO3)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	4.69	<0.50	<0.50	<0.50	<0.50
Conductivity (EC)	uS/cm	0.2	133	11.1	11.1	10.7	10.9
Fluoride (F)	mg/L	0.05	0.071	<0.050	<0.050	<0.050	<0.050
Hardness (as CaCO3)	mg/L	n/a	45.8	4.9	4.9	4.7	4.9
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0

Ion Balance	%	n/a	99.5	Low EC	Low EC	Low EC	Low EC
Nitrate and Nitrite (as N)	mg/L	0.006	0.521	<0.0060	<0.0060	<0.0060	<0.0060
Nitrate (as N)	mg/L	0.006	0.521	<0.0060	<0.0060	<0.0060	<0.0060
Nitrite (as N)	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Kjeldahl Nitrogen	mg/L	0.05	0.22	-	-	-	<0.20
pH	pH	0.1	7.78	7.12	7.11	7.03	6.86
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	0.0019	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.001	0.0048	0.0034	0.0033	0.0047	0.0034
TDS (Calculated)	mg/L	n/a	71.2	3.2	3.3	3.1	3.2
Sulfate (SO4)	mg/L	0.05	14.4	0.843	0.848	0.838	0.786
Total Inorganic Carbon	mg/L	1	9.4	3	2.3	2.2	2.2
Total Organic Carbon	mg/L	1	3.9	4.4	3.3	3.4	3.9
Fecal Coliforms	CFU/10 0mL	1	-	-	-	-	-
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Aluminum (Al)-Total	mg/L	0.0002	0.0154	0.0241	0.0226	0.0268	0.0271
Antimony (Sb)-Total	mg/L	0.000005	0.0000861	<0.0000050	<0.0000050	0.000005	0.0000051
Arsenic (As)-Total	mg/L	0.00002	0.000303	0.000214	0.000209	0.000183	0.000195
Barium (Ba)-Total	mg/L	0.00002	0.0167	0.00168	0.00169	0.00223	0.00172
Beryllium (Be)-Total	mg/L	0.000002	0.0000023	0.0000026	0.0000027	0.0000032	0.000003
Bismuth (Bi)-Total	mg/L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000012
Boron (B)-Total	mg/L	0.005	0.0171	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (Cd)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	0.03	9.28	1.06	1.05	1.01	1.06
Cesium (Cs)-Total	mg/L	0.000005	0.0000294	<0.0000050	<0.0000050	<0.0000050	0.0000054
Chromium (Cr)-Total	mg/L	0.00005	0.000073	0.000086	0.000069	0.00008	0.000075
Cobalt (Co)-Total	mg/L	0.000005	0.0000578	0.0000276	0.0000234	0.0000253	0.0000289
Copper (Cu)-Total	mg/L	0.00005	0.00134	0.0011	0.00103	0.000995	0.00109
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

Iron (Fe)-Total	mg/L	0.01	0.043	0.028	0.032	0.022	0.033
Lead (Pb)-Total	mg/L	0.000005	0.0000069	0.0000057	0.0000058	0.0000119	0.0000102
Lithium (Li)-Total	mg/L	0.0002	0.00072	0.0006	0.00058	0.00055	0.00055
Magnesium (Mg)-Total	mg/L	0.03	5.49	0.587	0.576	0.548	0.564
Manganese (Mn)-Total	mg/L	0.000005	0.00365	0.00322	0.00281	0.00226	0.00277
Molybdenum (Mo)-Total	mg/L	0.00001	0.00182	0.000023	0.000021	0.000018	0.000024
Nickel (Ni)-Total	mg/L	0.00005	0.000762	0.00037	0.000325	0.000363	0.000311
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.05	4.15	0.322	0.32	0.295	0.314
Rhenium (Re)-Total	mg/L	0.000005	0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Total	mg/L	0.000005	0.00865	0.000815	0.000782	0.000741	0.000785
Selenium (Se)-Total	mg/L	0.00004	0.00004	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si)-Total	mg/L	0.05	0.31	0.307	0.301	0.345	0.297
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Total	mg/L	0.2	6.02	0.51	0.51	0.46	0.49
Strontium (Sr)-Total	mg/L	0.00001	0.145	0.00432	0.00491	0.00431	0.00473
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.0000033	0.0000014	0.0000016	0.0000014	0.0000016
Thorium (Th)-Total	mg/L	0.000005	0.0000096	0.0000129	0.0000143	0.000015	0.0000189
Tin (Sn)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	0.000027	<0.000010
Titanium (Ti)-Total	mg/L	0.00005	0.000305	0.000172	0.000169	0.000286	0.000432
Tungsten (W)-Total	mg/L	0.00001	0.000031	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-Total	mg/L	0.000001	0.000422	0.00014	0.000141	0.000146	0.000143
Vanadium (V)-Total	mg/L	0.00001	0.000073	0.000052	0.000045	0.000049	0.000065
Yttrium (Y)-Total	mg/L	0.000005	0.0000689	0.000072	0.0000693	0.0000756	0.0000811
Zinc (Zn)-Total	mg/L	0.0001	0.00027	0.00042	0.00032	0.00495	0.00045
Zirconium (Zr)-Total	mg/L	0.00001	0.000036	0.000056	0.000057	0.000061	0.000059
Aluminum (Al)-Dissolved	mg/L	0.0002	0.00978	0.0169	0.0167	0.02	0.0181
Antimony (Sb)-Dissolved	mg/L	0.000005	0.0000856	<0.0000050	0.0000061	<0.0000050	0.0000054
Arsenic (As)-Dissolved	mg/L	0.00002	0.00028	0.000191	0.000189	0.000175	0.000201
Barium (Ba)-Dissolved	mg/L	0.00002	0.0162	0.00168	0.00156	0.0022	0.00161
Beryllium (Be)-Dissolved	mg/L	0.000002	<0.0000020	0.0000025	0.0000025	0.0000026	0.0000026
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010

Boron (B)-Dissolved	mg/L	0.005	0.0169	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (Cd)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	9.29 *	1.03 *	1.03 *	1.00 *	1.05 *
Cesium (Cs)-Dissolved	mg/L	0.000005	0.000028	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000056	0.000062	0.000071	0.000067	0.000082
Cobalt (Co)-Dissolved	mg/L	0.000005	0.000048	0.000016	0.0000153	0.0000153	0.0000219
Copper (Cu)-Dissolved	mg/L	0.00005	0.00127	0.000972	0.000964	0.000929	0.00105
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	0.023	0.01	0.012	<0.010	0.017
Lead (Pb)-Dissolved	mg/L	0.000005	0.0000054	<0.0000050	0.0000053	0.0000092	0.000005
Lithium (Li)-Dissolved	mg/L	0.0002	0.00068	0.00057	0.00057	0.00053	0.00055
Magnesium (Mg)-Dissolved	mg/L	0.03	5.50 *	0.569 *	0.567 *	0.541 *	0.553 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.00232	0.00121	0.00115	0.000576	0.00172
Mercury (Hg)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.00185	0.000022	0.000021	0.000017	0.000024
Nickel (Ni)-Dissolved	mg/L	0.00005	0.000722	0.000303	0.000315	0.000351	0.000297
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	4.17 *	0.296 *	0.317 *	0.275 *	0.303 *
Rhenium (Re)-Dissolved	mg/L	0.000005	0.0000084	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.00844	0.000775	0.000796	0.000705	0.000761
Selenium (Se)-Dissolved	mg/L	0.00004	0.000053	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si)-Dissolved	mg/L	0.05	0.304	0.29	0.29	0.33	0.28
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	6.08 *	0.49 *	0.49 *	0.46 *	0.48 *

Strontium (Sr)-Dissolved	mg/L	0.00001	0.145	0.00431	0.00447	0.00439	0.00487
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000034	0.0000013	0.0000013	0.0000012	0.0000016
Thorium (Th)-Dissolved	mg/L	0.000005	0.000007	0.0000129	0.0000143	0.0000134	0.0000152
Tin (Sn)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	0.000018	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	0.000101	0.00006	0.000054	0.000081	0.000143
Tungsten (W)-Dissolved	mg/L	0.00001	0.000031	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-Dissolved	mg/L	0.000001	0.000394	0.00015	0.000154	0.000132	0.000143
Vanadium (V)-Dissolved	mg/L	0.00001	0.000053	0.000043	0.000045	0.00004	0.000046
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000557	0.0000604	0.0000619	0.000066	0.0000722
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00026	0.00181	0.0022	0.00451	0.00039
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000041	0.000052	0.000053	0.000055	0.000051
Biochemical Oxygen Demand	mg/L	2	-	-	-	-	-
Oil and Grease	mg/L	1	-	-	-	-	-
* = Result Qualified							

ALS		Sample ID	JER AEM-12 (CARAT INTAKE)	AEM-12 (CARAT)	AEM12	JER-AEM -12 (CARAT INTAKE)	JER-AEM-12 (CARAT INTAKE)
3/24/2012		ALS ID	L1030756-5	L1043009-4	L1055190-4	L1087991-1	L1098177-1
Multiple Work Orders		Date Sampled	7/11/2011 8:10:00 AM	8/10/2011 9:30:00 AM	9/7/2011 9:00:00 AM	11/23/2011 6:35:00 AM	12/21/2011 7:00:00 AM
Analyte	Units	LOR	Water	Water	Water	Water	Water
Hardness (as CaCO3)	mg/L	0.5	5.4	5.59	6.2	5.5	5.6
Temperature	Degree C	1	25	25	25	25	25
Total Suspended Solids	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	mg/L	5	15	<10	11	17	14
Turbidity	NTU	0.1	0.72	0.3	0.6	0.81	0.38

