Basic Remediation
COMPANY

MEMORANDUM

To: Brian Rakvica (NDEP)

From: Ranajit Sahu (BRC)

cc: John J. Dodge, PG (DBS&A)
Stephen J. Cullen, Ph.D, PG (DBS&A)

Date: April 6, 2009

Subject: Response-to-Comments and Attachments, 5th Round Groundwater Monitoring Report, BMI Common Areas (Eastside)

Introduction

Basic Remediation Company (BRC) submitted the draft fifth round groundwater monitoring report to the Nevada Division of Environmental Protection (NDEP) on December 23, 2008. The report is entitled, "Fifth Round Groundwater Monitoring Report (April-July 2008), BMI Common Areas (Eastside), Clark County, Nevada, prepared by MWH Americas, Inc., December 2008. The NDEP provided comments in their letter to BRC dated January 7, 2009. In addition, NDEP submitted additional comments while meeting with BRC on February 4, 2009, and in subsequent electronic mail correspondence (dated February 23, 2009).

BRC has prepared this response-to-comments (RTC) document to address the NDEP comments. The document consists of the following:

- Itemized response to NDEP's January 7, 2009 comment letter;
- Attachment A - Figures showing wells with selected groundwater analyte detections exceeding U.S. Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) and Nevada Basic Comparison Levels (BCLs);
- Attachment B - A revised statistical table of selected analyte detections exceeding USEPA MCLs and Nevada BCLs by water-bearing zone (Shallow, Middle, Deep);
- Attachment C - Figure 3-1 for the draft report, entitled, "Potentiometric Surface Map of the Shallow Water-bearing Zone Wells, Fifth Round Groundwater Event, (April-July 2008)"; and
- Attachment D - Revised cation/anion balance table.

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

Ranajit Sahu 4/6/09

Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2009) Date
BRC Project Manager

Response to Nevada Division of Environmental Protection N(DEP) Comments to:
Fifth Round Groundwater Monitoring Report (April – July 2008)
dated December 2008 (received December 24, 2008)
NDEP Facility ID# H-000688

1. General comment, NDEP acknowledges that several of the comments below are related to the overall site investigation of groundwater and not related to the monitoring per say. NDEP is providing these comments because the issues were discovered as a result of the review of the groundwater monitoring report.

Response: Comment noted. BRC appreciates NDEP's comments regarding the overall groundwater investigation project.

2. Section 2.1, page 8, well MCF-03A continues to have an excessive amount of sedimentation. BRC has not identified the root cause of this problem. It is requested that BRC identify the root cause of this problem at this time. The well should be repaired or replaced (as appropriate). Please provide a schedule to address this issue in the revised report.

Response: BRC will evaluate the condition of Deep Zone well MCF-03A (located at the southeast corner of the Eastside Area) right after the installation of the new wells in the Eastside (expected in late April 2009) and discuss the results with NDEP. BRC will make every attempt to redevelop and repair this well.

3. Sections 2.1 through 2.9, pages 7 through 18, much of the discussion in these sections is unnecessary and should default to the project standard operating procedures (SOPs) or the quality assurance project plan (QAPP). BRC should merely note that the items in these sections were done in compliance with the SOPs and QAPP and discuss any deviations (as appropriate).

Response: Comment noted. BRC will simplify the text of future submittals where SOPs and the QAPP will be referenced in place of a detailed discussion. As agreed with NDEP, BRC will not be resubmitting the 5th quarter groundwater monitoring report, but instead, will be addressing NDEP comments going forward within separate documents, discussed below, that are scheduled for completion in 2009. These documents have been identified in subsequent discussions with the NDEP and are noted in the response to Comment #5.b.i.

4. Section 3.2, page 21, BRC should additionally reference the Nevada Basic Comparison Levels (BCLs) as promulgated on December 18, 2008.

Response: BRC will reference and utilize the Basic Comparison Levels (BCLs) going forward in future documents. As requested by the NDEP in correspondence dated February 23, 2009, BRC has prepared a set of figures depicting Eastside wells in each water-bearing zone that have groundwater detections for selected analytes exceeding U.S. Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) and Nevada Basic Comparison Levels (BCLs). The set of

figures is provided as Attachment A. Attachment B is a summary table of statistical data showing exceedances over MCLs and BCLs for the selected analytes.

5. Sections 3.0 through 3.2, pages 18 through 38, generally, these sections do provide a data "summary", however, there is an overall lack of conclusions.
   a. It is requested that a new Section 4.0 (and corresponding sub-sections) be added which presents conclusions.

Response: As noted above in the response to Comment #3, BRC will be preparing an Eastside CSM report in 2009. The CSM report will include a summary and evaluation of the Eastside data, with conclusions, as requested by NDEP.

   b. In addition, a Section 5.0 should be added which discusses "Path Forward" and "Schedule".

Response: The Eastside CSM discussed above in Comment #5a will also include sections discussing the "path forward" and the schedule for upcoming tasks.

      i. It is suggested that this Section discuss items such as the following:
         1. The site-wide groundwater model (and a definitive schedule for completion).
         2. The development and submittal of the site-wide conceptual site model (and a definitive schedule for completion).
         3. BRC's response to the NDEP's comments on BRC's *Vertical Delineation Response-to-Comments* (and a definitive schedule for completion).
         4. Additional planned intrusive investigations (see also comments below on apparent data gaps).

Response: An update to these tasks was presented to NDEP in the February 4, 2009 project meeting. As discussed in the meeting, the groundwater model is currently being revised per NDEP comments and the revised calibration report is anticipated to be completed in April 2009; the CSM report is scheduled to be completed approximately by August 2009; BRC's current response to NDEP comments regarding vertical delineation (vertical gradients) is in preparation with an anticipated completion in April 2009; and a workplan (dated March 4, 2009) for supplemental well installation and soil sampling was recently submitted to the NDEP for review and comment. NDEP prepared comments, dated 3/5/09, to the workplan and BRC prepared a response-to-comments (RTC) document for NDEP dated 3/26/09 (the NDEP did not request a revised workplan submittal). Well installation field work commenced on 3/30/09.

   c. For example, the Tracer Analyses Summary presents the data but presents no interpretation of the data.

Response: This topic was also discussed in the February 4, 2009 meeting. A technical memorandum summarizing the isotope sampling and data analysis was prepared and submitted to the NDEP on March 26, 2009.

d. The discussion of trends for each chemical class is inconsistent.

Response: The CSM report discussed above in Comment #3 will provide a consistent discussion of trends for each chemical class.

6. Section 3.2, pages 21 and 22, VOC Results Summary, examples of issues to discuss are as follows:
   a. Is the source of tetrachloroethylene (PCE) known? If so, identify it. If not, additional work should be planned to address this data gap.

Response: As noted above in the response to Comment #3, an Eastside CSM report is in preparation. The CSM report will discuss issues such as VOC sources in detail (the VOCs detected in groundwater along the southwest portion of the Eastside are interpreted to be due to offsite sources - this topic will be further addressed in the CSM report).

   b. Do the other VOCs behave in the same manner as the PCE and is the nature and extent the same? If so, this should be stated. If not, additional discussion should be provided and additional figures should be generated.

Response: Please see the response to Comment #6a above.

   c. Please note that these comments could be universally applied to the remainder of Section 3.2.

Response: Comment noted - these issues will be addressed in the Eastside CSM report.

7. Section 3.2, page 22, SVOC Results Summary, a representative sub-set of specific SVOCs should be discussed and figures should be generated.

Response: As discussed in the response to Comments #5a, #5d, and #6a above, the Eastside CSM will discuss issues such as data trends for each chemical class. The CSM report will also include supporting figures to illustrate the conclusions drawn from the data evaluation.

8. Section 3.2, page 23, Organochlorine Pesticide (OCP) Results Summary, a representative sub-set of specific OCPs should have figures generated.

Response: Please see the response to Comment #7 above.

9. Section 3.2, pages 24 through 25, Total Metal Results Summary, the NDEP has the following comments:
   a. It is not clear why the extremely elevated detection limits for arsenic are not discussed. In addition, please discuss if other metals suffered from the same analytical issues.

Response: BRC has prepared a technical memorandum discussing the detection limit issues. This was submitted to the NDEP for review on March 25, 2009. Specifically, for arsenic, BRC is evaluating the collision-cell analysis method and initial indications are that consistent and lower detection limits can be obtained by this technique.

b. Arsenic, hexavalent chromium and methyl mercury are discussed. It is important to understand the geochemical behavior of the other metals and justify why no additional metals are discussed.

Response: As discussed above in the response to Comment #7 above, the Eastside CSM report will include a discussion of data trends for each chemical class - including metals.

10. Section 3.2, page 28, Aldehyde Results Summary, a representative sub-set of specific aldehydes should have figures generated.

Response: Please see the response to Comment #7 above.

11. Figure 3-1, this Figure was not provided with the report.

Response: A copy of Figure 3-1 (BMI Common Areas (Eastside) Potentiometric Surface Map of Shallow Water-Bearing Zone Wells – Fifth Round Event (April - July 2008)) is provided as Attachment C for reference.

12. Appendix B, in the text BRC acknowledges that many of the new wells appear to not have reached stability. Therefore, many of these hydrographs lack meaning. It is requested that BRC either install transducers in the wells or propose a more frequent water level measuring program. These issues should be addressed in the new Sections 4.0 (and related sub-sections) and 5.0 discussed above.

Response: Hydrographs showing water-level data that are not equilibrated will be noted as such in future submittals. BRC will collect additional water-level data after the upcoming supplemental well installation task. Once these data are available for review, BRC will further review water level equilibration and determine if a more frequent monitoring program is appropriate to characterize Deep Zone groundwater conditions. (As noted above in the response to Comment #3, NDEP has agreed that BRC will not be resubmitting the 5th round groundwater monitoring report, but will be addressing NDEP's comments going forward in future submittals.)

13. Appendix D, the NDEP has the following comments:
    a. General comment, based upon a review of the Figures for the Middle and Deep Zones it appears that BRC has not identified the source for several contaminants (see also NDEP suggestions for inclusion of conclusions as discussed above). It is requested that this issue be addressed in the new Sections 4.0 (and related sub-sections) and 5.0 discussed above.
    b. Examples are provided below:
        i. Figure D-5, hexavalent chromium is elevated at locations BEC-6 and MCF-06B. Upgradient wells are all non-detect.

ii. Figure D-6, hexavalent chromium is elevated at locations MCF-27 (upgradient) and MCF-21A (northeast property boundary).
iii. Figure D-8, perchlorate is elevated at location MCF-06B but not in the upgradient wells.
iv. Figure D-9, perchlorate is elevated at location MCF-10A. It is requested that BRC discuss this matter with AMPAC and present applicable AMPAC data in this area.
v. Figure D-11, radium-226/228 is elevated at locations MCF-16B and MCF-06B.
vi. Figure D-12, radium-226/228 is elevated across the Site, however, upgradient concentrations are low.
vii. Figure D-14, total dissolved solids (TDS) concentrations are elevated at a number of locations, however, upgradient concentrations are generally low (except location MCF-03B).
viii. Figure D-15, TDS concentrations are elevated at a number of locations, however, upgradient concentrations are generally low (except location MCF-04, MCF-12A and MCF-22A).

Response: Please see the response to Comment #6a and #7 above.

ix. Generally, certain locations appear to be consistently elevated and additional work should be proposed to identify the nature and extent of contamination.

Response: The upcoming CSM report will evaluate the sitewide detections and data trends, and as a result, the CSM will identify potential data gaps regarding the nature, extent, and sources of detected analytes. If data daps are identified, BRC will discuss an appropriate response with NDEP before additional work is proposed.

14.

a. Figures D-1 through D-3, BRC continues to collect data that is not usable. Detection limits are extremely elevated for no apparent reason. For example, wells with arsenic at 69.8 µg/L are adjacent wells with a detection limit of 500 µg/L. NDEP does not understand how this is possible. This issue has been in discussion with BRC for several years and has not been addressed. BRC needs to address this issue immediately with the analytical laboratories and field personnel. BRC should propose an additional round of groundwater monitoring for metals, polycyclic aromatic hydrocarbons (PAHs), semi-volatile organic compounds (SVOCs), and any other compounds that do not have meaningful detection limits. These issues should be addressed in the new Sections 4.0 (and related sub-sections) and 5.0 discussed above.

Response: Please see the response to Comment #9a. After the completion of the proposed new wells, BRC will resample those wells for analytes with previous detection limits that have been high.

b. Figure D-7, it appears that better resolution is needed south of wells DBMW-12 and DBMW-14; and west of wells MW-04 and MW-13. There is an apparent pathway for contaminants to the Las Vegas Wash. This same trend was noticed on Figure D-13. This information is needed for quantification of the mass load of contaminants to the Las Vegas Wash. In addition, it is suggested that BRC obtain data from the C-1 channel to the Las Vegas Wash. This feature may

represent a pathway that is not yet accounted for. These issues should be addressed in the new Sections 4.0 (and related sub-sections) and 5.0 discussed above.

Response: As noted above in the response to Comment #5bi4, a workplan (dated March 4, 2009) for supplemental well installation and soil sampling is being implemented. BRC has also collected a sample from the C-1 channel and will send the data to the NDEP once it is analyzed.

c. Figure D-16, please revise this Figure to correct the concentration presented at well MW-13 or correct the erroneous contouring.

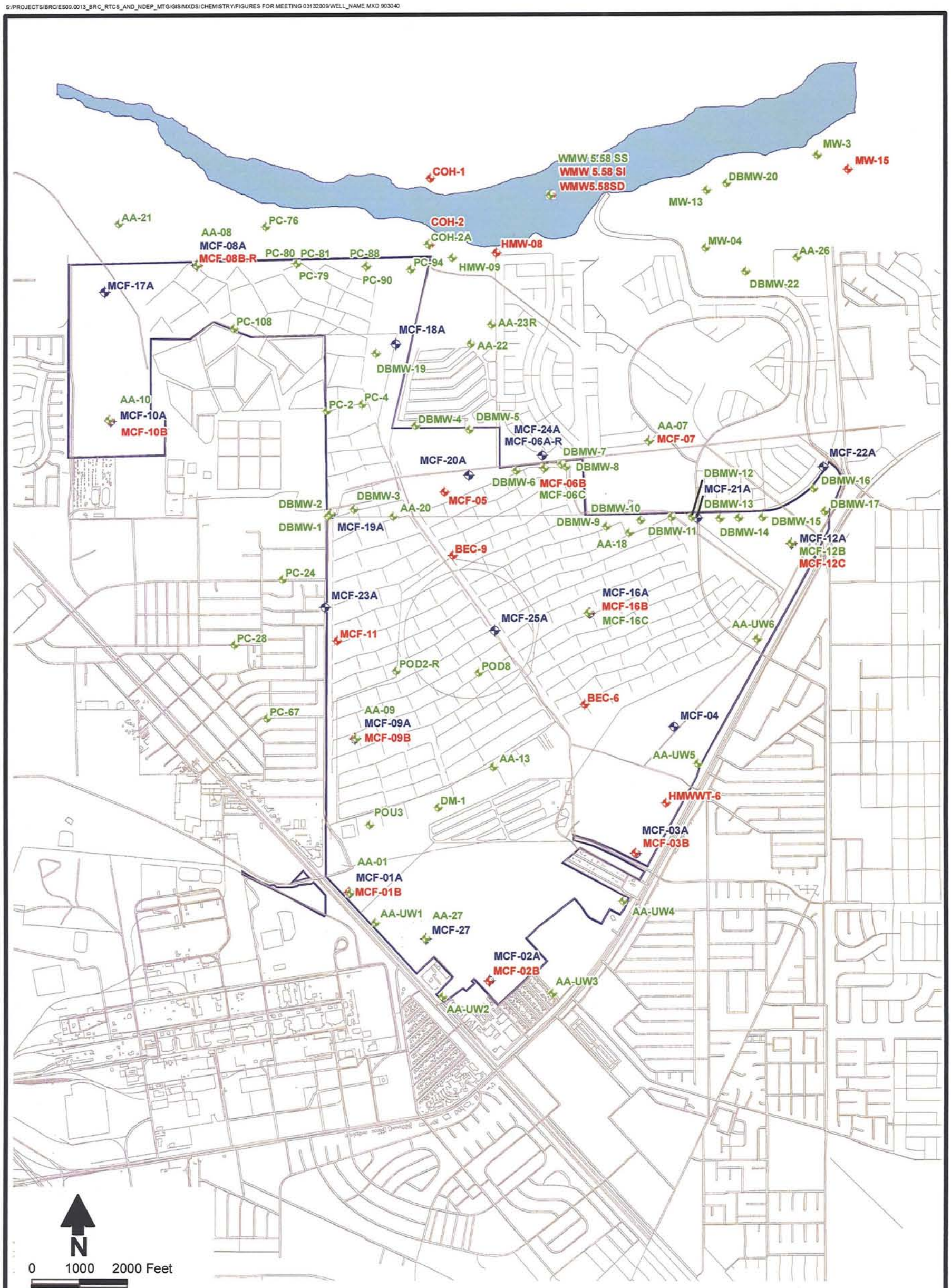
Response: This figure will be revised and updated, as appropriate, in the upcoming CSM report. (As noted above in the response to Comment #3, NDEP has agreed that BRC will not be resubmitting the 5th round groundwater monitoring report, but will be addressing NDEP's comments going forward in future submittals.)