Acidity (as CaCO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0
Ammonia (as N)	mg/L	0.005	<0.0050	<0.0050	<0.0050	0.0176	0.0144
Bicarbonate (HCO ₃)	mg/L	5	5.2	5.7	6	5.9	5.9
Carbonate (CO ₃)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50
Conductivity (EC)	uS/cm	0.2	11.9	12.3	16.8	15.1	15.2
Fluoride (F)	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Hardness (as CaCO ₃)	mg/L	n/a	5.2	5.3	6.4	5.8	6.1
Hydroxide (OH)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0
Ion Balance	%	n/a	Low EC	Low EC	Low EC	Low EC	Low EC
Nitrate and Nitrite (as N)	mg/L	0.006	0.0236	0.0157	0.0511	0.0298	0.0312
Nitrate (as N)	mg/L	0.006	0.0236	0.0157	0.0511	0.0298	0.0312
Nitrite (as N)	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Kjeldahl Nitrogen	mg/L	0.05	<0.20	-	-	-	-
pH	pH	0.1	7.03	7.03	6.96	6.77	6.83
Orthophosphate-Dissolved (as P)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total	mg/L	0.001	0.0028	0.003	0.003	0.0022	<0.0010
TDS (Calculated)	mg/L	n/a	3.5	3	4.3	4	4
Sulfate (SO ₄)	mg/L	0.05	0.885	0.932	1.09	1.05	0.934
Total Inorganic Carbon	mg/L	1	2.1	2.1	2.3	1	1.7
Total Organic Carbon	mg/L	1	3.7	3.9	4.3	3.3	2.9
Fecal Coliforms	CFU/10 mL	1	<1	<1	<1	<1	<1
Mercury (Hg)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Aluminum (Al)-Total	mg/L	0.0002	0.0205	0.0144	0.0172	0.0167	0.0138
Antimony (Sb)-Total	mg/L	0.000005	0.0000056	0.0000055	0.0000085	0.0000123	0.0000067
Arsenic (As)-Total	mg/L	0.00002	0.000181	0.00018	0.000163	0.000194	0.000161

Barium (Ba)-Total	mg/L	0.00002	0.0016	0.0017	0.00183	0.00173	0.00191
Beryllium (Be)-Total	mg/L	0.000002	0.0000027	0.0000025	0.0000025	<0.0000020	0.000002
Bismuth (Bi)-Total	mg/L	0.000001	0.0000013	<0.0000010	<0.0000010	0.0000077	<0.0000010
Boron (B)-Total	mg/L	0.005	<0.0050	<0.0050	0.0057	<0.0050	<0.0050
Cadmium (Cd)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000052
Calcium (Ca)-Total	mg/L	0.03	1.14	1.21	1.38	1.24	1.27
Cesium (Cs)-Total	mg/L	0.000005	<0.0000050	0.000006	0.0000059	<0.0000050	<0.0000050
Chromium (Cr)-Total	mg/L	0.00005	0.000085	0.000066	0.000088	0.00009	0.000068
Cobalt (Co)-Total	mg/L	0.000005	0.0000232	0.000015	0.0000192	0.000041	0.0000369
Copper (Cu)-Total	mg/L	0.00005	0.00112	0.0014	0.00168	0.0103	0.00178
Gallium (Ga)-Total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Total	mg/L	0.01	0.019	0.013	0.016	0.069	0.069
Lead (Pb)-Total	mg/L	0.000005	<0.0000050	<0.0000050	0.00002	0.00115	0.00034
Lithium (Li)-Total	mg/L	0.0002	0.0005	0.0005	0.00054	0.00047	0.00053
Magnesium (Mg)-Total	mg/L	0.03	0.598	0.625	0.698	0.668	0.668
Manganese (Mn)-Total	mg/L	0.000005	0.00408	0.00207	0.0021	0.00833	0.0076
Molybdenum (Mo)-Total	mg/L	0.00001	0.000051	0.000183	0.000097	0.000065	0.000083
Nickel (Ni)-Total	mg/L	0.00005	0.000371	0.000334	0.000367	0.000773	0.000616
Phosphorus (P)-Total	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.05	0.296	0.329	0.335	0.348	0.348
Rhenium (Re)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Total	mg/L	0.000005	0.000754	0.000822	0.00083	0.000715	0.000803
Selenium (Se)-Total	mg/L	0.00004	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si)-Total	mg/L	0.05	0.292	0.237	0.279	0.301	0.314
Silver (Ag)-Total	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Total	mg/L	0.2	0.5	0.5	0.57	0.56	0.56
Strontium (Sr)-Total	mg/L	0.00001	0.00485	0.00499	0.00556	0.00498	0.00532
Tellurium (Te)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Total	mg/L	0.000001	0.0000017	0.0000012	0.0000015	0.0000017	0.0000015
Thorium (Th)-Total	mg/L	0.000005	0.0000152	0.0000133	0.000014	0.0000167	0.0000158
Tin (Sn)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	0.000552	0.000021
Titanium (Ti)-Total	mg/L	0.00005	0.000136	0.0001	0.000202	0.000222	0.000131
Tungsten (W)-Total	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

Uranium (U)-Total	mg/L	0.000001	0.000162	0.000283	0.000215	0.000165	0.000164
Vanadium (V)-Total	mg/L	0.00001	0.000046	0.000047	0.000059	0.000042	0.000038
Yttrium (Y)-Total	mg/L	0.000005	0.0000768	0.0000637	0.0000717	0.0000689	0.0000693
Zinc (Zn)-Total	mg/L	0.0001	0.00045	0.00034	0.00066	0.0113	0.0223
Zirconium (Zr)-Total	mg/L	0.00001	0.00005	0.000043	0.000044	0.000065	0.000023
Aluminum (Al)-Dissolved	mg/L	0.0002	0.0168	0.0108	0.0112	0.0124	0.014
Antimony (Sb)-Dissolved	mg/L	0.000005	0.0000051	0.0000051	0.0000067	0.000008	0.0000058
Arsenic (As)-Dissolved	mg/L	0.00002	0.000173	0.000168	0.00018	0.000188	0.000197
Barium (Ba)-Dissolved	mg/L	0.00002	0.00162	0.00162	0.00178	0.00173	0.00181
Beryllium (Be)-Dissolved	mg/L	0.000002	0.0000026	<0.0000020	0.0000022	<0.0000020	0.0000028
Bismuth (Bi)-Dissolved	mg/L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.000050	<0.0000010
Boron (B)-Dissolved	mg/L	0.005	<0.0050	0.0069	0.0069	<0.0060 *	<0.0050
Cadmium (Cd)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.03	1.12 *	1.21 *	1.42 *	1.24 *	1.31 *
Cesium (Cs)-Dissolved	mg/L	0.000005	<0.0000050	0.0000061	0.0000054	<0.0000050	<0.0000050
Chromium (Cr)-Dissolved	mg/L	0.00005	0.000079	0.000066	0.000066	<0.0015 *	0.000065
Cobalt (Co)-Dissolved	mg/L	0.000005	0.0000178	0.0000075	0.0000107	0.0000324	0.0000219
Copper (Cu)-Dissolved	mg/L	0.00005	0.0011	0.00131	0.0015	0.00219	0.00141
Gallium (Ga)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe)-Dissolved	mg/L	0.01	<0.010	<0.010	<0.010	0.035	0.023
Lead (Pb)-Dissolved	mg/L	0.000005	<0.0000050	0.0000054	0.0000072	<0.00025 *	0.0000956
Lithium (Li)-Dissolved	mg/L	0.0002	0.0005	0.00051	0.00048	0.00044	0.0006
Magnesium (Mg)-Dissolved	mg/L	0.03	0.588 *	0.620 *	0.701 *	0.666 *	0.685 *
Manganese (Mn)-Dissolved	mg/L	0.000005	0.00267	0.000293	0.000335	0.00674	0.00306
Mercury (Hg)-	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050

Dissolved							
Molybdenum (Mo)-Dissolved	mg/L	0.00001	0.000027	0.000059	0.000085	<0.00015	0.000043
Nickel (Ni)-Dissolved	mg/L	0.00005	0.000386	0.000322	0.000314	<0.0015 *	0.000475
Phosphorus (P)-Dissolved	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	0.286 *	0.306 *	0.341 *	0.352 *	0.340 *
Rhenium (Re)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Dissolved	mg/L	0.000005	0.000755	0.000805	0.000804	0.000686	0.000863
Selenium (Se)-Dissolved	mg/L	0.00004	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si)-Dissolved	mg/L	0.05	0.281	0.228	0.264	0.284	0.321
Silver (Ag)-Dissolved	mg/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Dissolved	mg/L	0.2	0.50 *	0.50 *	0.57 *	0.55 *	0.59 *
Strontium (Sr)-Dissolved	mg/L	0.00001	0.00517	0.00496	0.00557	0.0049	0.00578
Tellurium (Te)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium (Tl)-Dissolved	mg/L	0.000001	0.0000014	0.000001	0.0000015	0.0000014	0.0000021
Thorium (Th)-Dissolved	mg/L	0.000005	0.0000137	0.0000116	0.0000127	0.0000168	0.0000104
Tin (Sn)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.00020	<0.000010
Titanium (Ti)-Dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	0.000091	<0.000050
Tungsten (W)-Dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Uranium (U)-Dissolved	mg/L	0.000001	0.00015	0.000249	0.000208	0.000144	0.000144
Vanadium (V)-Dissolved	mg/L	0.00001	0.000034	0.000043	0.000051	0.000032	0.000045
Yttrium (Y)-Dissolved	mg/L	0.000005	0.0000709	0.0000563	0.000062	0.0000602	0.0000699
Zinc (Zn)-Dissolved	mg/L	0.0001	0.00046	0.00113	0.00108	<0.010 *	0.00739
Zirconium (Zr)-Dissolved	mg/L	0.00001	0.000053	0.00004	0.000044	<0.00030	0.000038
Biochemical Oxygen Demand	mg/L	2	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0