15. Appendix E, Table 5, perchlorate is reported in µg/L on Table 3-11 and entered as mg/L without conversion on Table 5 CAB – Fifth Round Event. NDEP randomly checked several samples and with that conversion the CAB checked out. NDEP requests that BRC correct and re-submit Table 5; and then NDEP will complete a more thorough review.

Response: The ion balance table (Attachment D) has been revised to correct the units as requested.

Attachment A

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/WELL_NAME MXD 903040



Explanation

- Shallow Zone
- Middle Zone
- Deep Zone

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 1
Well Name

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 02-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/WELL_NAME.MXD 902020

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S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/DICHLOROBENZENE_SMD.MXD 903040

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > MCL (75 ug/L)
5. Values > Nevada BCL (0.466916 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 2
1,4 Dichlorobenzene

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-02-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/dichlorobenzene_SMD.MXD 902020

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S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/ALPHA BHC_SMD.MXD 903040

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Nevada BCL (0.010672 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 3
Alpha BHC

Basic Remediation COMPANY

Prepared by:		Date	
DBS&A	CRS	04-03-09	S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/alpha bhc_SMD.MXD 902020

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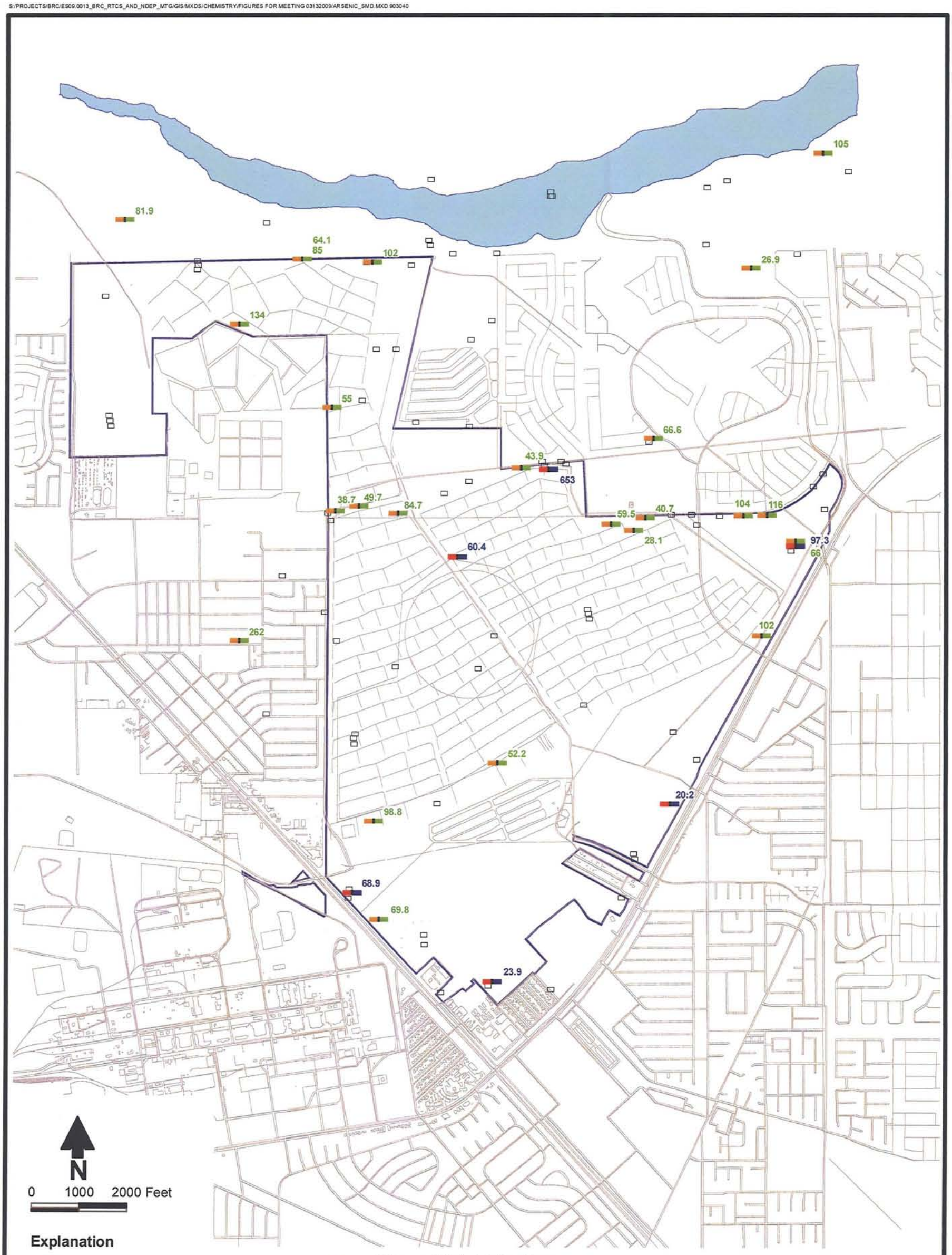
S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/ARSENIC_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (10 ug/L)
5. Values > Nevada BCL (0.044821 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 4
Arsenic

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-02-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/ARSENIC_SMD.MXD 902020

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S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/BETA BHC_SMD.MXD 903040

0.075
0.33
0.65
0.25
0.42
0.16
0.2
0.16
0.82
0.48
0.22
0.062
0.069
0.051

N

0 1000 2000 Feet

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Nevada BCL (0.037351 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 5
Beta BHC

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-02-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/beta bhc_SMD.MXD 902020

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S:/PROJECTS/BRC/ES09 0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/CADMIUM_SMD.MXD 903040

78.9

500

N

0 1000 2000 Feet

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:

1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (5 ug/L)
5. Values > Nevada BCL (18.25 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 6
Cadmium

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09 0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/cadmium_SMD MXD 902020

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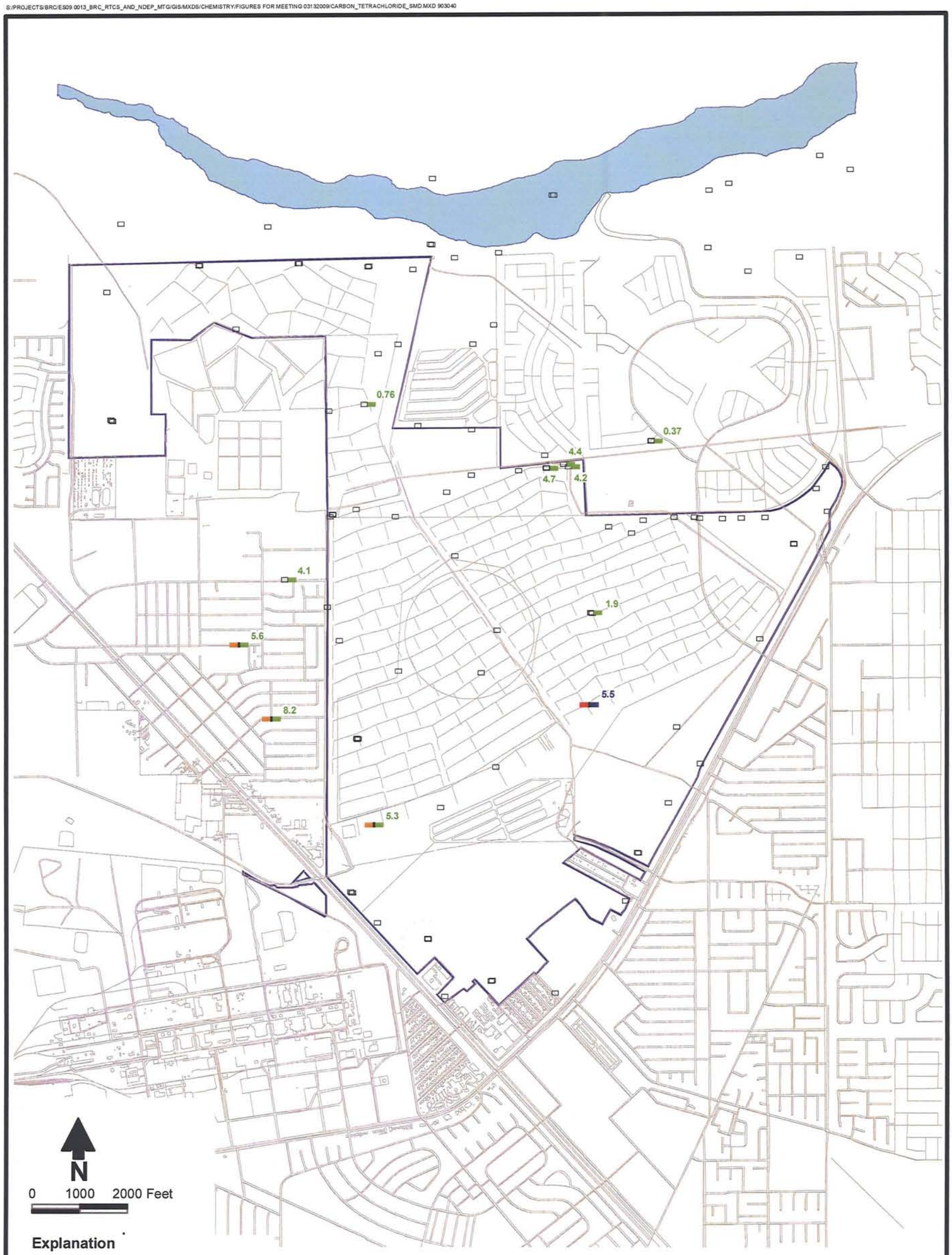
S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/CARBON_TETRACHLORIDE_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (5 ug/L)
5. Values > Nevada BCL (0.1713 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 7
Carbon Tetrachloride

Basic Remediation COMPANY

Prepared by:		Date	
DBS&A	CRS	04-03-09	S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/carbon tetrachloride_SMD.MXD 902020

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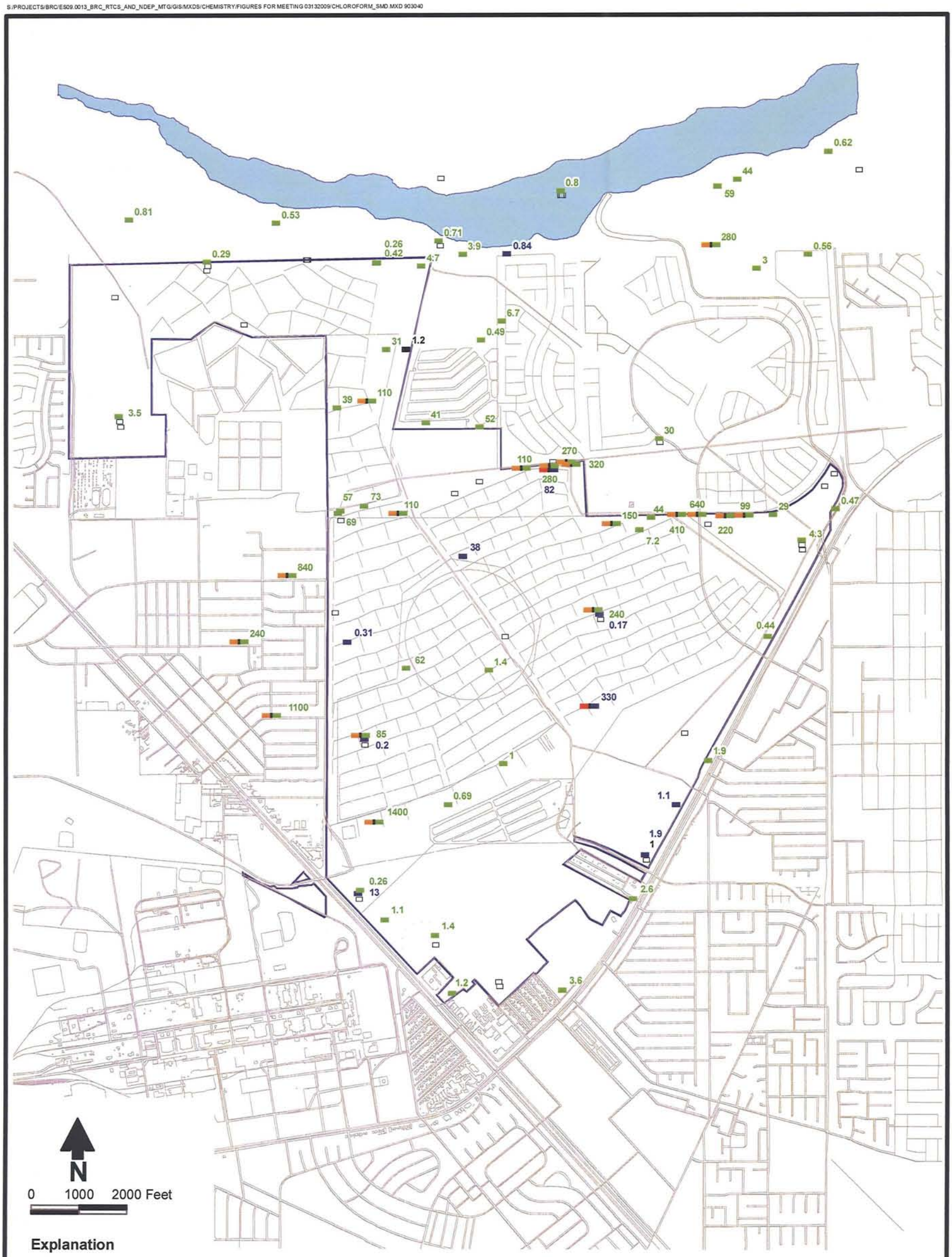
S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/CHLOROFORM_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > MCL goal (80 ug/L)
5. Values > Nevada BCL (0.167048 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 8
Chloroform

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/CHLOROFORM_SMD.MXD 902020

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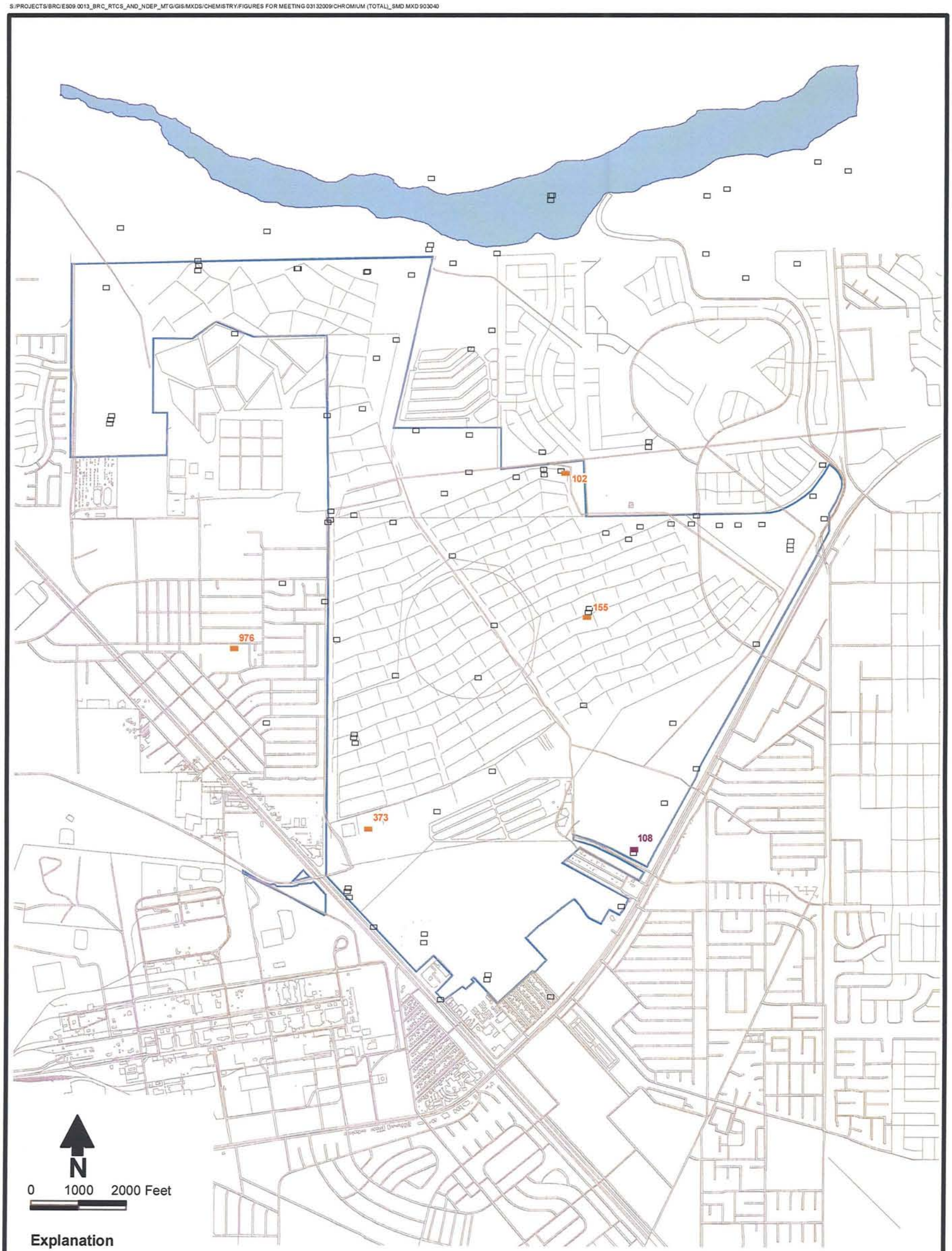
S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/CHROMIUM (TOTAL)_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (100 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 9
Chromium (Total)

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/CHROMIUM (TOTAL)_SMD.MXD 902020

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S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/HEXAVALENT_CHROMIUM_SMD.MXD 903040

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > MCL (100 ug/L)
5. Values > Nevada BCL (109.5 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 10
Hexavalent Chromium

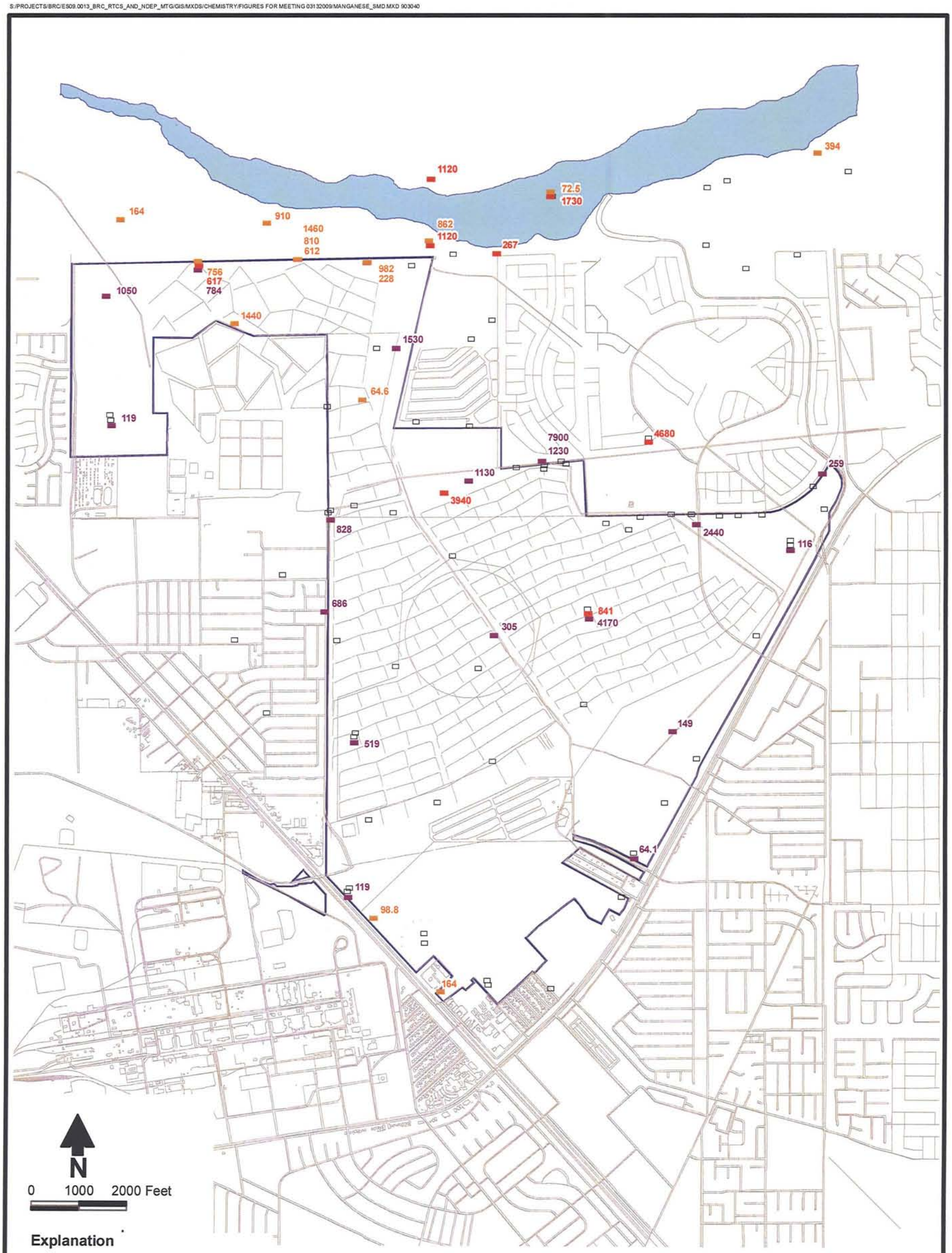
Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/hexavalent chromium_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/MANGANESE_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:

1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Secondary MCL (50 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 11
Manganese

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/manganese_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/NITRATE_SMD.MXD 903040

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (10 mg/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 12
Nitrate

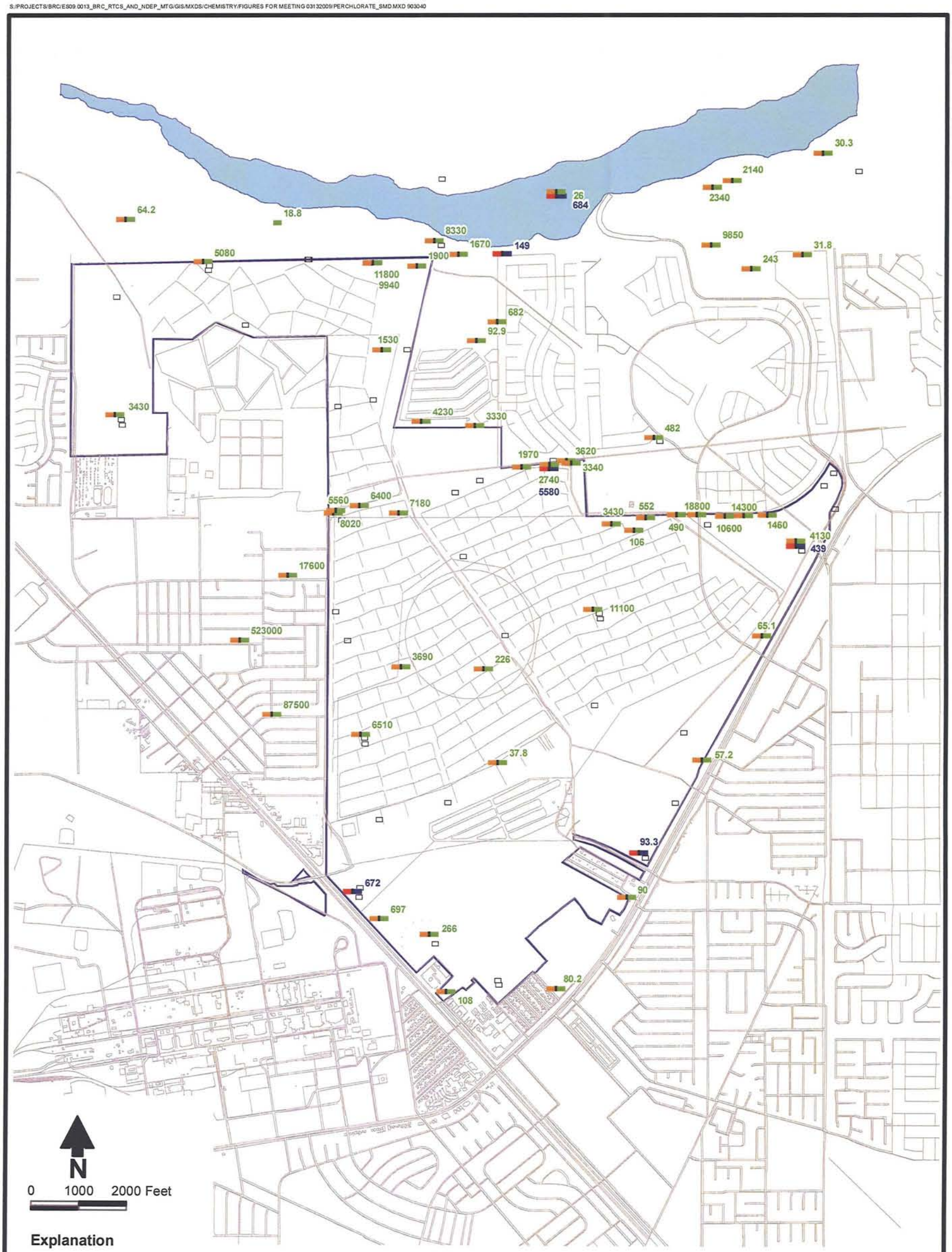
Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/nitrate_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/PERCHLORATE_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > USEPA Drinking Water Equivalent (24.5 ug/L) Usepa, 2006
5. Values > Nevada BCL (18 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 13
Perchlorate

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/PERCHLORATE_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/RADIUM 226_228_SMD.MXD 903040

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (5 piC/L)

BMI Common Areas (Eastside)
Henderson, Nevada

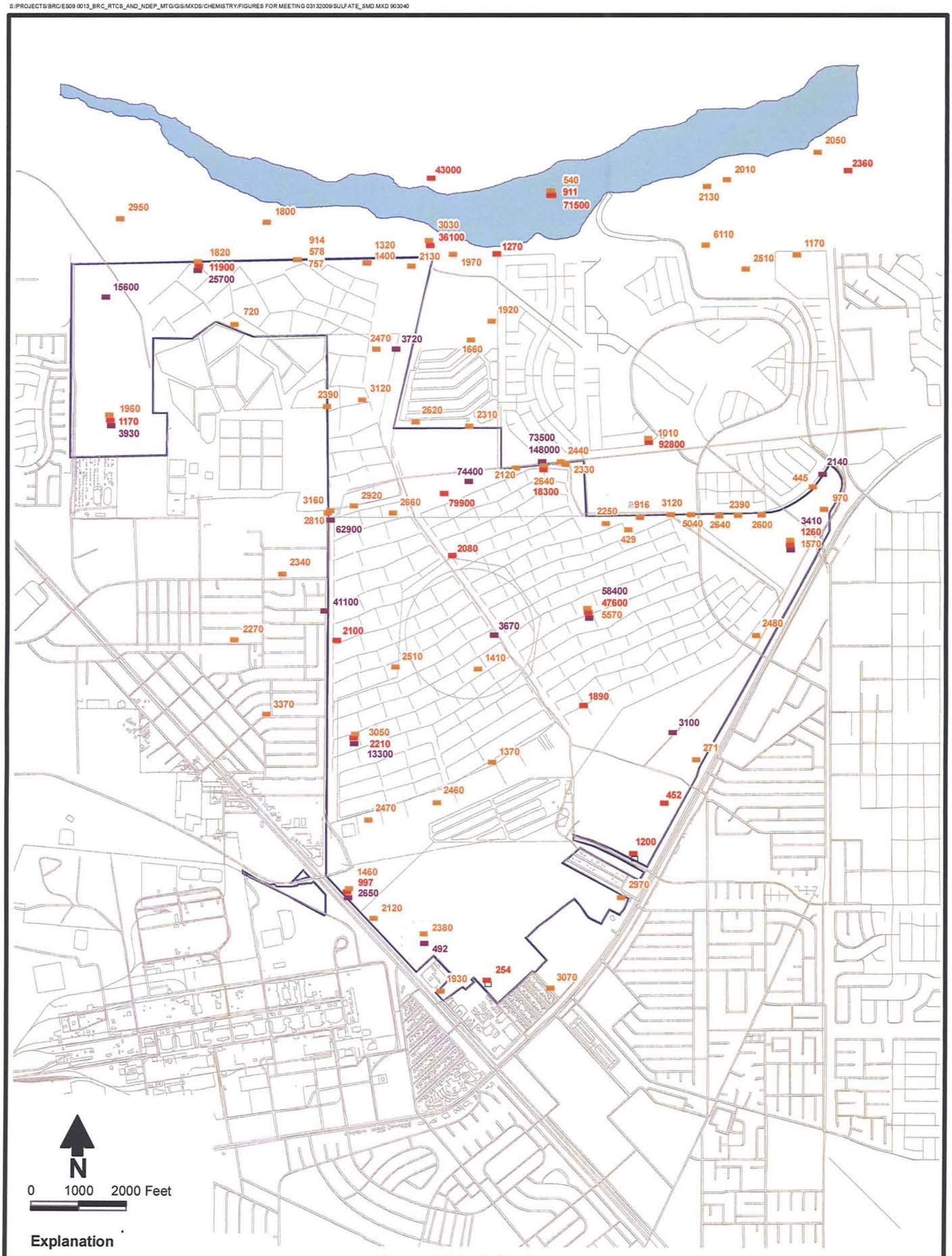
FIGURE 14
Radium 226/228

Basic Remediation COMPANY

Prepared by:		Date	
DBS&A	CRS	04-03-09	S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/RADIUM 226_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/SULFATE_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:

1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Secondary MCL (250 mg/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 15
Sulfate

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/sulfate_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/TETRACHLOROETHYLENE_SMD.MXD 903040

8.8
1.9
0.82
1.1
0.68
0.23
0.47
0.48
5.1
0.99
1.8
18
2.7
0.45
3.6
69
20
24

N

0 1000 2000 Feet

Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (5 ug/L)
5. Values > Nevada BCL (0.10452 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

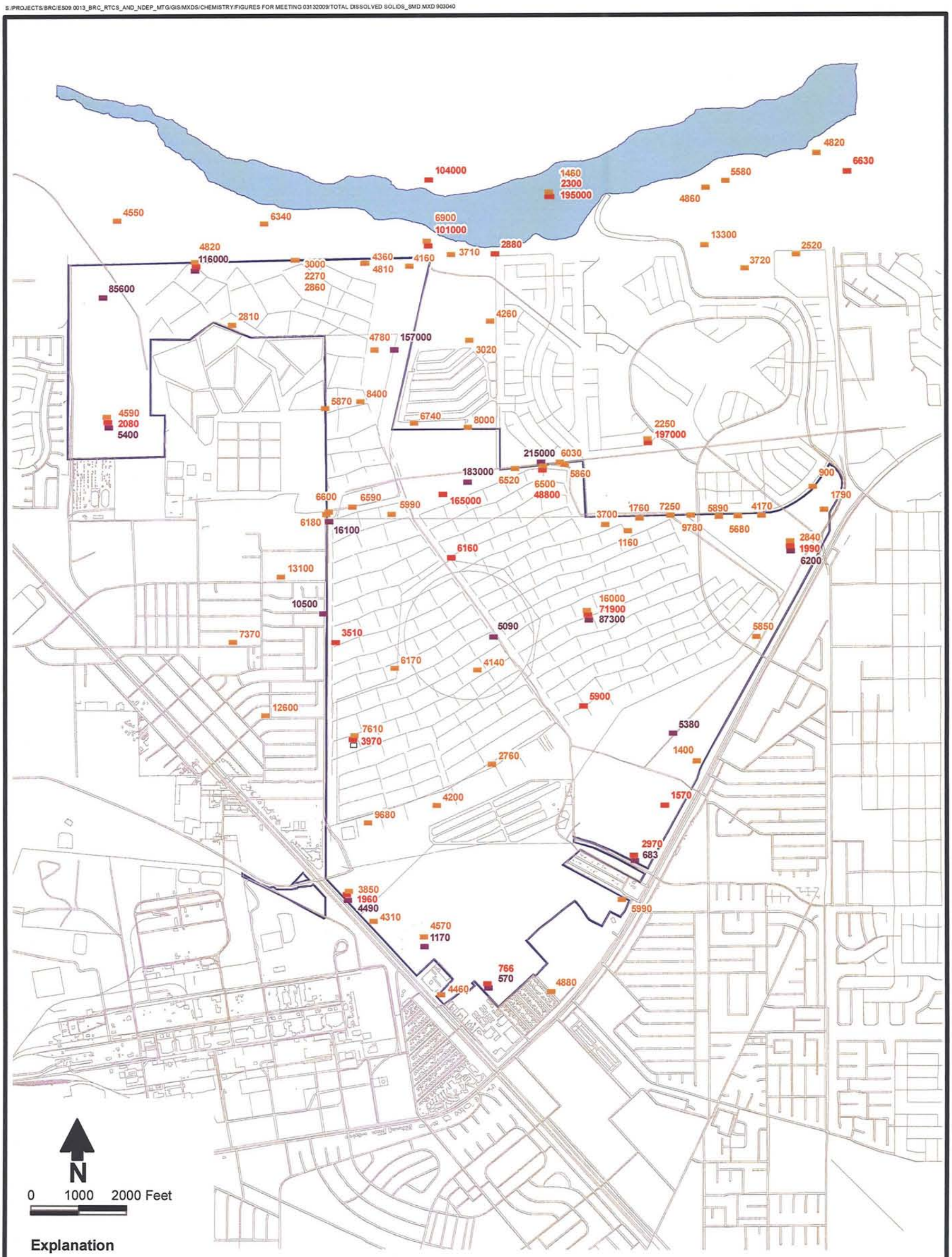
FIGURE 16
Tetrachloroethylene

Basic Remediation COMPANY

Prepared by:		Date	
DBS&A	CRS	04-03-09	S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/TETRACHLOROETHYLENE_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/TOTAL DISSOLVED SOLIDS_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Secondary MCL (500 mg/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 17
Total Dissolved Solids