BEA D NO:	Elevatio n	Distanc e from Core centrelin e	Correctio n	DATE : Apr 29/1 1 k- ohms (°C)	DATE : May 31/1 1 k- ohms (°C)	DATE : Jul 6/11 k- ohms (°C)	DATE : Jul 14/1 1 k- ohms (°C)	DATE : Aug 16/11 k- ohms (°C)	DATE : Sep 14/11 k- ohms (°C)	DATE : Nov 16/11 k- ohms (°C)	DATE : Dec 20/11 k- ohms (°C)
	(m)	(m)									
1	521.6	12.66	0.06	26.4	6.32	3.67	5.33	10.4	10.16	55.89	N/A
2	521.6	8.25	0.05	24.2	18.53	17.67	17.58	17.15	16.95	17.17	18.68
3	520.5	5.17	0.04	23	20.68	18.90	18.73	17.82	17.51	17.24	18.23
4	519.5	-1.32	0.04	19.5	20.01	20.28	20.30	20.12	19.86	19.32	19.1
5	518.1	-2.81	0.03	19.3	19.84	20.13	20.15	20.05	19.84	19.36	19.14
6	517.6	-4.30	0.15	19.3	19.81	20.10	20.13	20.05	19.89	19.43	19.22
7	517.5	-5.78	0.04	19.1	19.56	19.84	19.87	19.79	19.66	19.25	19.06
8	517.5	-7.27	0.04	18.9	19.44	19.69	19.70	19.64	19.5	19.14	18.97
9	517.4	-8.77	0.04	18.8	19.3	19.53	19.54	19.49	19.37	19.05	18.89
10	517.4	-10.27	0.04	18.7	19.12	19.32	19.34	19.3	19.2	18.92	18.77
11	517.4	-11.76	0.04	18.5	18.9	19.08	19.10	19.08	18.99	18.75	18.63
12	517.2	-13.28	0.05	18.3	18.68	18.85	18.87	18.86	18.8	18.6	18.5
13	517.3	-14.77	0.04	18.1	18.4	18.55	18.56	18.58	18.53	18.39	18.3

East Dam: line 1831

BEA D NO:	Elevati on	Distanc e from Core centrelin e	Correcti on	DATE : May 31/1 1 k- ohms (°C)	DATE : Jul 6/11 k- ohms (°C)	DATE : Jul 14/1 1 k- ohms (°C)	DATE : Aug 16/11 k- ohms (°C)	DATE : Sep 13/11 k- ohms (°C)	DATE : Nov 16/11 k- ohms (°C)	DATE : Dec 20/11 k- ohms (°C)	DATE : Dec 20/11 k- ohms (°C)
	(m)	(m)									
1	519.6		0.04	6.38	4.23	5.47	10.37	10.84	N/A	N/A	N/A
2	519.5	8.63	0.04	16.72		11.32	11.36	14.12	19.54	31.01	18.68

				0.43															
3	515.6	6.67	0.03	16.33	0.02	16.43	0.10	13.3	4.09	14.5	2.36	15.01	1.68	17.7	-1.55	23.15	-6.67	18.23	-2.11
4	515.5	3.78	0.04	22.1	5.78	20.65	4.50	20.44	4.30	19.68	-3.58	19.2	-3.11	18.6	-2.50	18.79	-2.69	19.1	-3.01
5	515.5	3.07	0.02	21.91	5.64	20.88	4.73	20.69	4.55	19.96	-3.87	19.49	-3.41	18.82	-2.74	18.86	-2.78	19.14	-3.06
6	515.5	1.53	0.00	21.74	5.51	21.03	4.88	20.84	4.71	20.13	-4.05	19.66	-3.60	18.96	-2.90	18.9	-2.84	19.22	-3.02
7	515.4	-0.07	0.05	21.6	5.34	21.17	4.96	21	4.81	20.31	-4.17	19.83	-3.71	19.12	-3.02	19.01	-2.91	19.06	-2.97
8	515.4	-1.44	0.03	21.39	5.18	21.16	4.97	21.04	4.86	20.39	-4.27	19.9	-3.80	19.17	-3.09	19.04	-2.96	18.97	-2.87
9	515.3	-2.91	0.04	21.24	5.03	21.13	4.93	21.03	4.84	20.44	-4.30	20	-3.89	19.26	-3.17	19.08	-2.99	18.89	-2.79
10	515.3	-4.40	0.02	21.1	4.93	21.06	4.89	20.98	4.82	20.49	-4.37	20.06	-3.96	19.33	-3.26	19.14	-3.07	18.77	-2.67
11	515.3	-5.91	0.05	20.98	4.79	20.96	4.77	20.89	4.71	20.49	-4.34	20.08	-3.95	19.4	-3.29	19.18	-3.08	18.63	-2.53
12	515.4	-7.40	0.03	20.8	4.64	20.83	4.67	20.78	4.63	20.42	-4.29	20.08	-3.97	19.41	-3.32	19.2	-3.12	18.5	-2.38

South East Dam: line 1832

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)	
				DATE: 2011-04-29	2011-06-02	DATE: 2011-06-02	2011-07-06	DATE: 2011-07-06	2011-07-14	DATE: 2011-07-14	2011-08-16	DATE: 2011-08-16	2011-09-13	DATE: 2011-09-13	2011-11-16
	(m)	(m)													
1	517.5	8.20	0.04	21.9	-5.61	19.15	-3.06	16.61	-0.30	16.61	-0.30	16.45	-0.11	16.38	-0.56
2	516.1	4.50	0.03	21.2	-5.01	21.93	-5.65	22.01	-5.72	21.95	-5.66	21.52	-5.29	21.04	-4.86
3	515.8	2.60	0.05	21	-4.81	21.82	-5.53	21.96	-5.65	21.93	-5.63	21.57	-5.31	21.16	-4.95
4	515.7	0.20	0.02	21.1	-4.93	21.9	-5.63	22.08	-5.79	22.04	-5.75	21.67	-5.43	21.25	-5.06
5	515.7	-1.20	0.04	21.2	-5.00	21.99	-5.69	22.2	-5.87	22.16	-5.83	21.76	-5.49	21.28	-5.07
6	515.8	-2.70	0.02	21.2	-5.02	22.05	-5.76	22.25	-5.93	22.21	-5.90	21.76	-5.51	21.25	-5.06
7	515.8	-4.20	0.02	21.3	-5.11	22.24	-5.92	22.41	-6.06	22.36	-6.02	21.85	-5.59	21.3	-5.11
8	515.7	-5.70	0.08	21.4	-5.13	22.34	-5.95	22.49	-6.07	22.42	-6.01	21.89	-5.56	21.33	-5.07
9	515.7	-7.20	0.05	21.5	-5.25	22.38	-6.01	22.47	-6.09	22.4	-6.03	21.85	-5.56	21.29	-5.07
10	515.8	-8.60	0.04	21.7	-5.44	22.62	-6.22	22.63	-6.23	22.54	-6.15	21.93	-5.64	21.34	-5.12
11	516.2	-9.90	0.03	22.2	-5.88	23.1	-6.62	22.87	-6.44	22.73	-6.32	21.95	-5.66	21.29	-5.09
12	516.3	-11.50	0.03	22.8	-6.38	23.53	-6.97	23.11	-6.63	22.93	-6.49	22.05	-5.75	21.32	-5.11
13	516.5	-12.90	0.03	22.3	-5.96	24	-7.34	23.4	-6.87	23.2	-6.71	22.23	-5.90	21.47	-5.25

South East Dam: line 1833

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)			
				DATE:	2011-04-29	DATE:	2011-06-02	DATE:	2011-07-06	DATE:	2011-07-14	DATE:	2011-08-16	DATE:	2011-09-13	DATE:	2011-11-16
	(m)	(m)															
1	518.6	11.57	0.05	24.4	-7.63	23.93	-7.27	21.15	-4.94	21.07	-4.87	19.09	-2.99	18.06	-1.92	17.44	-1.24
2	518.3	9.79	0.03	23.2	-6.71	23.39	-6.86	21.99	-5.70	21.82	-5.55	20.57	-4.43	19.72	-3.63	18.75	-2.66
3	518.2	9.01	0.03	22.3	-5.96	22.78	-6.36	21.90	-5.62	21.96	-5.67	21.01	-4.84	20.31	-4.19	19.29	-3.21
4	516.4	6.28	0.03	20.9	-4.74	21.65	-5.40	21.59	-5.35	21.76	-5.50	21.38	-5.17	20.9	-4.74	20.01	-3.91
5	516.4	4.86	0.04	20.8	-4.63	21.64	-5.39	21.71	-5.45	21.05	-4.86	21.43	-5.20	20.96	-4.78	20.06	-3.94
6	516.5	3.38	0.03	20.8	-4.64	21.67	-5.42	21.82	-5.55	21.80	-5.53	21.47	-5.25	21.41	-5.19	20.04	-3.94
7	516.6	1.88	0.02	20.9	-4.75	21.8	-5.54	21.82	-5.56	21.98	-5.70	21.52	-5.30	20.98	-4.82	20.01	-3.92
8	516.8	0.43	0.02	21	-4.84	21.92	-5.65	21.90	-5.63	22.06	-5.77	21.55	-5.33	20.97	-4.81	19.98	-3.89
9	517.1	-1.06	0.04	21.3	-5.09	22.18	-5.85	22.16	-5.83	22.19	-5.86	21.57	-5.32	20.91	-4.73	19.88	-3.77
10	517.2	-2.52	0.05	21.5	-5.25	22.42	-6.04	22.23	-5.88	22.27	-5.92	21.58	-5.32	20.92	-4.73	19.87	-3.75
11	517.3	-4.00	0.03	21.9	-5.62	22.72	-6.31	21.32	-5.11	22.38	-6.03	21.59	-5.35	20.9	-4.74	19.84	-3.74