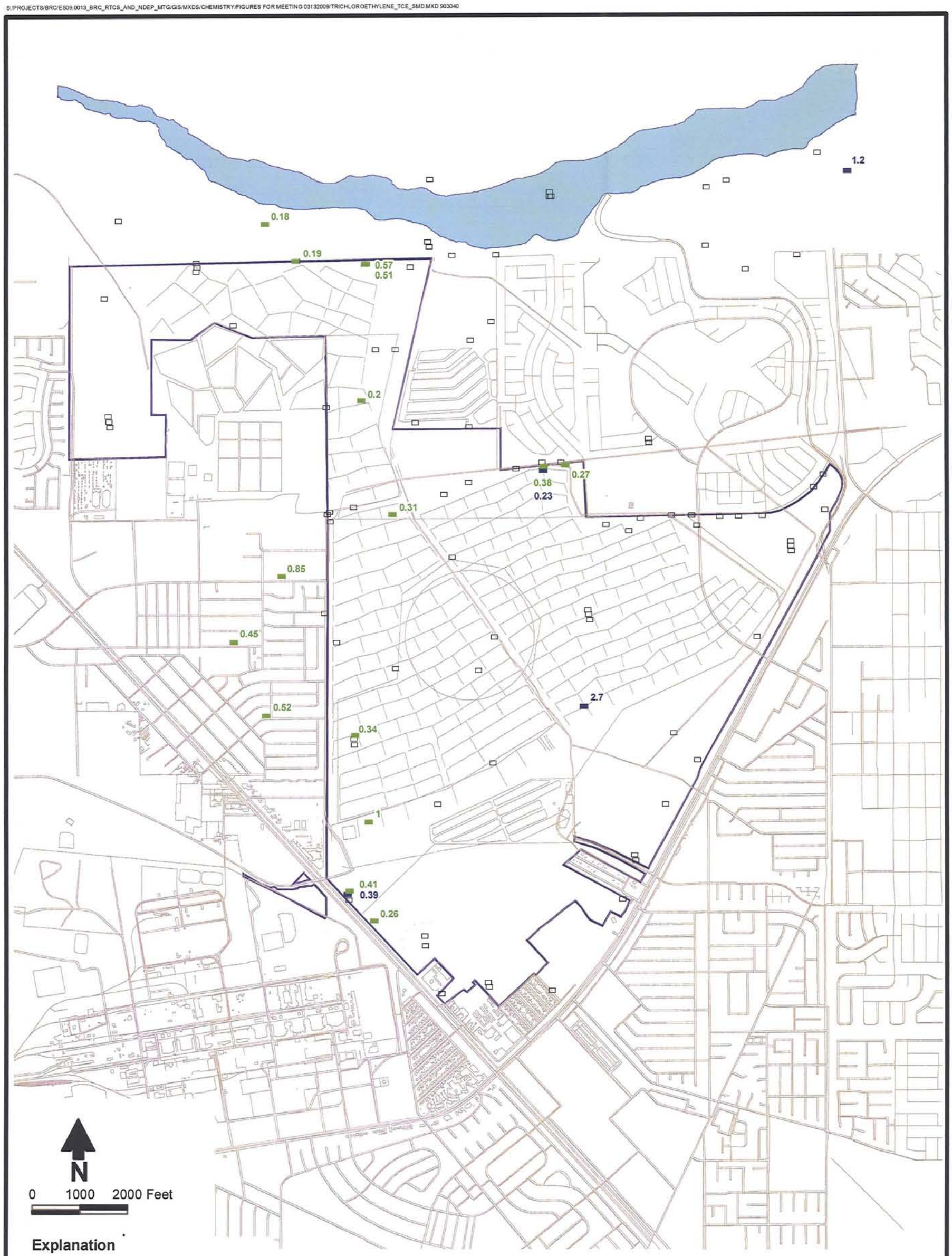
Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/TOTAL DISSOLVED SOLIDS_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/TRICHLOROETHYLENE_TCE_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > MCL (5 ug/L)
5. Values > Nevada BCL (0.028015 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 18
Trichloroethylene

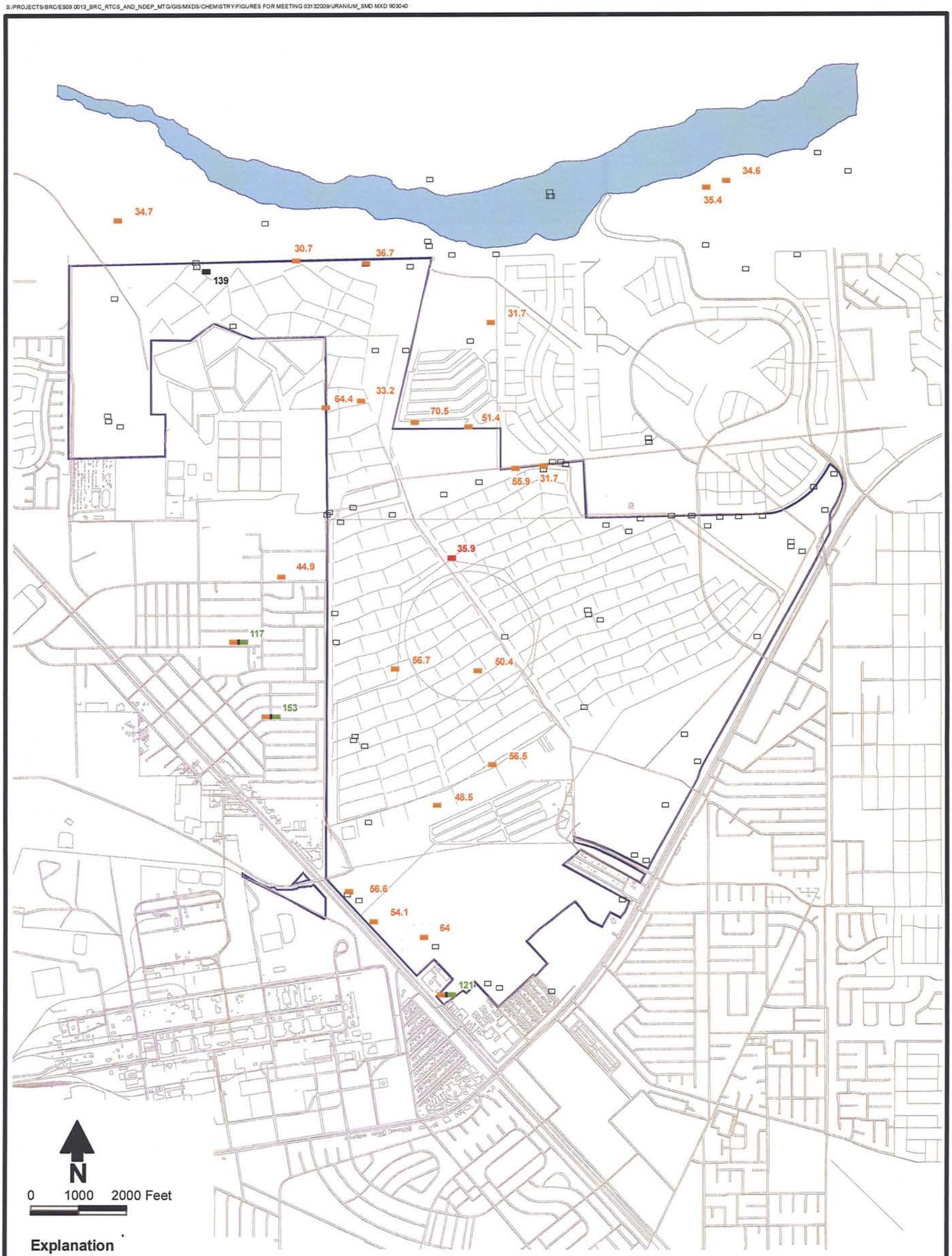
Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09.0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/tce_SMD MXD 902020

Daniel B. Stephens & Associates, Inc.

S:/PROJECTS/BRC/ES09 0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 03132009/URANIUM_SMD.MXD 903040



Explanation

- Values > MCL in Shallow Zone
- Values > MCL in Middle Zone
- Values > MCL in Deep Zone
- Values < MCLs or BCLs
- Values > BCL in Shallow Zone
- Values > BCL in Middle Zone
- Values > BCL in Deep Zone

values > MCLs values > BCLs

Notes:
1. Wells with Detected Values exceeding MCLs or BCLs 5th Round Monitoring Data (April-July 2008).
2. MCL = USEPA Maximum Contaminant Level
3. BCL = Basic Comparison Level
4. Values > Primary MCL (30 ug/L)
5. Values > Nevada BCL (109.5 ug/L)

BMI Common Areas (Eastside)
Henderson, Nevada

FIGURE 19
Uranium

Basic Remediation COMPANY

Prepared by: DBS&A CRS Date 04-03-09

S:/PROJECTS/BRC/ES09 0013_BRC_RTCS_AND_NDEP_MTG/GIS/MXDS/CHEMISTRY/FIGURES FOR MEETING 02022009/uranium_SMD.MXD 902020

Daniel B. Stephens & Associates, Inc.

Attachment B

Summary of Detected Analytes exceeding USEPA Maximum Contaminant Levels (MCLs) and Basic Comparison Levels (BCLs), 5th Round Eastside Groundwater Monitoring Event (April-July 2008)

		Shallow Zone Wells											
Chemical Name	Units	Min. Detected Value	Max. Detected Value	MCL	Frequency of Detection >MCL	No. of Detects > MCL	Min. Detected Value > MCL	Max. Detected Value > MCL	BCL	Frequency of Detection >BCL	No. of Detects > BCL	Min. Detected Value > BCL	Max. Detected Value > BCL
1,4-Dichlorobenzene	ug/l	0.23	3.8	75	0.0%	0	-	-	0.466916371	10.61%	7	0.58	3.8
alpha-BHC	ug/l	0.055	0.27	-	0.0%	0	-	-	0.010671672	41.67%	20	0.055	0.27
Arsenic	ug/l	26.9	262	10	36.36%	24	26.9	262	0.044821023	36.36%	24	26.9	262
beta-BHC	ug/l	0.051	0.82	-	0.0%	0	-	-	0.037350852	25.0%	12	0.051	0.82
Cadmium	ug/l	-	-	5	0.0%	0	-	-	18.25	0.0%	0	-	-
Carbon tetrachloride	ug/l	0.37	8.2	5	4.55%	3	5.3	8.2	0.171299577	16.67%	11	0.37	8.2
Chloroform	ug/l	0.26	1400	80	40.0%	37	85	1400	0.167048055	94.74%	89	0.26	1400
Chromium (Total)	ug/l	22.4	976	100	6.06%	4	102	976	-	0.0%	0	-	-
Chromium (VI)	ug/l	0.023	1.3	100	0.0%	0	-	-	109.5	0.0%	0	-	-
Manganese	ug/l	13.7	1460	50	22.73%	15	64.6	1460	-	0.0%	0	-	-
Nitrate (as N)	mg/l	0.014	56.9	10	60.61%	40	10.1	56.9	-	0.0%	0	-	-
Perchlorate	ug/L	3.86	523000	24.5	90.0%	54	26	523000	18	91.67%	55	18.8	523000
Radium-226+228	pCi/L	5.2	6.268	5	100.0%	3	5.2	6.268	-	0.0%	0	-	-
Sulfate	mg/l	271	6110	250	100.0%	66	271	6110	-	0.0%	0	-	-
Tetrachloroethylene	ug/l	0.23	69	5	8.7%	6	5.1	69	0.104519839	28.99%	20	0.23	69
Total Dissolved Solids	mg/l	900	16000	500	100.0%	66	900	16000	-	0.0%	0	-	-
Trichloroethylene	ug/l	0.18	1	5	0.0%	0	-	-	0.028014982	22.73%	15	0.18	1
Uranium	ug/l	2.5	153	30	34.85%	23	30.7	153	109.5	4.55%	3	117	153

Min.- Minimum
Max. - Maximum
USEPA - U.S. Environmental Protection Agency
Note: Only detected values are included - all non-detects are excluded from the table.

Summary of Detected Analytes exceeding USEPA Maximum Contaminant Levels (MCLs) and Basic Comparison Levels (BCLs), 5th Round Eastside Groundwater Monitoring Event (April-July 2008)

		Middle Zone Wells											
Chemical Name	Units	Min. Detected Value	Max. Detected Value	MCL	Frequency of Detection >MCL	No. of Detects > MCL	Min. Detected Value > MCL	Max. Detected Value > MCL	BCL	Frequency of Detection >BCL	No. of Detects > BCL	Min. Detected Value > BCL	Max. Detected Value > BCL
1,4-Dichlorobenzene	ug/l	0.42	0.42	75	0.0%	0	-	-	0.466916371	0.0%	0	-	-
alpha-BHC	ug/l	0.14	0.14	-	0.0%	0	-	-	0.010671672	5.88%	1	0.14	0.14
Arsenic	ug/l	20.2	653	10	20.69%	6	20.2	653	0.044821023	20.69%	6	20.2	653
beta-BHC	ug/l	0.062	0.075	-	0.0%	0	-	-	0.037350852	11.76%	2	0.062	0.075
Cadmium	ug/l	53.4	78.9	5	6.9%	2	53.4	78.9	18.25	6.9%	2	53.4	78.9
Carbon tetrachloride	ug/l	5.5	5.5	5	3.33%	1	5.5	5.5	0.171299577	3.33%	1	5.5	5.5
Chloroform	ug/l	0.15	330	80	20.0%	7	82	330	0.167048055	54.29%	19	0.17	330
Chromium (Total)	ug/l	-	-	100	0.0%	0	-	-	-	0.0%	0	-	-
Chromium (VI)	ug/l	0.012	0.221	100	0.0%	0	-	-	109.5	0.0%	0	-	-
Manganese	ug/l	33.9	4680	50	44.83%	13	267	4680	-	0.0%	0	-	-
Nitrate (as N)	mg/l	0.018	46.2	10	13.79%	4	11	46.2	-	0.0%	0	-	-
Perchlorate	ug/L	93.3	5580	24.5	37.5%	9	93.3	5580	18	37.5%	9	93.3	5580
Radium-226+228	pCi/L	5.51	11.43	5	100.0%	16	5.51	11.43	-	0.0%	0	-	-
Sulfate	mg/l	254	92800	250	100.0%	29	254	92800	-	0.0%	0	-	-
Tetrachloroethylene	ug/l	8.8	20	5	6.67%	2	8.8	20	0.104519839	6.67%	2	8.8	20
Total Dissolved Solids	mg/l	766	197000	500	100.0%	30	766	197000	-	0.0%	0	-	-
Trichloroethylene	ug/l	0.21	2.7	5	0.0%	0	-	-	0.028014982	16.67%	5	0.21	2.7
Uranium	ug/l	4.5	35.9	30	3.45%	1	35.9	35.9	109.5	0.0%	0	-	-

Min.- Minimum
Max. - Maximum
USEPA - U.S. Environmental Protection Agency
Note: Only detected values are included - all non-detects are excluded from the table.

Summary of Detected Analytes exceeding USEPA Maximum Contaminant Levels (MCLs)
and Basic Comparison Levels (BCLs), 5th Round Eastside Groundwater Monitoring Event (April-July 2008)

		Deep Zone Wells											
Chemical Name	Units	Min. Detected Value	Max. Detected Value	MCL	Frequency of Detection >MCL	No. of Detects > MCL	Min. Detected Value > MCL	Max. Detected Value > MCL	BCL	Frequency of Detection >BCL	No. of Detects > BCL	Min. Detected Value > BCL	Max. Detected Value > BCL
1,4-Dichlorobenzene	ug/l	-	-	75	0.0%	0	-	-	0.466916371	0.0%	0	-	-
alpha-BHC	ug/l	-	-	-	0.0%	0	-	-	0.010671672	0.0%	0	-	-
Arsenic	ug/l	-	-	-	0.0%	0	-	-	0.044821023	0.0%	0	-	-
beta-BHC	ug/l	-	-	-	0.0%	0	-	-	0.037350852	0.0%	0	-	-
Cadmium	ug/l	0.92	4.3	5	0.0%	0	-	-	18.25	0.0%	0	-	-
Carbon tetrachloride	ug/l			-	0.0%	0	-	-	0.171299577	0.0%	0	-	-
Chloroform	ug/l	0.16	1.2	-	0.0%	0	-	-	0.167048055	3.57%	1	1.2	1.2
Chromium (Total)	ug/l	73.4	108	100	3.57%	1	108	108	-	0.0%	0	-	-
Chromium (VI)	ug/l	0.014	0.044	100	0.0%	0	-	-	109.5	0.0%	0	-	-
Manganese	ug/l	64.1	7900	50	85.71%	24	64.1	7900	-	0.0%	0	-	-
Nitrate (as N)	mg/l	0.014	2.3	-	0.0%	0	-	-	-	0.0%	0	-	-
Perchlorate	ug/L	2.38	7.36	24.5	0.0%	0	-	-	18	0.0%	0	-	-
Radium-226+228	pCi/L	5.07	36.5	5	100.0%	17	5.07	36.5	-	0.0%	0	-	-
Sulfate	mg/l	194	148000	250	92.86%	26	492	148000	-	0.0%	0	-	-
Tetrachloroethylene	ug/l	-	-	-	0.0%	0	-	-	0.104519839	0.0%	0	-	-
Total Dissolved Solids	mg/l	570	215000	500	100.0%	28	570	215000	-	0.0%	0	-	-
Trichloroethylene	ug/l	-	-	5	0.0%	0	-	-	0.028014982	0.0%	0	-	-
Uranium	ug/l	2.7	139	-	0.0%	0	-	-	109.5	3.57%	1	139	139

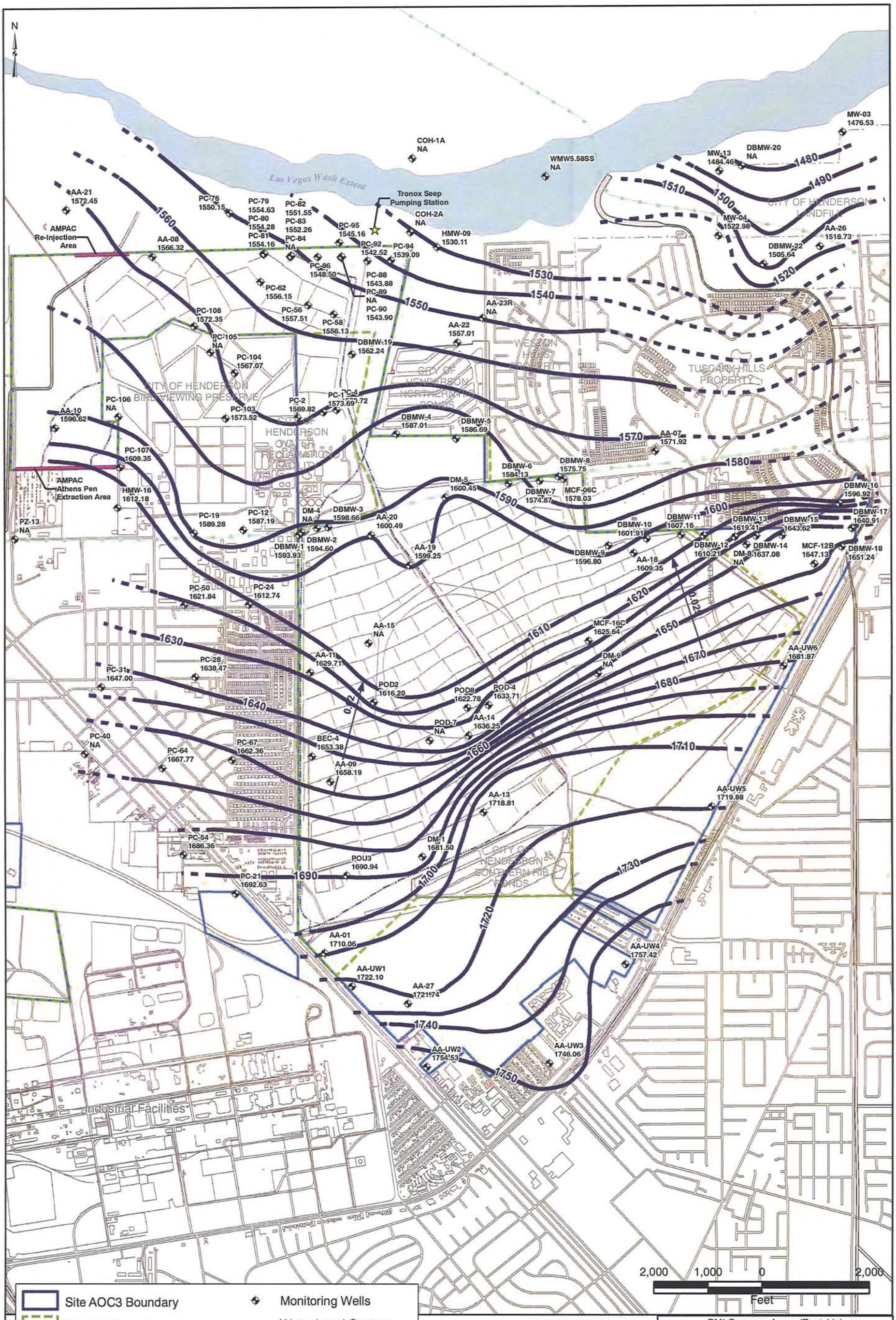
Min.- Minimum
Max. - Maximum
USEPA - U.S. Environmental Protection Agency
Note: Only detected values are included - all non-detects are excluded from the table.

Summary of Detected Analytes exceeding USEPA Maximum Contaminant Levels (MCLs) and Basic Comparison Levels (BCLs), 5th Round Eastside Groundwater Monitoring Event (April-July 2008)

		All Zones - All Wells											
Chemical Name	Units	Min. Detected Value	Max. Detected Value	MCL	Average Frequency of Detection >MCL	No. of Detects > MCL	Min. Detected Value > MCL	Max. Detected Value > MCL	BCL	Average Frequency of Detection >BCL	No. of Detects > BCL	Min. Detected Value > BCL	Max. Detected Value > BCL
1,4-Dichlorobenzene	ug/l	0.23	3.8	75	0.0%	0	-	-	0.466916371	3.54%	7	0.58	3.8
alpha-BHC	ug/l	0.055	0.27	-	0.0%	0	-	-	0.010671672	15.85%	21	0.055	0.27
Arsenic	ug/l	20.2	653	10	19.02%	30	20.2	653	0.044821023	19.02%	30	20.2	653
beta-BHC	ug/l	0.051	0.82	-	0.0%	0	-	-	0.037350852	12.25%	14	0.051	0.82
Cadmium	ug/l	0.92	78.9	5	2.3%	2	53.4	78.9	18.25	2.3%	2	53.4	78.9
Carbon tetrachloride	ug/l	0.37	8.2	5	2.63%	4	5.3	8.2	0.171299577	6.67%	12	0.37	8.2
Chloroform	ug/l	0.15	1400	80	20.0%	44	82	1400	0.167048055	50.86%	109	0.17	1400
Chromium (Total)	ug/l	22.4	976	100	3.21%	5	102	976	-	0.0%	0	-	-
Chromium (VI)	ug/l	0.012	1.3	100	0.0%	0	-	-	109.5	0.0%	0	-	-
Manganese	ug/l	13.7	7900	50	51.09%	52	64.1	7900	-	0.0%	0	-	-
Nitrate (as N)	mg/l	0.014	56.9	10	24.8%	44	10.1	56.9	-	0.0%	0	-	-
Perchlorate	ug/L	2.38	523000	24.5	42.5%	63	26	523000	18	43.06%	64	18.8	523000
Radium-226+228	pCi/L	5.07	36.5	5	100.0%	36	5.07	36.5	-	0.0%	0	-	-
Sulfate	mg/l	193	148000	250	97.62%	121	254	148000	-	0.0%	0	-	-
Tetrachloroethylene	ug/l	0.23	69	5	5.12%	8	5.1	69	0.104519839	11.88%	22	0.23	69
Total Dissolved Solids	mg/l	570	215000	500	100.0%	124	570	215000	-	0.0%	0	-	-
Trichloroethylene	ug/l	0.18	2.7	5	0.0%	0	-	-	0.028014982	13.13%	20	0.18	2.7
Uranium	ug/l	1.7	153	30	12.77%	24	30.7	153	109.5	2.71%	4	117	153

Min.- Minimum
Max. - Maximum
USEPA - U.S. Environmental Protection Agency
Note: Only detected values are included - all non-detects are excluded from the table.

Attachment C



FIFTH ROUND
GROUNDWATER EVENT
(APRIL-JULY 2008)

Notes:
NA - Not available.
Measurements are in feet above mean sea level (ft msl).

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 3-1

POTENTIOMETRIC SURFACE MAP OF THE SHALLOW WATER-BEARING ZONE WELLS

Basic Remediation Company

Prepared by: MWH | Date 12/17/08 | JOB No. 0064277 | FILE: GIS/BRC/WATERLEVELS.MXD