South East Dam: line 1997

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)	
				DATE:	2011-04-29	DATE:	2011-06-02	DATE:	2011-07-06	DATE:	2011-07-14	DATE:	2011-08-16	DATE:	2011-09-13	DATE:	2011-11-16
	(m)	(m)															
1	N/A	12.37	0.03	31.5	-12.33	24.43	-7.67	20.11	-4.00	18.66	-2.57	16.43	-0.10	15.65	0.86	16.59	-0.29
2	N/A	11.37	0.02	30.6	-11.82	25.2	-8.26	20.95	-4.79	20.26	-4.15	17.16	-0.96	16.71	-0.44	16.54	-0.24
3	523.80	10.37	0.00	30.7	-11.90	25.06	-8.18	20.69	-4.57	20.11	-4.03	17.25	-1.08	16.73	-0.48	16.77	-0.53
4	523.32	9.77	-0.01	39.4	-16.35	25.7	-8.65	21.80	-5.57	21.17	-5.02	18.50	-2.44	17.64	-1.52	17.21	-1.04
5	522.81	9.00	0.02	28.9	-10.78	25.83	-8.72	22.10	-5.80	21.51	-5.29	19.09	-3.02	18.07	-1.96	17.47	-1.30
6	522.50	8.12	0.05	28.6	-10.56	25.99	-8.80	22.37	-6.00	21.81	-5.52	19.53	-3.42	19.44	-3.33	17.70	-1.53
7	522.05	7.35	-0.01	27.5	-9.90	25.89	-8.79	22.59	-6.25	22.22	-5.93	20.11	-4.04	18.96	-2.91	18.01	-1.92
8	521.46	6.59	0.02	26.4	-9.12	25.59	-8.54	22.94	-6.50	22.56	-6.19	20.64	-4.51	19.48	-3.40	18.36	-2.27
9	520.94	5.88	0.02	25.3	-8.33	25.14	-8.21	23.21	-6.72	22.80	-6.39	21.10	-4.93	19.98	-3.89	18.73	-2.65
10	520.55	5.08	0.00	24.4	-7.68	24.63	-7.85	23.23	-6.76	22.86	-6.46	21.35	-5.17	20.30	-4.21	19.00	-2.94
11	520.12	4.26	0.03	23.7	-7.11	24.18	-7.48	23.18	-6.69	22.87	-6.44	21.55	-5.32	20.57	-4.43	19.25	-3.17
12	519.85	3.44	0.03	23.1	-6.62	23.75	-7.14	23.06	-6.59	22.81	-6.39	21.64	-5.40	20.72	-4.57	19.40	-3.31
13	519.72	2.47	0.00	22.7	-6.33	23.45	-6.94	22.75	-6.37	22.69	-6.32	21.58	-5.37	20.69	-4.57	19.41	-3.35
14	519.65	1.52	0.02	22.5	-6.14	23.29	-6.79	22.77	-6.36	22.61	-6.23	21.52	-5.30	20.64	-4.51	19.40	-3.32
15	519.61	0.04	0.02	22.2	-5.89	22.98	-6.54	22.62	-6.24	22.44	-6.09	21.38	-5.18	20.53	-4.41	19.34	-3.27
16	519.61	-1.24	0.00	21.9	-5.65	22.75	-6.37	22.45	-6.12	22.24	-5.94	21.26	-5.09	20.36	-4.27	19.25	-3.20

West Dam: line 1914

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)			
				DAT E:	2011-04-29	DAT E:	2011-05-31	DAT E:	2011-07-06	DAT E:	2011-07-14	DAT E:	2011-08-16	DAT E:	2011-09-13	DAT E:	2011-11-16	DAT E:	2011-12-20
1		33.5	0.02	32.8	#VALUE!	10.8	#VALUE!	7.00	17.44	7.48	16.01	9.20	11.63	14.75	2.01	31.18	-12.16	38.72	-16.02
2	518.47	23.5	0.03	OL		OL		OL		OL		OL		OL		OL		OL	
3	518.54	13.8	0.02	25.5	-8.48	25.43	-8.43	21.08	-4.91	20.53	-4.41	19.07	-3.00	18.42	-2.33	17.78	-1.64	18.91	-2.83
4	517.31	9.0	0.04	23.5	-6.94	24.18	-7.47	22.59	-6.20	22.16	-5.83	20.70	-4.54	19.91	-3.80	19.02	-2.93	19.55	-3.45
5	516.37	6.0	0.02	22.4	-6.06	23.09	-6.63	22.63	-6.25	22.38	-6.04	21.30	-5.11	20.58	-4.45	19.56	-3.48	19.66	-3.58
6	516.28	3.2	0.00	21.6	-5.39	22.37	-6.05	22.48	-6.14	22.37	-6.05	21.62	-5.41	20.17	-4.09	19.89	-3.82	19.73	-3.67
7	516.20	0.0	0.02	20.7	-4.56	21.35	-5.15	21.72	-5.47	21.76	-5.51	21.58	-5.35	21.21	-5.03	20.35	-4.24	20.03	-3.94
8	513.48	-0.8	0.03	20.3	-4.18	20.72	-4.57	21.04	-4.86	21.11	-4.93	21.22	-5.02	21.12	-4.93	20.61	-4.47	20.33	-4.21
9	512.62	-3.4	0.02	20.2	-4.10	20.66	-4.53	20.99	-4.83	21.07	-4.90	21.20	-5.02	21.15	-4.97	20.70	-4.56	20.41	-4.29
10	512.81	-5.4	0.04	20.2	-4.08	20.68	-4.52	21.01	-4.83	21.08	-4.89	21.24	-5.03	21.20	-5.00	20.72	-4.56	20.43	-4.29
11	513.04	-7.0	0.03	20.2	-4.09	20.71	-4.56	21.07	-4.89	21.13	-4.94	21.29	-5.09	21.23	-5.03	20.72	-4.57	20.42	-4.29
12	513.82	-8.4	0.03	20.3	-4.18	20.9	-4.74	21.31	-5.10	21.38	-5.17	21.49	-5.26	21.31	-5.10	20.62	-4.48	20.29	-4.17
13	514.74	-9.8	0.10	20.8	-4.57	21.53	-5.23	21.99	-5.63	22.05	-5.68	22.02	-5.65	23.65	-7.00	20.71	-4.49	20.38	-4.19
14	515.59	-11.1	0.03	21.6	-5.36	21.83	-5.56	22.27	-5.94	22.29	-5.95	21.94	-5.66	21.32	-5.11	20.15	-4.04	19.90	-3.80
15	516.55	-12.3	0.02	21.7	-5.46	22.59	-6.22	22.84	-6.42	22.79	-6.38	21.96	-5.68	21.10	-4.93	19.85	-3.76	19.75	-3.67
16	517.53	-13.6	0.06	22.6	-6.18	23.5	-6.92	23.34	-6.79	23.15	-6.64	21.67	-5.39	20.67	-4.50	19.53	-3.41	19.71	-3.59

West Dam: line 1915

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)			
				DATE	2011	DATE	2011	DATE	2011	DATE	2011	DATE	2011	DATE	2011	DATE	2011		
	(m)	(m)		:	-04-29	:	-05-31	:	-07-06	:	-07-14	:	-08-16	:	-09-13	:	-11-16	:	-12-20
1		23.2	0.04	34.8	14.11	17.05	0.81	17.18	0.96	16.97	0.72	15.83	0.64	15.65	0.87	16.78	0.50	25.80	8.67
2	520.09	18.2	0.03	32.2	12.73	23.49	6.94	18.63	2.54	18.42	2.32	17.25	1.05	16.96	0.72	16.89	0.64	21.70	5.45
3	519.94	13.4	0.03	36.8	15.11	26.16	8.94	21.42	5.20	20.96	4.79	19.50	3.41	18.92	2.83	18.28	2.17	19.70	3.61
4	518.60	8.6	0.02	23.2	-6.72	24.05	7.39	22.81	6.40	22.46	6.11	21.06	4.89	20.35	4.24	19.31	3.24	19.42	3.34
5	517.74	5.7	0.02	21.6	-5.37	22.5	6.14	22.60	6.22	22.48	6.12	21.65	5.41	21.04	4.87	19.92	3.83	19.63	3.55
6	517.22	2.3	0.03	21	-4.83	21.88	5.60	22.29	5.95	22.29	5.95	21.81	5.54	21.29	5.09	20.13	4.02	19.74	3.65
7	517.26	0.0	0.00	20.3	-4.21	20.89	4.76	21.36	5.18	21.42	5.23	24.48	7.74	21.31	5.13	20.60	4.49	20.29	4.20
8	514.75	-1.6	0.02	20.1	-4.00	20.62	4.49	20.98	4.82	21.05	4.88	21.22	5.03	21.17	4.99	20.70	4.56	20.40	4.29
9	514.24	-4.6	0.03	20.1	-3.99	20.61	4.47	20.94	4.77	21.00	4.83	21.15	4.96	21.10	4.92	20.65	4.51	20.37	4.25
10	514.32	-6.6	0.03	20.1	-3.99	20.57	4.43	20.89	4.73	20.95	4.78	21.07	4.89	21.01	4.84	20.54	4.41	20.27	4.15
11	514.38	-8.6	0.03	20.1	-3.99	20.58	4.44	20.89	4.73	20.94	4.77	21.02	4.84	20.92	4.75	20.44	4.31	20.18	4.07
12	514.21	-10.6	0.04	20.1	-3.98	20.52	4.38	20.82	4.65	20.87	4.70	20.92	4.74	20.80	4.63	20.34	4.21	20.09	3.97
13	514.77	-12.4	0.04	20.2	-4.08	20.66	4.51	20.95	4.77	20.98	4.80	20.88	4.71	20.69	4.53	20.12	4.00	19.88	3.77
14	515.30	-14.6	0.04	20.3	-4.17	20.78	4.62	21.02	4.83	21.01	4.83	20.74	4.58	20.47	4.33	19.84	3.73	19.63	3.53
15	516.06	-16.2	0.03	20.5	-4.37	21.05	4.87	21.11	4.93	21.03	4.85	20.47	4.34	20.11	4.00	18.42	2.32	19.30	3.22
16	516.73	-18.0	0.05	20.8	-4.62	21.4	5.16	21.04	4.84	20.87	4.69	20.07	3.94	19.65	3.54	18.98	2.87	19.02	2.92