Attachment D

Ion Balance Summary
BRC Eastside Groundwater Monitoring Data
First Round Event

Description	Zone	pH	Major Ion Chemistry Data Input												meq/l Calculations												Cation-Anion Balance Tests					TDS Checks				TDS and EC		
			Ca	Mg	Na	K	HCO_3	CO_3	OH	SO_4	Cl	F	NO_3	ClO_3	ClO_4	Ca	Mg	Na	K	HCO_3	CO_3	OH	SO_4	Cl	F	NO_2	ClO_3	ClO_4	Sum Cations	Sum Anions	Cat/An Ratio	(Cat-An)/ (Cat+An)	Balance Variance >5%?	TDS Sum	TDS Lab	Lab/Sum Ratio	Acceptable Ratio 1.0 - 1.2	EC	Lab TDS / EC Ratio	Acceptable Range 0.55 - 0.7
															20.04	12.16	22.99	39.1	61.02	30.01	17	48.03	35.5	19	61.91	63.4	99.5												
			(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)				(mg/l)	(mg/l)			(umhos/cm)		
Sample Name			Calcium	Magnesium	Sodium	Potassium	Bicarbonate alkalinity	Carbonate alkalinity	Alkalinity	Sulfate	Chloride	Fluoride	Nitrate (as N)	Chlorate	Perchlorate																			TDS				Electrical Conductivity		
AA-01	Shallow UG	7.1	446	111	375	6.72	98			1500	892	0.75	11.8	3.44	1.17	22.26	9.13	16.31	0.17	1.61	0.00	0.00	31.23	25.13	0.04	0.19	0.04	0.01	47.87	58.25	0.82	9.78	FAIL	3446	3430	1.00	PASS	3210	1.069	FAIL
AA-07	Shallow	7.3	281	81.1	198	42	106			1100	283	0.66	13.1		0.405	14.02	6.67	8.61	1.07	1.74	0.00	0.00	22.90	7.97	0.03	0.21		0.00	30.38	32.86	0.92	3.93	PASS	2105	2030	0.96	FAIL	2230	0.910	FAIL
AA-08	Shallow	7.2	452	219	644	29.8	152			2170	1240	2.5	7.5		2.79	22.55	18.01	28.01	0.76	2.49	0.00	0.00	45.18	34.93	0.13	0.12		0.03	69.34	82.88	0.84	8.90	FAIL	4920	5070	1.03	PASS	4580	1.107	FAIL
AA-09	Shallow	7.2	658	308	764	17.3	70			2740	1280	0.41	23.8	97.3	6.47	32.83	25.33	33.23	0.44	1.15	0.00	0.00	57.05	36.06	0.02	0.38	1.17	0.07	91.84	95.89	0.96	2.16	PASS	5965	5670	0.95	FAIL	4330	1.309	FAIL
AA-10	Shallow	7.7	482	238	671	34.9	124			2310	1320	1.4	8.2		2.97	24.05	19.57	29.19	0.89	2.03	0.00	0.00	48.09	37.18	0.07	0.13		0.03	73.70	87.55	0.84	8.58	FAIL	5192	4880	0.94	FAIL	4600	1.061	FAIL
AA-13	Shallow	7.5	226	102	362	18.1	246			1160	340	1.2	29.7		0.0163	11.28	8.39	15.75	0.46	4.03	0.00	0.00	24.15	9.58	0.06	0.48		0.00	35.87	38.30	0.94	3.27	PASS	2485	2550	1.03	PASS	2460	1.037	FAIL
AA-18	Shallow	7.3	112	59.1	150	14.9	104			503	253	0.86	10.9		0.0972	5.59	4.86	6.52	0.38	1.70	0.00	0.00	10.47	7.13	0.05	0.18		0.00	17.35	19.53	0.89	5.89	FAIL	1208	1150	0.95	FAIL	1750	0.657	PASS
AA-19	Shallow	7.6	612	217	430	24.8	130			9670	811	1.1	165	5.66	1.61	30.54	17.85	18.70	0.63	2.13	0.00	0.00	201.33	22.85	0.06	2.67	0.07	0.02	67.72	229.12	0.30	54.37	FAIL	12068	4690	0.39	FAIL	4130	1.136	FAIL
AA-20	Shallow	7.3	621	284	966	44.6	80			3430	1600	0.14	34.7	93.3	6.04	30.99	23.36	42.02	1.14	1.31	0.00	0.00	71.41	45.07	0.01	0.56	1.12	0.06	97.50	119.54	0.82	10.15	FAIL	7160	6000	0.84	FAIL	5110	1.174	FAIL
AA-21	Shallow	7	538	345	814	86.9	194			3100	1260	2.7	7.5		0.0673	26.85	28.37	35.41	2.22	3.18	0.00	0.00	64.54	35.49	0.14	0.12		0.00	92.85	103.48	0.90	5.42	FAIL	6348	6510	1.03	PASS	5660	1.150	FAIL
AA-22	Shallow	7.2	366	82.9	334	22	174			1360	471	0.44	2.9			18.26	6.82	14.53	0.56	2.85	0.00	0.00	28.32	13.27	0.02	0.05			40.17	44.50	0.90	5.12	FAIL	2813	2460	0.87	FAIL	2520	0.976	FAIL
AA-26	Shallow	7.4	221	75.2	320	35.8	76			1200	291	0.89	4.4			11.03	6.18	13.92	0.92	1.25	0.00	0.00	24.98	8.20	0.05	0.07			32.05	34.54	0.93	3.75	PASS	2224	2000	0.90	FAIL	2380	0.840	FAIL
AA-27	Shallow UG	7.1	426	207	540	8.72	140			2410	443	0.73	14.1		0.247	21.26	17.02	23.49	0.22	2.29	0.00	0.00	50.18	12.48	0.04	0.23		0.00	61.99	65.22	0.95	2.54	PASS	4190	4080	0.97	FAIL	3170	1.287	FAIL
BEC-6	Middle	6.8	500	277	702	35	72			1780	1570	0.44	38.2	28.2	14.4	24.95	22.78	30.54	0.90	1.18	0.00	0.00	37.06	44.23	0.02	0.62	0.34	0.14	79.16	83.59	0.95	2.72	PASS	5017	4830	0.96	FAIL	4630	1.043	FAIL
BEC-9	Middle	5.6	797	338	517	54	126			2440	2060	1.2	64.8	1.96	0.518	39.77	27.80	22.49	1.38	2.06	0.00	0.00	50.80	58.03	0.06	1.05	0.02	0.01	91.44	112.03	0.82	10.12	FAIL	6400	5680	0.89	FAIL	4890	1.162	FAIL
DM-1	Shallow	5.9	723	186	413	9.46	310			2680	380	0.49	19.2		0.225	36.08	15.30	17.96	0.24	5.08	0.00	0.00	55.80	10.70	0.03	0.31		0.00	69.58	71.92	0.97	1.65	PASS	4721	4690	0.99	PASS	3250	1.443	FAIL
MCF-01A	Deep	9.8	426	144	391	21.2		8	26	2870	271	1.9				21.26	11.84	17.01	0.54	0.00	0.27	1.53	59.75	7.63	0.10	0.00			50.65	69.28	0.73	15.54	FAIL	4159	3570	0.86	FAIL	3100	1.152	FAIL
MCF-01B	Middle	7.6	119	69.7	406	11.1	122			1070	312	0.72	1.6	1.27	0.649	5.94	5.73	17.66	0.28	2.00	0.00	0.00	22.28	8.79	0.04	0.03	0.02	0.01	29.61	33.15	0.89	5.64	FAIL	2114	2000	0.95	FAIL	2250	0.889	FAIL
MCF-02A	Deep	8.1	23.8	7.5	166	9.51	64			265	151	1	1.8			1.19	0.62	7.22	0.24	1.05	0.00	0.00	5.52	4.25	0.05	0.03			9.27	10.90	0.85	8.10	FAIL	690	494	0.72	FAIL	1100	0.449	FAIL
MCF-02B	Middle	8.1	20.2	9.23	198	9.34	74			346	102	1.2	2			1.01	0.76	8.61	0.24	1.21	0.00	0.00	7.20	2.87	0.06	0.03			10.62	11.39	0.93	3.49	PASS	762	622	0.82	FAIL	1100	0.565	PASS
MCF-03A	Deep	8.4	141	144	163	38.4			56	12.5	176	0.92	2.2			7.04	11.84	7.09	0.98	0.00	0.00	3.29	0.26	4.96	0.05	0.04			26.95	8.60	3.14	51.63	FAIL	734	694	0.95	FAIL	1200	0.578	PASS
MCF-03B	Middle	8.1	174	92.7	550	14.2	82			1290	326	0.64	14.2		0.0677	8.68	7.62	23.92	0.36	1.34	0.00	0.00	26.86	9.18				0.00	40.59	37.39	1.09	4.11	PASS	2544	2590	1.02	PASS	2750	0.942	FAIL
MCF-04	Deep	7.7	527	127	723	88.2	40			3340	467	0.69				26.30	10.44	31.45	2.26	0.66	0.00	0.00	69.54	13.15					70.45	83.35	0.85	8.39	FAIL	5313	4740	0.89	FAIL	4450	1.065	FAIL
MCF-05	Middle	8.3	610	13800	20400	12700			164	76500	28500	2.7				30.44	1134.87	887.34	324.81	0.00	0.00	9.65	1592.75	802.82	0.14	0.00			2377.46	2405.36	0.99	0.58	PASS	152677	47600	0.31	FAIL	138000	0.345	FAIL
MCF-06A	Deep	6.7	74.8	12700	26400	9440	64			148000	87600	1.6				3.73	1044.41	1148.33	241.43	1.05	0.00	0.00	3081.41	2467.61	0.08	0.00			2437.90	5550.15	0.44	38.96	FAIL	284280	186000	0.65	FAIL	250000	0.744	FAIL
MCF-06B	Middle	8.6	554	2410	3970	3340			50	13500	7050	4.1	2.3	4	3.53	27.64	198.19	172.68	85.42	0.00	0.00	2.94	281.07	198.59	0.22	0.04	0.05	0.04	483.94	482.94	1.00	0.10	PASS	30888	31400	1.02	PASS	35400	0.887	FAIL
MCF-06C	Shallow	7.2	703	350	642	187	74			2460	1640	0.89	48.4	4.36	2.57	35.08	28.78	27.93	4.78	1.21	0.00	0.00	51.22	46.20	0.05	0.78	0.05	0.03	96.57	99.53	0.97	1.51	PASS	6112	47600	7.79	FAIL	5900	8.068	FAIL
MCF-06D	Deep	7.2	319	6310	17000	3010	106			24100	46500					15.92	518.91	739.45	76.98	1.74	0.00	0.00	501.77	1309.86		0.00			1351.27	1813.37	0.75	14.60	FAIL	97345	110000	1.13	PASS	1300	84.615	FAIL
MCF-06B	Middle	9	590	1880	5320	743			56	10300	7420	0.61				29.44	154.61	231.40	19.00	0.00	0.00	3.29	214.45	209.01	0.03	0.00			434.45	426.79	1.02	0.89	PASS	26310	27100	1.03	PASS	32000	0.847	FAIL
MCF-06A	Deep	7.4	506	1880	4720	596	66			13500	4540	2.2				25.25	154.61	205.31	15.24	1.08	0.00	0.00	281.07	127.89	0.12	0.00			400.40	410.16	0.98	1.20	PASS	25810	<3.5 U	N/A	FAIL	30100	N/A	FAIL
MCF-06B	Middle	7.4	451	136	397	42.9	70			2260	162	0.29			0.0703	22.50	11.18	17.27	1.10	1.15	0.00	0.00	47.05	4.56	0.02	0.00		0.00	52.05	52.78	0.99	0.69	PASS	3519	3390	0.96	FAIL	2910	1.165	FAIL
MCF-10A	Deep	7.6	549	238	1300	161	40			4710	1600	0.75	0.14			27.40	19.57	56.55	4.12	0.66	0.00	0.00	98.06	45.07	0.04	0.00			107.63	143.83	0.75	14.40	FAIL	8599	8080	0.94	FAIL	6410	1.261	FAIL
MCF-10B	Middle	8.3	270	86.1	225	35.9			30	1330	245	0.66	0.072			13.47	7.08	9.79	0.92	0.00	0.00	1.76	27.69	6.90	0.03	0.00			31.26	36.39	0.86	7.59	FAIL	2223	2050	0.92	FAIL	2270	0.903	FAIL
MCF-11	Middle	7.3	372	115	394	55.5	86			2050	374	1.5	0.08		0.0432	18.56	9.46	17.14	1.42	1.41	0.00	0.00	42.68	10.54	0.08	0.00		0.00	46.58	54.71	0.85	8.03	FAIL	3448	3470	1.01	PASS	3130	1.109	FAIL
MCF-12A	Deep	7.7	514	206	928	362	36			3520	993	1.6				25.65	16.94	40.37	9.26	0.59	0.00	0.00	73.29	27.97	0.08	0.00			92.21	101.93	0.90	5.01	FAIL	6561	5950	0.91	FAIL	5770	1.031	FAIL
MCF-12B	Shallow	7.8	300	128	294	71	64			1570	265	0.91	6.9	3.44	2.26	14.97	10.53	12.79	1.82	1.05	0.00	0.00	32.69	7.46	0.05	0.11	0.04	0.02	40.10	41.42	0.97	1.62	PASS	2706	2630	0.97	FAIL	2700	0.974	FAIL
MCF-12C	Middle	8.9	247	27.6	215	97.7			22	1190	175	0.27	1.3		0.711	12.33	2.27	9.35	2.50	0.00	0.00	1.29	24.78	4.93	0.01	0.02		0.01	26.45	31.04	0.85	8.00	FAIL	1977	1690	0.86	FAIL	2060	0.820	FAIL
MCF-16A	Deep	7.6	574	7990	3930	15400	138			53900	3270	23.2				28.64	657.07	170.94	393.86	2.26	0.00	0.00	1122.22	92.11	1.22	0.00			1250.52	1217.81	1.03	1.33	PASS	85225	81800	0.96	FAIL	72000	1.136	FAIL
MCF-16B	Middle	7.9	403	4880	3140	15100	160			47600	2600					20.11	401.32	136.58	386.19	2.62	0.00	0.00	991.05	73.24	0.00	0.00			944.20	1066.91	0.88	6.10	FAIL	73883	64800	0.88	FAIL	6150	10.537	FAIL
MCF-16C	Shallow	7.2	658	501	552	193	90			4030	1350	1.2	27.3	22.5	10	32.83	41.20	24.01	4.94	1.47	0.00	0.00	83.91	38.03	0.06	0.44	0.27	0.10	102.98	124.28	0.83	9.37	FAIL	7435	8150	1.10	PASS	6460	1.262	FAIL
MCF-27	Deep	7.7	61.3	21.4	224	11.1	68			846	117	0.82	1.3			3.06	1.76	9.74	0.28	1.11	0.00	0.00	17.61	3.30		0.02			14.85	22.05	0.67	19.51	FAIL	1351	1460	1.08	PASS	1980	0.737	FAIL
MW-01	Shallow	7.9	372	127	376	70.6	144			2300	227	0.81	6.6		0.233	18.56	10.44	16.35	1.81	2.36	0.00	0.00	47.89	6.39	0.04	0.11		0.00	47.17	56.79	0.83	9.26	FAIL	3624	3460	0.95	FAIL	2960	1.169	FAIL
MW-03	Shallow	6.6	463	207	751	75.5	96			3220	1950	3.2	0.16		0.315	23.10	17.02	32.67	1.93	1.57	0.00	0.00	67.04	54.93	0.17	0.00		0.00	74.72	123.72	0.60	24.69	FAIL	6766	4660	0.69	FAIL	4560	1.022	FAIL
PC-108	Shallow	6.7	309	67	477	16.7	656			715	698	1.6	0.041			15.42	5.51	20.75	0.43	10.75	0.00	0.00	14.89	19.66	0.08	0.00			42.10	45.38	0.93	3.75	PASS	2940	2410	0.82	FAIL	2810	0.858	FAIL
PC-2	Shallow	7	485	232	609	22.9	116			2560	697	0.63	18.8	10.3	1.14	24.20	19.08	26.49	0.59	1.90	0.00	0.00	53.30	19.63	0.03	0.30	0.12	0.01	70.36	75.31	0.93	3.40	PASS	4753	4450	0.94	FAIL	3870	1.150	FAIL
PC-4	Shallow	6.2	628	392	1180	104	126			3290	1800	0.14	32.7	103	12.5	31.34	32.24	51.33	2.66	2.06	0.00	0.00	68.50	50.70	0.01	0.53	1.24	0.13	117.56	123.16	0.95	2.33	PASS	7668	6750	0.88	FAIL	6230	1.083	FAIL
PC-79	Shallow	7.8	278	99.9	491	22.7	240			1380	896	0.73			0.704	13.87	8.22	21.36	0.58	3.93	0.00	0.00	28.73	25.24	0.04	0.00		0.01	44.03	57.95	0.76	13.65	FAIL	3409	2790	0.82	FAIL	2970	0.939	FAIL
PC-80	Shallow	8.2	211	62.4	450	21.1			340	856	683	0.7			0.106	10.53	5.13	19.57	0.54	0.00	0.00	20.00	17.82	19.24	0.04	0.00		0.00	35.77	57.10	0.63	22.96	FAIL	2624	2090	0.80	FAIL	2440	0.857	FAIL
PC-81	Shallow	6.6	174	89.9	852	29	332			1220	847	3.5			0.39	8.68	7.39	37.06	0.74	5.44	0.00	0.00	25.40	23.86	0.18	0.00		0.00	53.88	54.89	0.98	0.93	PASS	3548	3230	0.91	FAIL	3600	0.897	FAIL
PC-94	Shallow	7.7	487	206	514	46.7	146			1960	781	0.22	15.1	14.9	3.79	24.30	16.94	22.36	1.19	2.39	0.00	0.00	40.81	22.00	0.01	0.24	0.18	0.04	64.79	65.67	0.99	0.67	PASS	4175	4070	0.97	FAIL	3740	1.088	FAIL
POD2	Shallow	7.6	640	179	654	16.2	142			2900	951	0.53	25.8	53.6	2.85	31.94	14.72	28.45	0.41	2.33	0.00	0.00	60.38	26.79	0.03	0.42	0.64	0.03	75.52	90.61	0.83	9.08	FAIL	5565	5010	0.90	FAIL	4340	1.154	FAIL
POD8	Shallow	6	353	279	459	23	218			1210	1230	0.83	40.9		0.168	17.61	22.94	19.97	0.59	3.57	0.00	0.00	25.19	34.65	0.04	0.66		0.00	61.11	64.12	0.95	2.40	PASS	3814	3720	0.98	FAIL	3760	0.989	FAIL
POU3	Shallow	5.8	451	246	1090	15.6	82			2550	1600	0.25	10	118	12.1	22.50	20.23	47.41	0.40	1.34	0.00	0.00	53.09	45.07	0.01	0.16	1.41	0.12	90.55	101.22	0.89	5.56	FAIL	6175	5650	0.91	FAIL	4540	1.244	FAIL

8.6 - pH at or above 8.2.
mg/L - Milligrams per Liter
Cat - Cation
An - Anion
Blank cells for minor consistuents (F, NO3, ClO3, ClO4) indicate sample not collected or below detection limit
Flagged cells with red indicate that the sample result was non-detect, and 1/2 the detection limit is used here

Ion Balance Summary
BRC Eastside Groundwater Monitoring Data
Second Round Event

Description	Zone	pH	Major Ion Chemistry Data Input												meq/l Calculations													Cation-Anion Balance Tests					TDS Checks				TDS and EC		
			Ca	Mg	Na	K	HCO_3	CO_3	OH	SO_4	Cl	F	NO_3	ClO_3	ClO_4	Ca	Mg	Na	K	HCO_3	CO_3	OH	SO_4	Cl	F	NO_3	ClO_3	ClO_4	Sum Cations	Sum Anions	Cat/An Ratio	(Cat-An)/ (Cat+An)	Balance Variance >5%?	TDS Sum	TDS Lab	Lab/Sum Ratio	Acceptable Ratio 1.0 - 1.2	EC	Lab TDS / EC Ratio	Acceptable Range 0.55 - 0.7
																20.04	12.16	22.99	39.1	61.02	30.01	17	48.03	35.5	19	61.91	83.4	99.5											
			(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	(meq/l)	-	(%)		(mg/l)	(mg/l)	-		(umhos/cm)	-	
Sample Name			Calcium	Magnesium	Sodium	Potassium	Bicarbonate alkalinity	Carbonate alkalinity	Alkalinity	Sulfate	Chloride	Fluoride	Nitrate (as N)	Chlorate	Perchlorate																				TDS			Electrical Conductivity		
AA-01	Shallow UG	7.4	595	116	378	6.93	110			1700	884	3.5	12.4	4.2	1.53	29.69	9.54	16.44	0.18	1.80	0.00	0.00	35.39	24.90	0.18	0.20	0.05	0.02	55.85	62.55	0.89	5.66	FAIL	3812	3930	1.03	PASS	3530	1.113	FAIL
AA-07	Shallow	7.5	268	83.8	200	42.4	80			874	232		11.2		0.467	13.37	6.89	8.70	1.08	1.31	0.00	0.00	18.20	6.54		0.18		0.00	30.05	26.23	1.15	6.79	FAIL	1792	1990	1.11	PASS	2280	0.873	FAIL
AA-08	Shallow	7.2	484	223	688	31.9	182			2050	1190	1.1	8.1		3.13	24.15	18.34	29.93	0.82	2.98	0.00	0.00	42.68	33.52	0.06	0.13		0.03	73.23	79.41	0.92	4.04	PASS	4861	4390	0.90	FAIL	4640	0.946	FAIL
AA-09	Shallow	7.5	649	319	857	21.2	70			2850	1460	1	15.9	105	7.02	32.39	26.23	37.28	0.54	1.15	0.00	0.00	59.34	41.13	0.05	0.26	1.26	0.07	96.44	103.25	0.93	3.41	PASS	6355	5740	0.90	FAIL	5840	0.983	FAIL
AA-10	Shallow	7.2	508	240	692	37.2	130			2240	1340	4.3	6.5		2.4	25.35	19.74	30.10	0.95	2.13	0.00	0.00	46.64	37.75	0.23	0.10		0.02	76.14	86.87	0.88	6.58	FAIL	5200	4610	0.89	FAIL	4900	0.941	FAIL
AA-13	Shallow	7.6	240	102	362	18	126			1380	390	1.6	25.3		0.023	11.98	8.39	15.75	0.46	2.06	0.00	0.00	28.73	10.99	0.08	0.41		0.00	36.57	42.28	0.87	7.24	FAIL	2645	2500	0.95	FAIL	2610	0.958	FAIL
AA-18	Shallow	7.6	117	57.9	154	15.2	96			439	251	0.81	9.7		0.106	5.84	4.76	6.70	0.39	1.57	0.00	0.00	9.14	7.07	0.04	0.16		0.00	17.69	17.98	0.98	0.83	PASS	1141	1280	1.12	PASS	1820	0.703	FAIL
AA-20	Shallow	7.4	644	254	880	42.4	90			2960	1400	1.6	19.2	94.6	5.35	32.14	20.89	38.28	1.08	1.47	0.00	0.00	61.63	39.44	0.08	0.31	1.13	0.05	92.39	104.12	0.89	5.97	FAIL	6391	5670	0.89	FAIL	5760	0.984	FAIL
AA-21	Shallow	7.1	559	346	828	88.1	180			7220	200	3.6	6.7		0.0734	27.89	28.45	36.02	2.25	2.95	0.00	0.00	150.32	5.63	0.19	0.11		0.00	94.62	159.20	0.59	25.45	FAIL	9431	6180	0.66	FAIL	5170	1.195	FAIL
AA-22	Shallow	7.3	291	61.2	309	23.2	232			972	473	0.82	3.9		0.0429	14.52	5.03	13.44	0.59	3.80	0.00	0.00	20.24	13.32	0.04	0.06		0.00	33.59	37.47	0.90	5.46	FAIL	2366	2260	0.96	FAIL	2500	0.904	FAIL
AA-26	Shallow	7.5	240	71.1	332	38.7	86			1160	298	1.8	4.5		0.0232	11.98	5.85	14.44	0.99	1.41	0.00	0.00	24.15	8.39	0.09	0.07		0.00	33.25	34.12	0.97	1.29	PASS	2232	2170	0.97	FAIL	2360	0.919	FAIL
AA-27	Shallow UG	7.6	578	169	497	8.12	136			6870	1250	3.3	39.3		0.246	28.84	13.90	21.62	0.21	2.23	0.00	0.00	143.04	35.21	0.17	0.63		0.00	64.57	181.29	0.36	47.48	FAIL	9551	4240	0.44	FAIL	3640	1.165	FAIL
BEC-6	Middle	6.5	679	256	639	36.7	64			2040	1780	0.83	32.9	24.3	16.3	33.88	21.05	27.79	0.94	1.05	0.00	0.00	42.47	50.14	0.04	0.53	0.29	0.16	83.67	94.69	0.88	6.18	FAIL	5569	5520	0.99	PASS	5090	1.084	FAIL
BEC-9	Middle	7.1	826	279	549	57.3	116			2330	1760	1	52.8	1.45	0.762	41.22	22.94	23.88	1.47	1.90	0.00	0.00	48.51	49.58	0.05	0.85	0.02	0.01	89.51	100.92	0.89	5.99	FAIL	5973	6020	1.01	PASS	5170	1.164	FAIL
DM-1	Shallow	6.7	648	220	463	9.05	178			3910	476	3.6	17.3		0.141	32.34	18.09	20.14	0.23	2.92	0.00	0.00	81.41	13.41	0.19	0.28		0.00	70.80	98.20	0.72	16.22	FAIL	5925	4740	0.80	FAIL	3740	1.267	FAIL
MCF-01A	Deep	9.3	399	140	394	22.4		8	16	2470	154	0.41				19.91	11.51	17.14	0.57	0.00	0.27	0.94	51.43	4.34	0.02				49.13	56.99	0.86	7.41	FAIL	3604	4020	1.12	PASS	3020	1.331	FAIL
MCF-01B	Middle	7.6	126	72.7	419	11.9	116			1090	321	0.82	1.4	1.39	0.578	6.29	5.98	18.23	0.30	1.90	0.00	0.00	22.69	9.04	0.04	0.02	0.02	0.01	30.80	33.73	0.91	4.54	PASS	2161	2070	0.96	FAIL	2220	0.932	FAIL
MCF-02A	Deep	7.7	24	7.53	168	10.2	208			192	1290	0.94	1.3			1.20	0.62	7.31	0.26	3.41	0.00	0.00	4.00	36.34	0.05	0.02			9.39	43.81	0.21	64.72	FAIL	1902	560	0.29	FAIL	984	0.569	PASS
MCF-02B	Middle	8.1	23.7	9.03	185	9.8	86			428	169	1.2	1.7			1.18	0.74	8.05	0.25	1.41	0.00	0.00	8.91	4.76	0.06	0.03			10.22	15.17	0.67	19.49	FAIL	913	620	0.68	FAIL	1030	0.602	PASS
MCF-03A	Deep	6.9	26.8	12.1	179	12.6	80			198	178	1.1	2.3			1.34	1.00	7.79	0.32	1.31	0.00	0.00	4.12	5.01	0.06	0.04			10.44	10.54	0.99	0.49	PASS	690	631	0.91	FAIL	1150	0.549	FAIL
MCF-03B	Middle	7.8	178	94.1	510	13.9	104			1320	373	0.97	15.6		0.082	8.88	7.74	22.18	0.36	1.70	0.00	0.00	27.48	10.51	0.05	0.25		0.00	39.16	40.00	0.98	1.06	PASS	2610	2450	0.94	FAIL	2880	0.851	FAIL
MCF-04	Deep	7.5	510	131	752	90.1	24			6710	855	0.46				25.45	10.77	32.71	2.30	0.39	0.00	0.00	139.70	24.08					71.24	164.18	0.43	39.48	FAIL	9073	4580	0.50	FAIL	4240	1.080	FAIL
MCF-05	Middle	7.8	101	13400	19300	11900	130			76800	31800					5.04	1101.97	839.50	304.35	2.13	0.00	0.00	1599.00	895.77					2250.86	2496.91	0.90	5.18	FAIL	153431	149000	0.97	FAIL	13100	11.374	FAIL
MCF-06A	Deep	6.7	255	12100	38800	10800	64			55600	81000					12.72	995.07	1687.69	276.21	1.05	0.00	0.00	1157.61	2281.69					2971.70	3440.35	0.86	7.31	FAIL	198619	185000	0.93	FAIL	230000	0.804	FAIL
MCF-06B	Middle	8.3	541	3830	4480	3690			86	18000	8050	38		8.25	5.24	27.00	314.97	194.87	94.37	0.00	0.00	5.06	374.77	226.76	2.00		0.10	0.05	631.20	608.74	1.04	1.81	PASS	38728	39700	1.03	PASS	41400	0.959	FAIL
MCF-06C	Shallow	7.4	664	393	634	213	66			2710	1830	0.68	48.9	5.14	2.98	33.13	32.32	27.58	5.45	1.08	0.00	0.00	56.42	51.55	0.04	0.79	0.06	0.03	98.48	109.97	0.90	5.51	FAIL	6568	6280	0.96	FAIL	5910	1.063	FAIL
MCF-07	Deep	7.1	458	15700	27900	12100	198			92800	46000					22.85	1291.12	1213.57	309.46	3.24	0.00	0.00	1932.13	1295.77					2837.01	3231.15	0.88	6.50	FAIL	195156	174000	0.89	FAIL	169000	1.030	FAIL
MCF-08A	Deep	7.2	445	6740	27900	3240	110			23300	50900	26				22.21	554.28	1213.57	82.86	1.80	0.00	0.00	485.11	1433.80					1872.92	1920.72	0.98	1.26	PASS	112661	113000	1.00	PASS	128000	0.883	FAIL
MCF-08B	Middle	9	592	1740	5600	808		40	56	9470	7640					29.54	143.09	243.58	20.66	0.00	1.33	3.29	197.17	215.21					436.88	417.01	1.05	2.33	PASS	25946	26200	1.01	PASS	27000	0.970	FAIL
MCF-09A	Deep	7.4	516	2050	5220	613	60			14600	4860					25.75	168.59	227.06	15.68	0.98	0.00	0.00	303.98	136.90					437.07	441.86	0.99	0.55	PASS	27919	24800	0.89	FAIL	28900	0.858	FAIL
MCF-09B	Middle	7.2	460	115	367	40.1	70			2130	1530	1.4				22.95	9.46	15.96	1.03	1.15	0.00	0.00	44.35	43.10	0.07				49.40	88.67	0.56	28.44	FAIL	4714	3510	0.74	FAIL	3040	1.155	FAIL
MCF-10A	Deep	7.6	559	245	1280	162	40			3520	1190	0.67				27.89	20.15	55.68	4.14	0.66	0.00	0.00	73.29	33.52	0.04				107.86	107.50	1.00	0.17	PASS	6997	6800	0.97	FAIL	6280	1.083	FAIL
MCF-10B	Middle	8	267	85.1	234	41.3	30			1390	244	0.35			0.0011	13.32	7.00	10.18	1.06	0.49	0.00	0.00	28.94	6.87	0.02			0.00	31.56	36.32	0.87	7.02	FAIL	2292	2030	0.89	FAIL	2280	0.890	FAIL
MCF-11	Middle	7.4	396	130	456	59.2	88			3640	688	1.7			0.116	19.76	10.69	19.83	1.51	1.44	0.00	0.00	75.79	19.38	0.09			0.00	51.80	96.70	0.54	30.24	FAIL	5459	3250	0.60	FAIL	3190	1.019	FAIL
MCF-12A	Deep	7.6	548	217	978	398	50			3540	1040	1				27.35	17.85	42.54	10.18	0.82	0.00	0.00	73.70	29.30	0.05				97.91	103.87	0.94	2.95	PASS	6772	5900	0.87	FAIL	6020	0.980	FAIL
MCF-12B	Shallow	7.7	277	131	286	75	56			1650	283	0.48	6.5	3.43	3.08	13.82	10.77	12.44	1.92	0.92	0.00	0.00	34.35	7.97	0.03	0.10	0.04	0.03	38.95	43.45	0.90	5.45	FAIL	2771	2520	0.91	FAIL	28200	0.089	FAIL
MCF-12C	Middle	7.6	265	84.6	239	74.5	76			1260	135	0.45	1.5		0.343	13.22	6.96	10.40	1.91	1.25	0.00	0.00	26.23	3.80	0.02	0.02		0.00	32.48	31.33	1.04	1.80	PASS	2136	1820	0.85	FAIL	2210	0.824	FAIL
MCF-16A	Deep	7.4	562	8120	3890	15600	128			58400	5720					28.04	667.76	169.20	398.98	2.10	0.00	0.00	1215.91	161.13					1263.99	1379.13	0.92	4.36	PASS	92420	83800	0.91	FAIL	76100	1.101	FAIL
MCF-16B	Middle	7.9	488	5480	3280	14200	160			42500	2810					24.35	450.66	142.67	363.17	2.62	0.00	0.00	884.86	79.15					980.85	966.64	1.01	0.73	PASS	68918	70000	1.02	PASS	70000	1.000	FAIL
MCF-16C	Shallow	7.3	601	999	673	529	84			5220	1110	1	22.3	17.4	11.1	29.99	82.15	29.27	13.53	1.38	0.00	0.00	108.68	31.27	0.05	0.36	0.21	0.11	154.95	142.06	1.09	4.34	PASS	9268	8190	0.88	FAIL	6850	1.196	FAIL
MCF-27	Deep	7.9	76.5	22.6	232	12.3	50			891	136	0.83	1.4			3.82	1.86	10.09	0.31	0.82	0.00	0.00	18.55	3.83		0.02			16.08	23.22	0.69	18.17	FAIL	1423	1260	0.89	FAIL	1790	0.704	FAIL
MW-01	Shallow	7.5	319	126	410	73.3	80			2470	247	0.57	7.4		0.268	15.92	10.36	17.83	1.87	1.31	0.00	0.00	51.43	6.96	0.03	0.12		0.00	45.99	59.85	0.77	13.09	FAIL	3734	3120	0.84	FAIL	3150	0.990	FAIL
MW-03	Shallow	7.4	511	207	722	76.4	92			2600	1580	3			0.137	25.50	17.02	31.40	1.95	1.51	0.00	0.00	54.13	44.51	0.16			0.00	75.88	100.31	0.76	13.86	FAIL	5792	4700	0.81	FAIL	4990	0.942	FAIL
PC-108	Shallow	7.5	159	65.8	513	15.4	410			579	670	1.6				7.93	5.41	22.31	0.39	6.72	0.00	0.00	12.05	18.87	0.08				36.05	37.73	0.96	2.27	PASS	2414	2220	0.92	FAIL	2720	0.816	FAIL
PC-2	Shallow	5.6	645	203	534	38.8	150			3960	1390	2.1	17.9	13.1	2.81	32.19	16.69	23.23	0.99	2.46	0.00	0.00	82.45	39.15	0.11	0.29	0.16	0.03	73.10	124.65	0.59	26.07	FAIL	6957	4700	0.68	FAIL	4220	1.114	FAIL
PC-4	Shallow	6.2	636	337	1100	96.7	120			2880	1600	1.9	297	96.7	7.38	31.74	27.71	47.85	2.47	1.97	0.00	0.00	59.96	45.07	0.10	4.80	1.16	0.07	109.77	113.13	0.97	1.51	PASS	7173	7220	1.01	PASS	6330	1.141	FAIL
PC-79	Shallow	6.7	316	106	534	22.9	220			1080	1350	3.4				15.77	8.72	23.23	0.59	3.61	0.00	0.00	22.49	38.03	0.18				48.30	64.30	0.75	14.21	FAIL	3632	3070	0.85	FAIL	3340	0.919	FAIL
PC-80	Shallow	7.4	219	69.3	396	23.1	324			746	587	1.8			0.351	10.93	5.70	17.22	0.59	5.31	0.00	0.00	15.53	16.54	0.09			0.00	34.44	37.48	0.92	4.22	PASS	2367	2140	0.90	FAIL	2740	0.781	FAIL
PC-81	Shallow	7.4	121	67.9	693	26.7	332			1010	773	3.9			0.258	6.04	5.58	30.14	0.68	5.44	0.00	0.00	21.03	21.77	0.21			0.00	42.45	48.45	0.88	6.60	FAIL	3028	2520	0.83	FAIL	3420	0.737	FAIL
PC-94	Shallow	5.8	431	183	460	44.3	134			2020	872	0.72	11.9	9.74	2.03	21.51	15.05	20.01	1.13	2.20	0.00	0.00	42.06	24.56	0.04	0.19	0.12	0.02	57.70	69.18	0.83	9.05	FAIL	4169	4130	0.99	PASS	3870	1.067	FAIL
POD8	Shallow	6.7	450	265	437	24.3	204			1480	1040	1	36.7		0.2	22.46	21.79	19.01	0.62	3.34	0.00	0.00	30.81	29.30	0.05	0.59		0.00	63.88	64.10	1.00	0.17	PASS	3938	3770	0.96	FAIL	3840	0.982	FAIL
POU3	Shallow	7.4	717	360	1660	26.1	66			3090	2770	3	17.8	343	26.1	35.78	29.61	72.21	0.67	1.08	0.00	0.00	64.33	78.03	0.16	0.29	4.11	0.26	138.26	148.27	0.93	3.49	PASS	9079	8580	0.95	FAIL	7730	1.110	FAIL

The reporting limit (RL) was multipled by 0.5 in the calculations for non-detect results
8.6 - pH at or above 8.2.
mg/L - Milligrams per Liter
Cat - Cation
An - Anion
Blank cells for minor consistuents (F, NO3, ClO3, ClO4) indicate sample not collected or below detection limit
Flagged cells with red indicate that the sample result was non-detect, and 1/2 the detection limit is used here

Ion Balance Summary
BRC Eastside Groundwater Monitoring Data
Third Round Event

Description / Sample Name	Zone	pH	Ca (mg/l) Calcium	Mg (mg/l) Magnesium	Na (mg/l) Sodium	K (mg/l) Potassium	HCO_3 (mg/l) Bicarbonate alkalinity	CO_3 (mg/l) Carbonate alkalinity	OH (mg/l) Alkalinity	SO_4 (mg/l) Sulfate	Cl (mg/l) Chloride	F (mg/l) Fluoride	NO_3 (mg/l) Nitrate (as N)	ClO_3 (mg/l) Chlorate	ClO_4 (mg/l) Perchlorate
AA-01	Shallow UG	7.2	522	112	362	6.78	90			1600	757	3.1	10	3.07	1.55
AA-07	Shallow	7.4	294	92.1	216	46.3	85			1130	307	0.79	16	2.43	0.509
AA-08	Shallow	7.3	477	225	666	32.4	147			1910	1120		7.8		5.21
AA-09	Shallow	7.3	598	319	821	20.6	80			2200	1160	0.91	17	124	7.47
AA-10	Shallow	7.2	466	236	649	35	120			2080	1160	1.5	6.6		2.22
AA-13	Shallow	7.2	245	117	385	20.1	188			660	357	1.1	25.8		0.0317
AA-18	Shallow	7.7	117	55	141	14.3	86.4			517	240	1	10	1.59	0.107
AA-20	Shallow	7.4	623	243	837	38.9	91			2720	1170	0.73	24.3	99.2	5.1
AA-21	Shallow	7.2	564	325	774	83.8	153			3200	1290		7.3		0.0744
AA-22	Shallow	7.3	286	62.8	327	25.9	195			1010	394	0.76	4.3		0.0112
AA-26	Shallow	7.5	227	82	346	39	113			1230	303	1.1	4.3		0.0242
AA-27	Shallow UG	7.1	511	195	473	7.95	121			2700	434	3	12		0.261
BEC-6	Middle	7.2	588	263	653	34.8	62			2110	1900	0.94	36.5	24.9	16.3
BEC-9	Middle	7.2	723	290	488	58.9	110			2030	1460	1.8	45.1		0.846
DM-1	Shallow	7.2	552	219	442	9.04	152			2640	317	2.1	10.2		0.152
MCF-01A	Deep	8.9	479	161	424	23.7		8	39	2780	136				
MCF-01B	Middle	7.6	127	72.2	427	12.2	117			951	305	1		1.47	0.633
MCF-02A	Deep	7.9	23.9	7.45	165	9.73	85			187	194	0.86	1.5		
MCF-02B	Middle	8	22.6	9.79	181	8.98	77			402	114	1.3	1.7		
MCF-03A	Deep	6.6	26.7	11.4	186	13.4	54			308	138	0.95	2.3		
MCF-03B	Middle	7.4	164	95.8	526	13.9	105			1320	327	1.4	13.3		0.087
MCF-04	Deep	7.3	490	117	705	82.1	33			3080	412	0.59			
MCF-05	Middle	7.9	515	13500	18800	11700	150			76800	29700	1.1			
MCF-06A	Deep	6.2	374	14300	45000	11100	60			43600	54000				
MCF-06B	Middle	8.3	528	3580	4050	3620			84	17300	6670		4	6.7	5.48
MCF-06C	Shallow	7.4	686	346	623	188	56			2430	1630	23.7	52	11.9	3.07
MCF-07	Deep	6.9	434	16100	29500	12000	141			19100	11400	148			
MCF-08A	Deep	7.4	554	7050	29900	3440	91			13700	28500	125			
MCF-08B	Middle	8.7	552	1670	5460	746		14	153	9590	8170				
MCF-09A	Deep	7.6	499	2010	4900	604	89			13200	4580				
MCF-09B	Middle	7.1	424	123	390	41.3	65			2250	159	0.72			
MCF-10A	Deep	7.8	540	246	1220	156	41			3740	1310	1.6			
MCF-10B	Middle	7.8	262	79	207	34.8	35			1310	225	0.78			
MCF-11	Middle	7.1	416	127	421	59	90			2000	379	1.6			
MCF-12A	Deep	7.5	501	194	928	337	43			3400	897	0.94			
MCF-12B	Shallow	7.4	278	123	282	67.7	56			1480	254	0.58	5.9	3.81	3.16
MCF-12C	Middle	7.2	226	87.1	199	69.6	51			1230	143	0.66	1.7		0.325
MCF-16A	Deep	7.4	610	8830	4130	16700	136			30800	3290	60.3			
MCF-16B	Middle	8	553	5490	3120	15400	140			35400	2290	50			
MCF-16C	Shallow	7.3	685	459	548	166	73			3240	1180	1	27.1	19.2	15.9
MCF-27	Deep	7.4	66.2	23.8	214	11.8	43			683	103	0.82	1.5		0.0173
MW-01	Shallow	5.8	339	121	408	72.6	94			0.025	443	0.47	6		0.234
MW-03	Shallow	7.3	482	216	777	78.8	88			0.025	0.0115	1.1	0.066		0.0327
PC-108	Shallow	6.4	239	73.7	519	19.9	342			928	580	1.5	6.4		0.0033
PC-2	Shallow	7.6	658	200	673	34.3	86			3090	785	1.6	10	21.5	2.43
PC-4	Shallow	7.2	589	360	1020	92.5	96			3470	1880	0.45	28.2	128	7.71
PC-79	Shallow	7.2	273	98.3	484	22.4	243			1120	638	1.6			0.0785
PC-80	Shallow	7.3	223	61.7	425	22.2	282			668	493	1.4			0.0139
PC-81	Shallow	7.3	111	55.7	687	24.5	310			848	644	3.8			0.191
PC-90	Shallow	7.4	476	209	1100	33.9	231			2020	1800	2.6	6.7	29.6	10.4
PC-94	Shallow	6.1	422	172	417	43.7	124			1720	647	0.87	8	6.09	1.33
POD2	Shallow	7.5	599	195	708	16.6	127			2670	924	3.5	17.3	63.4	5.75
POD8	Shallow	7.3	373	258	419	24.7	193			1410	792	1.9	27.2		0.245
POU3	Shallow	7.3	637	380	1560	27.3	69			2390	2840	1	11.6	338	29.6