West Dam: line1916

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)	
				DATE:	2011-04-29	DATE:	2011-05-31	DATE:	2011-07-06	DATE:	2011-07-14	DATE:	2011-08-16	DATE:	2011-09-13	DATE:	2011-11-16
	(m)	(m)															
1		30.0	0.04														
2	520.25	25.0	0.02	33.10	-13.23	17.02	-0.80	17.17	-0.97	16.93	-0.69	16.17	-1.25	16.06	0.34	17.34	-1.16
3	520.35	20.0	0.03	31.60	-12.39	21.63	-5.39	18.63	-2.54	18.35	-2.24	17.42	-1.45	17.02	-0.79	17.67	-1.51
4	520.53	17.0	0.02	30.80	-11.94	23.19	-6.71	19.10	-3.03	18.70	-2.62	17.61	-2.12	17.16	-0.96	17.43	-1.26
5	520.54	14.0	0.03	30.00	-11.45	26.73	-9.34	20.13	-4.02	19.61	-3.52	18.22	-3.75	17.65	-1.49	18.12	-2.00
6	520.52	11.0	0.02	28.40	-10.46	27.26	-9.71	22.67	-6.28	21.86	-5.60	19.85	-5.02	18.87	-2.79	18.66	-2.58
7	520.31	8.0	0.03	26.60	-9.25	26.89	-9.45	24.14	-7.45	23.47	-6.92	21.20	-6.13	19.88	-3.78	18.94	-2.85
8	520.33	6.0	0.04	24.40	-7.64	25.26	-8.28	24.55	-7.75	24.21	-7.49	22.50	-6.51	21.00	-4.82	19.70	-3.60
9	517.81	4.0	0.03	22.30	-5.96	23.21	-6.71	23.54	-6.98	23.51	-6.95	22.97	-6.40	22.00	-5.71	20.87	-4.71
10	517.69	1.0	0.02	21.80	-5.54	22.70	-6.31	23.10	-6.63	23.12	-6.65	22.82	-6.34	22.00	-5.72	20.91	-4.75
11	517.69	-1.0	0.04	21.80	-5.52	22.61	-6.21	22.99	-6.53	23.01	-6.54	22.74	-6.20	22.00	-5.70	20.92	-4.74
12	518.08	-2.8	0.03	21.90	-5.62	22.66	-6.26	22.99	-6.54	22.99	-6.54	22.60	-6.00	21.70	-5.45	20.69	-4.54
13	518.98	-4.5	0.03	22.70	-6.30	23.18	-6.69	23.30	-6.79	23.23	-6.73	22.34	-5.53	21.20	-5.01	20.13	-4.02
14	519.74	-6.3	0.03	22.90	-6.46	23.72	-7.12	23.51	-6.95	23.28	-6.77	21.79	-4.64	20.50	-4.37	19.53	-3.44
15	520.49	-8.1	0.02	23.60	-7.04	24.30	-7.58	23.21	-6.72	22.78	-6.37	20.79	-4.65	19.64	-3.56	18.79	-2.71

West Dam: lin444e 1917

BEA D NO.	ELEVATIO N (m)	DISTANCE FROM CORE CENTERLIN E (m)	CORRECTIO N	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)	k- ohms (°C)
				DATE: 2011 -04- 29	DATE: 2011 -05- 31	DATE: 2011 -07- 06	DATE: 2011 -07- 14	DATE: 2011 -08- 16	DATE: 2011 -09- 13	DATE: 2011 -11- 16	DATE: 2011 -12- 20	
1	516.30	8.0	0.03	23.30 -6.79	23.99 -7.33	22.64 -6.25	22.24 -5.91	10.58 8.74	20.00 -3.90	19.15 -3.07	19.62 -3.53	
2	516.83	5.0	0.06	22.70 -6.27	23.41 -6.84	22.92 -6.45	22.64 -6.22	21.45 -5.20	20.65 -4.48	19.58 -3.46	19.73 -3.61	
3	516.79	2.0	0.04	22.01 -5.71	22.93 -6.48	22.94 -6.48	22.77 -6.34	21.73 -5.46	20.91 -4.73	19.72 -3.62	19.61 -3.51	
4	517.01	-1.0	0.04	21.80 -5.52	22.64 -6.24	22.96 -6.50	22.90 -6.45	22.22 -5.88	21.44 -5.21	20.13 -4.01	19.82 -3.71	
5	516.38	-4.0	0.03	21.20 -5.01	22.00 -5.71	22.39 -6.04	22.40 -6.05	22.00 -5.71	21.35 -5.14	20.06 -3.95	19.70 -3.61	
6	516.32	-6.0	0.03	21.00 -4.83	21.74 -5.48	22.16 -5.84	22.19 -5.87	21.90 -5.62	21.30 -5.10	20.06 -3.95	19.70 -3.61	
7	516.34	-8.0	0.03	20.80 -4.64	21.56 -5.33	22.01 -5.72	22.05 -5.75	21.79 -5.53	21.22 -5.02	20.01 -3.91	19.66 -3.57	
8	516.36	-10.0	0.03	20.70 -4.55	21.46 -5.24	21.94 -5.66	21.99 -5.70	21.72 -5.46	21.10 -4.92	19.90 -3.80	19.60 -3.51	
9	516.35	-11.9	0.03	20.50 -4.37	21.30 -5.10	21.78 -5.52	21.81 -5.54	21.48 -5.25	20.87 -4.71	19.72 -3.63	19.46 -3.37	
10	516.40	-13.9	0.02	20.50 -4.38	21.34 -5.14	21.75 -5.50	21.74 -5.49	21.28 -5.09	20.65 -4.52	19.56 -3.48	19.41 -3.33	
11	516.44	-15.9	0.03	20.70 -4.55	21.48 -5.25	21.69 -5.44	21.61 -5.37	20.96 -4.79	20.35 -4.23	19.36 -3.28	19.35 -3.27	
12	516.43	-18.0	0.02	20.70 -4.56	21.49 -5.27	21.39 -5.19	21.24 -5.05	20.50 -4.38	19.91 -3.82	19.09 -3.02	19.23 -3.16	

West Dam: line 1918

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)			
				DATE:	2011-04-29	DATE:	2011-05-31	DATE:	2011-07-06	DATE:	2011-07-14	DATE:	2011-09-13	DATE:	2011-11-16	DATE:	2011-12-20
	(m)	(m)															
1	517.92	10.1	0.04	24.20	-7.49	24.88	-8.00	22.54	-6.15	22.11	-5.79	19.91	-3.80	19.00	-2.90	19.44	-3.34
2	518.11	7.0	0.03	22.60	-6.21	23.57	-7.00	22.96	-6.51	22.70	-6.30	20.67	-4.53	19.53	-3.44	19.45	-3.36
3	518.03	4.1	0.06	21.70	-5.42	22.69	-6.26	22.83	-6.37	22.72	-6.28	21.00	-4.80	19.80	-3.68	19.47	-3.35
4	518.09	1.2	0.04	21.20	-5.00	22.09	-5.77	22.45	-6.08	22.42	-6.05	21.19	-4.99	19.91	-3.80	19.51	-3.41
5	517.54	-1.7	0.08	21.10	-4.87	21.93	-5.60	22.29	-5.90	22.29	-5.90	21.23	-4.98	19.99	-3.84	19.59	-3.45
6	517.59	-3.6	0.00	21.00	-4.86	21.80	-5.56	22.13	-5.85	22.15	-5.86	21.11	-4.96	19.92	-3.85	19.52	-3.46
7	517.63	-5.7	0.03	21.00	-4.83	21.72	-5.46	22.02	-5.72	22.01	-5.72	20.98	-4.81	19.83	-3.73	19.46	-3.37
8	517.63	-7.6	0.03	20.90	-4.74	21.69	-5.44	21.96	-5.67	21.93	-5.65	20.80	-4.64	19.69	-3.60	19.36	-3.28
9	517.60	-9.7	0.05	20.90	-4.72	21.67	-5.40	21.89	-5.59	21.82	-5.53	20.56	-4.40	19.54	-3.43	19.25	-3.15
10	517.58	-11.6	0.04	20.90	-4.73	21.62	-5.37	21.73	-5.46	21.61	-5.36	20.30	-4.17	19.36	-3.27	19.15	-3.06
11	517.62	-13.6	0.04	20.90	-4.73	21.56	-5.32	21.45	-5.22	21.28	-5.07	19.94	-3.83	19.12	-3.03	19.04	-2.95
12	517.57	-15.6	0.04	21.00	-4.82	21.59	-5.34	21.21	-5.01	20.99	-4.81	19.63	-3.53	18.71	-2.61	18.99	-2.89

West Dam: line 1919

BEA D NO.	ELEVATIO N	DISTANCE FROM CORE CENTERLI NE	CORRECTI ON	k- ohms (°C)		k- ohms (°C)		k- ohms (°C)		k- ohms (°C)		k- ohms (°C)		k- ohms (°C)		k- ohms (°C)			
				DATE :	2011 -04- 29	DATE :	2011- 05-31	DATE :	2011 -07- 06	DATE :	2011 -07- 14	DATE :	2011 -08- 16	DATE :	2011 -09- 13	DATE :	2011 -11- 16	DATE :	2011 -12- 20
	(m)	(m)																	
1	520.55	20.7	0.02	31.80	-12.51	21.92	-5.65	18.52	2.43	18.24	2.14	17.34	1.16	17.01	0.78	17.71	1.57	22.86	6.44
2	520.63	17.7	0.00	31.00	-12.07	23.98	-7.35	18.92	2.86	18.56	2.49	17.52	1.38	17.16	0.98	17.42	1.27	21.44	5.25
3	520.55	15.0	0.03	30.20	-11.57	27.06	-9.56	19.81	3.72	19.33	3.25	18.04	1.92	17.59	1.43	17.90	1.76	21.40	5.18
4	520.31	11.7	0.03	28.80	-10.71	27.62	-9.94	22.24	5.91	21.43	5.21	19.54	3.45	18.75	2.66	18.60	2.51	21.28	5.08
5	520.33	8.6	0.04	27.10	-9.58	27.25	-9.68	23.88	7.24	23.16	6.66	20.91	4.73	19.82	3.71	18.98	2.88	20.13	4.01
6	520.33	5.7	0.04	25.30	-8.31	26.01	-8.82	24.66	7.84	24.19	7.48	22.07	5.76	20.70	4.54	19.27	3.18	19.32	3.23
7	520.34	2.8	0.08	24.10	-7.37	25.05	-8.09	24.62	7.77	24.32	7.54	22.61	6.17	21.21	4.97	19.58	3.44	19.40	3.26
8	520.40	0.8	0.02	23.90	-7.27	24.78	-7.95	24.38	7.64	24.11	7.44	22.47	6.12	21.09	4.92	19.47	3.39	19.42	3.34
9	520.43	-1.2	0.04	23.80	-7.17	24.55	-7.75	24.15	7.45	23.90	7.25	22.28	5.94	20.93	4.75	19.41	3.31	19.43	3.33
10	520.49	-3.2	0.03	23.80	-7.18	24.49	-7.72	24.05	7.38	23.77	7.16	22.00	5.71	20.69	4.54	19.25	3.17	19.43	3.34
11	520.59	-5.2	0.02	23.80	-7.19	24.64	-7.84	23.89	7.26	23.51	6.96	21.49	5.27	20.28	4.17	19.03	2.96	19.36	3.29
12	520.72	-7.3	0.06	24.00	-7.31	OL	#VALUE!	23.65	7.04	23.10	6.59	20.92	4.72	19.85	3.72	18.80	2.68	19.40	3.28

West Dam: line 1921

BEAD NO.	ELEVATION (m)	DISTANCE FROM CORE CENTERLINE (m)	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)	
				DATE : 2011-04-29		DATE : 2011-05-31		DATE : 2011-07-06		DATE : 2011-07-14		DATE : 2011-08-16		DATE : 2011-09-13		DATE : 2011-11-16	
1	520.55	20.7	0.02	31.80	-12.51	21.92	-5.65	18.52	2.43	18.24	2.14	17.34	1.16	17.01	0.78	17.71	1.57
2	520.63	17.7	0.00	31.00	-12.07	23.98	-7.35	18.92	2.86	18.56	2.49	17.52	1.38	17.16	0.98	17.42	1.27
3	520.55	15.0	0.03	30.20	-11.57	27.06	-9.56	19.81	3.72	19.33	3.25	18.04	1.92	17.59	1.43	17.90	1.76
4	520.31	11.7	0.03	28.80	-10.71	27.62	-9.94	22.24	5.91	21.43	5.21	19.54	3.45	18.75	2.66	18.60	2.51
5	520.33	8.6	0.04	27.10	-9.58	27.25	-9.68	23.88	7.24	23.16	6.66	20.91	4.73	19.82	3.71	18.98	2.88
6	520.33	5.7	0.04	25.30	-8.31	26.01	-8.82	24.66	7.84	24.19	7.48	22.07	5.76	20.70	4.54	19.27	3.18
7	520.34	2.8	0.08	24.10	-7.37	25.05	-8.09	24.62	7.77	24.32	7.54	22.61	6.17	21.21	4.97	19.58	3.44
8	520.40	0.8	0.02	23.90	-7.27	24.78	-7.95	24.38	7.64	24.11	7.44	22.47	6.12	21.09	4.92	19.47	3.39
9	520.43	-1.2	0.04	23.80	-7.17	24.55	-7.75	24.15	7.45	23.90	7.25	22.28	5.94	20.93	4.75	19.41	3.31
10	520.49	-3.2	0.03	23.80	-7.18	24.49	-7.72	24.05	7.38	23.77	7.16	22.00	5.71	20.69	4.54	19.25	3.17
11	520.59	-5.2	0.02	23.80	-7.19	24.64	-7.84	23.89	7.26	23.51	6.96	21.49	5.27	20.28	4.17	19.03	2.96
12	520.72	-7.3	0.06	24.00	-7.31	OL	#VALUE!	23.65	7.04	23.10	6.59	20.92	4.72	19.85	3.72	18.80	2.68

West Dam: line 1922

BEAD NO.	ELEVATION	DISTANCE FROM CORE CENTERLINE	CORRECTION	k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)		k-ohms (°C)			
				DAT E:	2011-04-29	DAT E:	2011-05-31	DAT E:	2011-07-06	DAT E:	2011-07-14	DAT E:	2011-08-16	DAT E:	2011-09-13	DAT E:	2011-11-16	DAT E:	2011-12-20
1	521.90	21.42	0.03	36.20	-14.82	16.38	-0.04	11.74	6.61	10.65	8.60	10.95	8.03	13.97	3.10	23.20	-6.71	35.69	-14.57
2	522.00	18.46	-0.02	36.30	-14.92	16.41	-0.12	12.91	4.63	11.44	7.08	11.60	6.80	14.03	2.97	20.56	-4.47	29.09	-10.94
3	522.00	15.46	0.02	34.80	-14.13	16.32	0.02	15.88	0.56	13.87	3.24	12.95	4.61	14.58	2.24	17.93	-1.81	26.67	-9.31
4	522.00	12.61	0.02	33.00	-13.18	19.73	-3.65	17.84	-1.71	17.48	-1.31	16.62	-0.33	16.40	-0.07	17.97	-1.85	24.75	-7.92
5	521.90	9.66	0.03	31.50	-12.33	26.36	-9.08	20.90	-4.74	19.43	-3.34	18.02	-1.89	17.49	-1.32	17.97	-1.84	22.87	-6.44
6	521.60	7.04	0.04	25.50	-8.46	28.13	-10.27	OL	#VALUE!	22.55	-6.16	19.97	-3.86	18.84	-2.74	18.10	-1.97	19.66	-3.56
7	521.70	4.18	0.02	26.30	-9.05	26.67	-9.31	24.63	-7.83	23.99	-7.34	21.34	-5.14	19.77	-3.69	18.57	-2.48	18.92	-2.84
8	522.40	2.29	0.04	26.00	-8.82	26.34	-9.06	24.52	-7.73	23.90	-7.25	21.26	-5.05	19.66	-3.56	18.45	-2.34	18.98	-2.88
9	522.40	0.35	0.02	25.80	-8.69	26.06	-8.88	24.33	-7.60	32.74	-13.04	21.12	-4.94	19.57	-3.49	18.38	-2.29	19.11	-3.04
10	522.50	-1.64	0.03	25.60	-8.54	25.82	-8.70	24.13	-7.44	23.56	-6.99	20.90	-4.74	19.47	-3.38	18.37	-2.27	19.11	-3.03
11	522.50	-3.59	0.02	25.40	-8.41	25.65	-8.59	37.00	-15.22	23.38	-6.86	20.60	-4.47	19.33	-3.26	OL	#VALUE!	19.24	-3.17
12	522.50	-5.55	0.03	OL	#VALUE!	OL	#VALUE!	OL	#VALUE!	OL	#VALUE!	OL	#VALUE!	OL	#VALUE!	OL	#VALUE!	OL	#VALUE!

APPENDIX E: Annual seepage surveys analysis

ALS		Sam ple ID	JER- SPG- 01A	JER- SPG- 01B	JER- SPG- 01C	JER- SPG- DUP01	JER- SPG- 01D	JER- SPG- 02A	JER- SPG- 08A	JER- SPG- 08B	JER- SPG- INFLOW 01	JER- SPG-FB	JER- SPG-TB
3/24/2012		ALS ID	L105993 5-1	L105993 5-2	L105993 5-3	L105993 5-4	L105993 5-5	L105993 5-6	L105993 5-7	L105993 5-8	L105993 5-9	L105993 5-12	L105993 5-13
Multiple Work Orders		Date Sam pled	9/14/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/15/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/15/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM	9/14/201 1 12:00:00 AM
Analyte	U ni ts	LOR	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Hardness (as CaCO ₃)	m g/ L	0.5	116	60	265	259	513	331	130	104	16.3	<1.3	<1.3
Total Suspended Solids	m g/ L	3	40	5	40	56	45	237	7	<3.0	<3.0	<3.0	<3.0
Turbidity	N T U	0.1	24.8	2.65	5.04	19.6	33.4	231	3.62	0.72	3.2	<0.10	<0.10
Acidity (as CaCO ₃)	m g/ L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0
Alkalinity, Total (as CaCO ₃)	m g/ L	5	38.5	30.4	78.9	81.7	73.4	117	67.3	85.9	14.2 *	<5.0	<5.0
Ammonia (as N)	m g/ L	0.005	0.76	0.157	0.489	0.463	2.25	0.205	0.306	<0.0050	<0.0050	<0.0050	<0.0050

Bicarbonate (HCO ₃)	m g/ L	5	47	37.1	96.3	99.7	89.5	143	82.1	105	17.3 *	<5.0	<5.0
Carbonate (CO ₃)	m g/ L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0
Chloride (Cl)	m g/ L	0.5	5.92	1.88	7.03	6.44	7.17	10.5	8.38	4.52	<0.50	<0.50	<0.50
Conductivity (EC)	u S/ c m	0.2	310	159	658	645	1240	793	349	251	38.7 *	1.07	0.91
Fluoride (F)	m g/ L	0.05	<0.050	<0.050	0.091	0.093	0.088	<0.050	0.057	0.104	<0.050	<0.050	<0.050
Hardness (as CaCO ₃)	m g/ L	n/a	116	60.1	266	259	514	331	129	104	16.3	<1.0	<1.0
Hydroxide (OH)	m g/ L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 *	<5.0	<5.0
Ion Balance	%	n/a	124 *	97.1	95.4	100	90	95.4	95.8	105	Low EC	Low TDS	Low TDS
Nitrate and Nitrite (as N)	m g/ L	0.006	14.9	9.84	54	46.6	126	58	12	3.26	0.347	<0.0060	<0.0060
Nitrate (as N)	m g/ L	0.006	14.8	9.84	53.2 *	46.0 *	125 *	58.0 *	12	3.26	0.347	<0.0060	<0.0060
Nitrite (as N)	m g/ L	0.002	0.099	<0.050	0.722	0.625	0.669	0.054	0.056	<0.0020	<0.0020	<0.0020	<0.0020
pH	p H	0.1	7.59	7.76	7.93	7.94	8.05	8.12	8.03	8.06	7.34 *	5.81	5.69
Orthophosphate-Dissolved (as P)	m g/ L	0.001	0.0033	<0.0010	<0.0010	<0.0010	<0.0010	0.0656	0.0018	<0.0010	<0.0010	<0.0010	<0.0010

Phosphorus (P)-Total	m g/L	0.001	0.0503	0.0102	0.0361 *	0.0443 *	0.0115	0.176	0.0473	0.008	0.0049	<0.0010	<0.0010
TDS (Calculated)	m g/L	n/a	157	96.4	441	408	911	529	213	139	18.1	<1.0	<1.0
Sulfate (SO4)	m g/L	0.05	12.5	6.48	38.6	39.3	102	54.6	50.2	18.9	1.36	0.065	<0.050
Total Inorganic Carbon	m g/L	1	11	7.8	20.7	21.1	18.4	29.8	16.7	22.3	4.3	<1.0	<1.0
Total Organic Carbon	m g/L	1	7.4	6.3	7	7.5	3.4	10.5	13.5	6	6.3	2.8	<1.0
Mercury (Hg)-Total	m g/L	0.000 05	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0
Aluminum (Al)-Total	m g/L	0.000 2	0.0743	0.0901	0.122	0.0791	0.0277	0.128	0.136	0.037	0.195	<0.00020	<0.00020
Antimony (Sb)-Total	m g/L	0.000 005	0.000082 1	0.000072 7	0.000146	0.000165	0.000161	0.000348	0.000167	0.000833	0.000012 8	<0.00000 50	<0.00000 50
Arsenic (As)-Total	m g/L	0.000 02	0.00029	0.000322	0.000907	0.000775	0.000716	0.00108	0.000631	0.000376	0.000186	<0.00002 0	<0.00002 0
Barium (Ba)-Total	m g/L	0.000 02	0.0434	0.0171	0.0772	0.0777	0.0647	0.102	0.0443	0.0261	0.0071	<0.00002 0	<0.00002 0
Beryllium (Be)-Total	m g/L	0.000 002	0.000018 1	0.000016 1	0.000012 7	0.000008 4	0.000002 5	0.000010 5	0.000014 6	0.000005 4	0.000040 5	<0.00000 20	<0.00000 20
Bismuth (Bi)-Total	m g/L	0.000 001	0.000001 4	0.000002 1	0.000004 5	0.000002 8	0.000001 2	0.000007 5	0.000003 2	<0.00000 10	0.000002 1	<0.00000 10	<0.00000 10

Boron (B)-Total	m g/L	0.005	0.0579	0.0449	0.102	0.103	0.111	0.0556	0.0483	0.0355	0.0051	<0.0050	<0.0050
Cadmium (Cd)-Total	m g/L	0.000 005	0.000009 4	<0.00000 50	<0.00001 0 *	<0.00001 0 *	<0.00001 0 *	0.000111	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50
Calcium (Ca)-Total	m g/L	0.03	26.3	13.5	63.6	62.4	130	83.7	29.4	24.7	3.94	<0.030	<0.030
Cesium (Cs)-Total	m g/L	0.000 005	0.000081 9	0.000047 1	0.000043	0.000033 6	0.000247	0.000068 9	0.000046 1	0.000017 2	0.000030 9	<0.00000 50	<0.00000 50
Chromium (Cr)-Total	m g/L	0.000 05	0.00029	0.000289	0.000382	0.000234	0.000104	0.000427	0.000909	0.000241	0.00037	<0.00005 0	<0.00005 0
Cobalt (Co)-Total	m g/L	0.000 005	0.00145	0.000262	0.00448	0.00491	0.00149	0.00234	0.0012	0.000185	0.000135	<0.00000 50	<0.00000 50
Copper (Cu)-Total	m g/L	0.000 05	0.00486	0.00456	0.00442	0.00446	0.00863	0.0135	0.00549	0.00581	0.00289	<0.00005 0	<0.00005 0
Gallium (Ga)-Total	m g/L	0.000 05	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0
Iron (Fe)-Total	m g/L	0.01	0.303	0.119	0.365	0.303	0.05	0.209	0.257	0.069	0.17	<0.010	<0.010
Lead (Pb)-Total	m g/L	0.000 005	0.000143	0.000228	0.000324	0.000259	0.000023 4	0.000767	0.00046	0.000096 6	0.000185	<0.00000 50	<0.00000 50
Lithium (Li)-Total	m g/L	0.000 2	0.00404	0.0031	0.00804	0.00767	0.011	0.00383	0.00412	0.00278	0.00078	<0.00020	<0.00020
Magnesium (Mg)-Total	m g/L	0.03	13	6.88	29.3	28.7	56	34.5	15.6	10	1.65	<0.030	<0.030
Manganese (Mn)-Total	m g/L	0.000 005	0.253	0.0331	0.935	1.06	0.718	0.337	0.481	0.00261	0.00321	0.000022 3	0.000017

Molybdenum (Mo)-Total	m g/L	0.00001	0.00332	0.00318	0.01	0.00954	0.00592	0.00293	0.00695	0.00405	0.000111	0.000012	0.000013
Nickel (Ni)-Total	m g/L	0.00005	0.00684	0.00263	0.00823	0.00849	0.00828	0.0314	0.0121	0.00246	0.000788	<0.000050	<0.000050
Phosphorus (P)-Total	m g/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	0.093	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	m g/L	0.05	2.61	1.7	7.11	7.02	11.8	8.19	4.71	4.47	0.366	<0.050	<0.050
Rhenium (Re)-Total	m g/L	0.000005	0.0000142	0.0000052	0.0000161	0.0000153	0.000015	0.0000079	0.0000244	0.0000112	<0.0000050	<0.0000050	<0.0000050
Rubidium (Rb)-Total	m g/L	0.000005	0.00517	0.00281	0.00597	0.00579	0.00836	0.00916	0.00508	0.00347	0.00094	<0.0000050	<0.0000050
Selenium (Se)-Total	m g/L	0.00004	0.000172	0.000154	0.000513	0.000453	0.00244	0.00029	0.000511	0.000221	<0.000040	<0.000040	<0.000040
Silicon (Si)-Total	m g/L	0.05	5.29	4.16	5.46	5.26	4.45	5.01	5.33	3.65	4.17	<0.050	<0.050
Silver (Ag)-Total	m g/L	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na)-Total	m g/L	0.2	8.58	4.71	14.5	14	17.2	16.5	14.3	9.23	1.18	<0.20	<0.20
Strontium (Sr)-Total	m g/L	0.00001	0.139	0.0694	0.325	0.319	0.412	0.325	0.123	0.095	0.0116	<0.000010	<0.000010
Tellurium (Te)-Total	m g/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

Thallium (Tl)-Total	m g/L	0.000001	0.0000137	0.0000077	0.0000174	0.0000163	0.0000273	0.0000237	0.0000123	0.000004	0.0000039	<0.000010	<0.000010
Thorium (Th)-Total	m g/L	0.000005	0.0000585	0.0000637	0.0000674	0.0000364	0.0000073	0.0000415	0.000108	0.0000316	0.0000906	<0.000050	<0.000050
Tin (Sn)-Total	m g/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Titanium (Ti)-Total	m g/L	0.00005	0.00106	0.00201	0.00432	0.00233	0.00159	0.00482	0.00399	0.00114	0.0044	<0.000050	<0.000050
Tungsten (W)-Total	m g/L	0.00001	0.000057	0.000104	0.000199	0.000191	0.000077	0.000373	0.000466	0.000031	<0.000010	<0.000010	<0.000010
Uranium (U)-Total	m g/L	0.000001	0.0437	0.0544	0.183	0.168	0.123	0.0268	0.0848	0.0421	0.00167	<0.000010	<0.000010
Vanadium (V)-Total	m g/L	0.00001	0.00034	0.000445	0.000637	0.000584	0.00197	0.00108	0.000758	0.000333	0.000341	<0.000010	<0.000010
Yttrium (Y)-Total	m g/L	0.000005	0.000616	0.000566	0.000465	0.000304	0.0000733	0.000674	0.000622	0.000198	0.00133	<0.000050	<0.000050
Zinc (Zn)-Total	m g/L	0.00001	0.00166	0.0199	0.00271	0.00324	0.00057	0.00211	0.00079	0.00029	0.00119	0.00276	0.00251
Zirconium (Zr)-Total	m g/L	0.00001	0.000337	0.000287	0.000265	0.000211	0.000038	0.000337	0.000398	0.000173	0.000593	<0.000010	<0.000010
Aluminum (Al)-Dissolved	m g/L	0.00002	0.0545	0.0423	0.0193	0.0238	0.00256	0.00818	0.044	0.0148	0.0899	<0.00020	<0.00020
Antimony (Sb)-Dissolved	m g/L	0.000005	0.0000879	0.000072	0.000149	0.000144	0.000162	0.000338	0.000164	0.00085	0.0000127	<0.000050	<0.000050
Arsenic (As)-Dissolved	m g/L	0.00002	0.000323	0.000289	0.000775	0.000778	0.000762	0.000979	0.000587	0.000357	0.000166	<0.000020	<0.000020

Barium (Ba)- Dissolved	m g/ L	0.000 02	0.042	0.0166	0.0783	0.0759	0.064	0.0979	0.0417	0.0255	0.00582	0.000079	<0.00002 0
Beryllium (Be)- Dissolved	m g/ L	0.000 002	0.000017 1	0.000012 7	0.000005 6	0.000006 1	<0.00000 20	0.000002 6	0.000006 8	0.000004 7	0.000026 1	<0.00000 20	<0.00000 20
Bismuth (Bi)- Dissolved	m g/ L	0.000 001	<0.00000 10	<0.00000 10	<0.00000 10	0.000001 1	<0.00000 10	0.000001 5	<0.00000 10	<0.00000 10	<0.00000 10	<0.00000 10	<0.00000 10
Boron (B)- Dissolved	m g/ L	0.005	0.0611	0.0459	0.102	0.105	0.112	0.0535	0.047	0.036	<0.0050	<0.0050	<0.0050
Cadmium (Cd)- Dissolved	m g/ L	0.000 005	0.000009 3	<0.00000 50	<0.00001 0 *	<0.00001 0 *	<0.00001 0 *	0.000108	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50
Calcium (Ca)- Dissolved	m g/ L	0.03	26.3 *	13.5 *	63.6 *	63.2 *	129 *	84.2 *	29.4 *	24.4 *	3.92 *	<0.030 *	<0.030 *
Cesium (Cs)- Dissolved	m g/ L	0.000 005	0.000077 9	0.000035	0.000024 4	0.000024 5	0.000238	0.000041 3	0.000026 3	0.000013 9	0.000005 2	<0.00000 50	<0.00000 50
Chromium (Cr)- Dissolved	m g/ L	0.000 05	0.000234	0.000216	0.00013	0.000151	<0.00005 0	0.000121	0.000275	0.00018	0.000272	<0.00005 0	<0.00005 0
Cobalt (Co)- Dissolved	m g/ L	0.000 005	0.00138	0.000249	0.00405	0.00419	0.0014	0.0021	0.000955	0.000149	0.000082 2	<0.00000 50	<0.00000 50
Copper (Cu)- Dissolved	m g/ L	0.000 05	0.0044	0.00417	0.00359	0.00364	0.00821	0.012	0.00452	0.00515	0.00255	<0.00005 0	0.000082
Gallium (Ga)- Dissolved	m g/ L	0.000 05	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0
Iron (Fe)- Dissolved	m g/ L	0.01	0.269	0.064	0.213	0.228	<0.010	0.022	0.062	0.033	0.078	<0.010	<0.010

Lead (Pb)-Dissolved	m g/L	0.000 005	0.000096 4	0.000112	0.000088 4	0.000093 3	<0.00000 50	0.00047	0.000094 4	0.000059 2	0.000032 8	<0.00000 50	<0.00000 50
Lithium (Li)-Dissolved	m g/L	0.000 2	0.00406	0.00308	0.00782	0.00749	0.011	0.00367	0.00392	0.00271	0.00063	<0.00020	<0.00020
Magnesium (Mg)-Dissolved	m g/L	0.03	12.9 *	6.77 *	29.2 *	28.5 *	56.1 *	34.0 *	15.3 *	9.88 *	1.63 *	<0.030 *	<0.030 *
Manganese (Mn)-Dissolved	m g/L	0.000 005	0.247	0.0319	0.873	0.915	0.699	0.34	0.425	0.00134	0.00165	0.000024 6	0.000020 9
Mercury (Hg)-Dissolved	m g/L	0.000 05	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0	<0.00005 0
Molybdenum (Mo)-Dissolved	m g/L	0.000 01	0.00341	0.00319	0.0102	0.00944	0.00588	0.00301	0.00687	0.00405	0.000079	0.000012	0.000013
Nickel (Ni)-Dissolved	m g/L	0.000 05	0.00666	0.00248	0.00707	0.00729	0.00803	0.0282	0.00962	0.00219	0.00073	<0.00005 0	<0.00005 0
Phosphorus (P)-Dissolved	m g/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	0.067	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	m g/L	0.05	2.61 *	1.64 *	7.01 *	7.03 *	11.7 *	8.14 *	4.63 *	4.42 *	0.322 *	<0.050 *	<0.050 *
Rhenium (Re)-Dissolved	m g/L	0.000 005	0.000014	0.000005	0.000015 9	0.000015 3	0.000015 1	0.000007 9	0.000024 3	0.000010 9	<0.00000 50	<0.00000 50	<0.00000 50
Rubidium (Rb)-Dissolved	m g/L	0.000 005	0.00511	0.00265	0.00561	0.00556	0.00834	0.00903	0.0048	0.00341	0.000693	<0.00000 50	<0.00000 50
Selenium (Se)-Dissolved	m g/L	0.000 04	0.000219	0.000164	0.000389	0.000461	0.00265	0.000329	0.000416	0.000171	<0.00004 0	<0.00004 0	<0.00004 0
Silicon (Si)-Dissolved	m g/L	0.05	5.13	3.94	5.09	5.09	4.36	4.82	4.88	3.52	3.92	<0.050	<0.050

Silver (Ag)-Dissolved	m g/L	0.000 005	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50	<0.00000 50
Sodium (Na)-Dissolved	m g/L	0.2	8.65 *	4.59 *	14.3 *	14.1 *	17.0 *	16.5 *	14.2 *	9.15 *	1.17 *	<0.20 *	<0.20 *
Strontium (Sr)-Dissolved	m g/L	0.000 01	0.135	0.0668	0.321	0.31	0.414	0.328	0.124	0.0961	0.0113	0.000025	<0.00001 0
Tellurium (Te)-Dissolved	m g/L	0.000 01	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0
Thallium (Tl)-Dissolved	m g/L	0.000 001	0.000013 4	0.000007 2	0.000016 2	0.000016 3	0.000027 2	0.000024 1	0.000011 1	0.000003 7	0.000002 6	<0.00000 10	<0.00000 10
Thorium (Th)-Dissolved	m g/L	0.000 005	0.000069 3	0.000046 6	0.000028 9	0.000029	<0.00000 50	0.000009 2	0.000050 8	0.000023 5	0.000071 6	<0.00000 50	<0.00000 50
Tin (Sn)-Dissolved	m g/L	0.000 01	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0	<0.00001 0
Titanium (Ti)-Dissolved	m g/L	0.000 05	0.000555	0.000411	0.000432	0.000425	<0.00005 0	0.000187	0.000772	0.000341	0.000583	<0.00005 0	<0.00005 0
Tungsten (W)-Dissolved	m g/L	0.000 01	0.000058	0.000107	0.000204	0.000192	0.000078	0.000427	0.000456	0.000026	<0.00001 0	<0.00001 0	<0.00001 0
Uranium (U)-Dissolved	m g/L	0.000 001	0.0436	0.0534	0.182	0.166	0.121	0.0259	0.0804	0.0426	0.00159	<0.00000 10	<0.00000 10
Vanadium (V)-Dissolved	m g/L	0.000 01	0.000301	0.000357	0.0004	0.000415	0.00182	0.000774	0.000483	0.000273	0.00017	<0.00001 0	<0.00001 0
Yttrium (Y)-Dissolved	m g/L	0.000 005	0.000552	0.000464	0.000215	0.000227	0.000046 8	0.000413	0.000341	0.000172	0.00117	<0.00000 50	<0.00000 50

Zinc (Zn)- Dissolved	m g/ L	0.000 1	0.00241	0.0183	0.00264	0.00311	0.00027	0.00193	0.00085	0.00064	0.00186	0.00339	0.00282
Zirconium (Zr)- Dissolved	m g/ L	0.000 01	0.000331	0.000246	0.000132	0.00015	0.000025	0.000237	0.000218	0.000161	0.000437	<0.00001 0	<0.00001 0
* = Result Qualified													