meq/l Calculations

Sample Name	Ca 20.04 (mg/meq) (meq/l)	Mg 12.16 (mg/meq) (meq/l)	Na 22.99 (mg/meq) (meq/l)	K 39.1 (mg/meq) (meq/l)	HCO_3 61.02 (mg/meq) (meq/l)	CO_3 30.01 (mg/meq) (meq/l)	OH 17 (mg/meq) (meq/l)	SO_4 48.03 (mg/meq) (meq/l)	Cl 35.5 (mg/meq) (meq/l)	F 19 (mg/meq) (meq/l)	NO_3 61.91 (mg/meq) (meq/l)	ClO_3 83.4 (mg/meq) (meq/l)	ClO_4 99.5 (mg/meq) (meq/l)
AA-01	26.05	9.21	15.75	0.17	1.47	0.00	0.00	33.31	21.32	0.16	0.16	0.04	0.02
AA-07	14.67	7.57	9.40	1.18	1.39	0.00	0.00	23.53	8.65	0.04	0.26	0.03	0.01
AA-08	23.80	18.50	28.97	0.83	2.41	0.00	0.00	39.77	31.55	0.00	0.13		0.05
AA-09	29.84	26.23	35.71	0.53	1.31	0.00	0.00	45.80	32.68	0.05	0.27	1.49	0.08
AA-10	23.25	19.41	28.23	0.90	1.97	0.00	0.00	43.31	32.68	0.08	0.11		0.02
AA-13	12.23	9.62	16.75	0.51	3.08	0.00	0.00	13.74	10.06	0.06	0.42		0.00
AA-18	5.84	4.52	6.13	0.37	1.42	0.00	0.00	10.76	6.76	0.05	0.16	0.02	0.00
AA-20	31.09	19.98	36.41	0.99	1.49	0.00	0.00	56.63	32.96	0.04	0.39	1.19	0.05
AA-21	28.14	26.73	33.67	2.14	2.51	0.00	0.00	66.63	36.34	0.00	0.12		0.00
AA-22	14.27	5.16	14.22	0.66	3.20	0.00	0.00	21.03	11.10	0.04	0.07		0.00
AA-26	11.33	6.74	15.05	1.00	1.85	0.00	0.00	25.61	8.54	0.06	0.07		0.00
AA-27	25.50	16.04	20.57	0.20	1.98	0.00	0.00	56.21	12.23	0.16	0.19		0.00
BEC-6	29.34	21.63	28.40	0.89	1.02	0.00	0.00	43.93	53.52	0.05	0.59	0.30	0.16
BEC-9	36.08	23.85	21.23	1.51	1.80	0.00	0.00	42.27	41.13	0.09	0.73		0.01
DM-1	27.54	18.01	19.23	0.23	2.49	0.00	0.00	54.97	8.93	0.11	0.16		0.00
MCF-01A	23.90	13.24	18.44	0.61	0.00	0.27	2.29	57.88	3.83	0.00	0.00		
MCF-01B	6.34	5.94	18.57	0.31	1.92	0.00	0.00	19.80	8.59	0.05	0.00	0.02	0.01
MCF-02A	1.19	0.61	7.18	0.25	1.39	0.00	0.00	3.89	5.46	0.05	0.02		
MCF-02B	1.13	0.81	7.87	0.23	1.26	0.00	0.00	8.37	3.21	0.07	0.03		
MCF-03A	1.33	0.94	8.09	0.34	0.88	0.00	0.00	6.41	3.89	0.05	0.04		
MCF-03B	8.18	7.88	22.88	0.36	1.72	0.00	0.00	27.48	9.21	0.07	0.21		0.00
MCF-04	24.45	9.62	30.67	2.10	0.54	0.00	0.00	64.13	11.61				
MCF-05	25.70	1110.20	817.75	299.23	2.46	0.00	0.00	1599.00	836.62				
MCF-06A	18.66	1175.99	1957.37	283.89	0.98	0.00	0.00	907.77	1521.13	0.00	0.00		
MCF-06B	26.35	294.41	176.16	92.58	0.00	0.00	4.94	360.19	187.89	0.00	0.06	0.08	0.06
MCF-06C	34.23	28.45	27.10	4.81	0.92	0.00	0.00	50.59	45.92	1.25	0.84	0.14	0.03
MCF-07	21.66	1324.01	1283.17	306.91	2.31	0.00	0.00	397.67	321.13	7.79	0.00		
MCF-08A	27.64	579.77	1300.57	87.98	1.49	0.00	0.00	285.24	802.82		0.00		
MCF-08B	27.54	137.34	237.49	19.08	0.00	0.47	9.00	199.67	230.14	0.00	0.00		
MCF-09A	24.90	165.30	213.14	15.45	1.46	0.00	0.00	274.83	129.01	0.00	0.00		
MCF-09B	21.16	10.12	16.96	1.06	1.07	0.00	0.00	46.85	4.48	0.04	0.00		
MCF-10A	26.95	20.23	53.07	3.99	0.67	0.00	0.00	77.87	36.90	0.08	0.00		
MCF-10B	13.07	6.50	9.00	0.89	0.57	0.00	0.00	27.27	6.34	0.04	0.00		
MCF-11	20.76	10.44	18.31	1.51	1.47	0.00	0.00	41.64	10.68	0.08	0.00		
MCF-12A	25.00	15.95	40.37	8.62	0.70	0.00	0.00	70.79	25.27	0.05	0.00		
MCF-12B	13.87	10.12	12.27	1.73	0.92	0.00	0.00	30.81	7.15	0.03	0.10	0.05	0.03
MCF-12C	11.28	7.16	8.66	1.78	0.84	0.00	0.00	25.61	4.03	0.03	0.03		0.00
MCF-16A	30.44	726.15	179.64	427.11	2.23	0.00	0.00	641.27	92.68	3.17	0.00		
MCF-16B	27.59	451.48	135.71	393.86	2.29	0.00	0.00	737.04	64.51	2.63	0.00		
MCF-16C	34.18	37.75	23.84	4.25	1.20	0.00	0.00	67.46	33.24	0.05	0.44	0.23	0.16
MCF-27	3.30	1.96	9.31	0.30	0.70	0.00	0.00	14.22	2.90		0.02		0.00
MW-01	16.92	9.95	17.75	1.86	1.54	0.00	0.00	0.00	12.48	0.02	0.10		0.00
MW-03	24.05	17.76	33.80	2.02	1.44	0.00	0.00	0.00	0.00	0.06	0.00		0.00
PC-108	11.93	6.06	22.58	0.51	5.60	0.00	0.00	19.32	16.34	0.08	0.10		0.00
PC-2	32.83	16.45	29.27	0.88	1.41	0.00	0.00	64.33	22.11	0.08	0.16	0.26	0.02
PC-4	29.39	29.61	44.37	2.37	1.57	0.00	0.00	72.25	52.96	0.02	0.46	1.53	0.08
PC-79	13.62	8.08	21.05	0.57	3.98	0.00	0.00	23.32	17.97	0.08	0.00		0.00
PC-80	11.13	5.07	18.49	0.57	4.62	0.00	0.00	13.91	13.89	0.07	0.00		0.00
PC-81	5.54	4.58	29.88	0.63	5.08	0.00	0.00	17.66	18.14	0.20	0.00		0.00
PC-90	23.75	17.19	47.85	0.87	3.79	0.00	0.00	42.06	50.70	0.14	0.11	0.35	0.10
PC-94	21.06	14.14	18.14	1.12	2.03	0.00	0.00	35.81	18.23	0.05	0.13	0.07	0.01
POD2	29.89	16.04	30.80	0.42	2.08	0.00	0.00	55.59	26.03	0.18	0.28	0.76	0.06
POD8	18.61	21.22	18.23	0.63	3.16	0.00	0.00	29.36	22.31	0.10	0.44		0.00
POU3	31.79	31.25	67.86	0.70	1.13	0.00	0.00	49.76	80.00	0.05	0.19	4.05	0.30

Sample Name	Cation-Anion Balance Tests: Sum Cations (meq/l)	Sum Anions (meq/l)	Cat/An Ratio -	(Cat-An)/(Cat+An) (%)	Balance Variance >5%?	TDS Checks: TDS Sum (mg/l)	TDS Lab (mg/l) TDS	Lab/Sum Ratio -	Acceptable Ratio 1.0 - 1.2	TDS and EC: EC (umhos/cm) Electrical Conductivity	Lab TDS / EC Ratio -	Acceptable Range 0.55 - 0.7
AA-01	51.18	56.49	0.91	4.93	PASS	3468	3310	0.95	FAIL	3480	0.951	FAIL
AA-07	32.82	33.90	0.97	1.62	PASS	2190	2120	0.97	FAIL	2370	0.895	FAIL
AA-08	72.10	73.90	0.98	1.23	PASS	4590	4640	1.01	PASS	4840	0.959	FAIL
AA-09	92.31	81.68	1.13	6.11	FAIL	5348	5890	1.10	PASS	5230	1.126	FAIL
AA-10	71.79	78.16	0.92	4.25	PASS	4756	4770	1.00	PASS	4570	1.044	FAIL
AA-13	39.11	27.35	1.43	17.69	FAIL	1999	2680	1.34	FAIL	2620	1.023	FAIL
AA-18	16.86	19.17	0.88	6.42	FAIL	1183	1210	1.02	PASS	1750	0.691	PASS
AA-20	88.47	92.75	0.95	2.36	PASS	5852	6160	1.05	PASS	5320	1.158	FAIL
AA-21	90.68	105.59	0.86	7.60	FAIL	6397	6360	0.99	PASS	5830	1.091	FAIL
AA-22	34.32	35.43	0.97	1.59	PASS	2306	2180	0.95	FAIL	2710	0.804	FAIL
AA-26	34.12	36.12	0.94	2.86	PASS	2345	2300	0.98	FAIL	2370	0.970	FAIL
AA-27	62.31	70.78	0.88	6.36	FAIL	4457	4220	0.95	FAIL	3700	1.141	FAIL
BEC-6	80.26	99.57	0.81	10.74	FAIL	5689	4510	0.79	FAIL	5140	0.877	FAIL
BEC-9	82.66	86.03	0.96	2.00	PASS	5208	5120	0.98	FAIL	5100	1.004	FAIL
DM-1	65.01	66.66	0.98	1.25	PASS	4343	3630	0.84	FAIL	3660	0.992	FAIL
MCF-01A	56.19	64.27	0.87	6.71	FAIL	4051	4060	1.00	PASS	3210	1.265	FAIL
MCF-01B	31.16	30.39	1.03	1.26	PASS	2015	1980	0.98	FAIL	2290	0.865	FAIL
MCF-02A	9.23	10.82	0.85	7.93	FAIL	674	492	0.73	FAIL	1090	0.451	FAIL
MCF-02B	10.04	12.94	0.78	12.64	FAIL	818	650	0.79	FAIL	1110	0.586	☛PASS
MCF-03A	10.70	11.27	0.95	2.59	PASS	741	627	0.85	FAIL	1170	0.536	FAIL
MCF-03B	39.30	38.70	1.02	0.76	PASS	2566	2490	0.97	FAIL	2880	0.865	FAIL
MCF-04	66.84	76.27	0.88	6.59	FAIL	4920	4940	1.00	PASS	4930	1.002	FAIL
MCF-05	2252.88	2438.08	0.92	3.95	PASS	151166	171000	1.13	PASS	15300	11.176	FAIL
MCF-06A	3435.91	2429.88	1.41	17.15	FAIL	168434	205000	1.22	FAIL	271000	0.756	FAIL
MCF-06B	589.50	553.22	1.07	3.18	PASS	35848	38200	1.07	PASS	43000	0.888	FAIL
MCF-06C	94.59	99.69	0.95	2.62	PASS	6050	6720	1.11	PASS	5830	1.153	FAIL
MCF-07	2935.74	728.90	4.03	60.22	FAIL	88823	182000	2.05	FAIL	199000	0.915	FAIL
MCF-08A	1995.96	1089.55	1.83	29.38	FAIL	83360	113000	1.36	FAIL	170000	0.665	PASS
MCF-08B	421.45	439.27	0.96	2.07	PASS	26355	26800	1.02	PASS	37400	0.717	FAIL
MCF-09A	418.78	405.30	1.03	1.64	PASS	25882	26800	1.04	PASS	19500	1.374	FAIL
MCF-09B	49.29	52.43	0.94	3.08	PASS	3453	3420	0.99	PASS	2940	1.163	FAIL
MCF-10A	104.23	115.53	0.90	5.14	FAIL	7255	7700	1.06	PASS	7340	1.049	FAIL
MCF-10B	29.46	34.23	0.86	7.48	FAIL	2154	2050	0.95	FAIL	2520	0.813	FAIL
MCF-11	51.02	53.88	0.95	2.72	PASS	3494	3350	0.96	FAIL	3190	1.050	FAIL
MCF-12A	89.94	96.81	0.93	3.68	PASS	6301	7580	1.20	FAIL	6570	1.154	FAIL
MCF-12B	37.99	39.09	0.97	1.43	PASS	2554	2620	1.03	PASS	3060	0.856	FAIL
MCF-12C	28.88	30.54	0.95	2.80	PASS	2008	2010	1.00	PASS	2180	0.922	FAIL
MCF-16A	1363.34	739.34	1.84	29.68	FAIL	64556	86400	1.34	FAIL	81800	1.056	FAIL
MCF-16B	1008.65	806.47	1.25	11.14	FAIL	62443	72200	1.16	PASS	66600	1.084	FAIL
MCF-16C	100.01	102.77	0.97	1.36	PASS	6414	7010	1.09	PASS	5720	1.226	FAIL
MCF-27	14.87	17.85	0.83	9.11	FAIL	1147	1170	1.02	PASS	1630	0.718	FAIL
MW-01	46.47	14.14	3.29	53.33	FAIL	1484	3160	2.13	FAIL	3370	0.938	FAIL
MW-03	77.63	1.50	51.67	96.20	FAIL	1643	4810	2.93	FAIL	5510	0.873	FAIL
PC-108	41.07	41.45	0.99	0.45	PASS	2710	2500	0.92	FAIL	2910	0.859	FAIL
PC-2	79.43	88.38	0.90	5.33	FAIL	5562	5460	0.98	FAIL	4570	1.195	FAIL
PC-4	105.73	128.87	0.82	9.86	FAIL	7672	6660	0.87	FAIL	5980	1.114	FAIL
PC-79	43.33	45.36	0.96	2.28	PASS	2880	2840	0.99	FAIL	2940	0.966	FAIL
PC-80	35.26	32.49	1.09	4.08	PASS	2176	2020	0.93	FAIL	2330	0.867	FAIL
PC-81	40.63	41.08	0.99	0.55	PASS	2684	2520	0.94	FAIL	2910	0.866	FAIL
PC-90	89.65	97.25	0.92	4.06	PASS	5919	5990	1.01	PASS	5810	1.031	FAIL
PC-94	54.46	56.33	0.97	1.69	PASS	3562	3770	1.06	PASS	3420	1.102	FAIL
POD2	77.15	84.98	0.91	4.83	PASS	5330	5430	1.02	PASS	4430	1.226	FAIL
POD8	58.69	55.37	1.06	2.91	PASS	3499	3670	1.05	PASS	3320	1.105	FAIL
POU3	131.59	135.48	0.97	1.46	PASS	8284	7970	0.96	FAIL	8420	0.947	FAIL

8.6 - pH at or above 8.2.
mg/L - Milligrams per Liter
Cat - Cation
An - Anion
Blank cells for minor consistuents (F, NO3, ClO3, ClO4) indicate sample not collected or below detection limit
Flagged cells with red indicate that the sample result was non-detect, and 1/2 the detection limit is used here

Ion Balance Summary
BRC Eastside Groundwater Monitoring Data
Fourth Round Event

Major Ion Chemistry Data Input

Description / Sample Name	Zone	pH	Ca (mg/l) Calcium	Mg (mg/l) Magnesium	Na (mg/l) Sodium	K (mg/l) Potassium	HCO_3 (mg/l) Bicarbonate alkalinity	CO_3 (mg/l) Carbonate alkalinity	OH (mg/l) Alkalinity	SO_4 (mg/l) Sulfate	Cl (mg/l) Chloride	F (mg/l) Fluoride	NO_3 (mg/l) Nitrate (as N)	ClO_3 (mg/l) Chlorate	ClO_4 (mg/l) Perchlorate
AA-01	Shallow UG	7.3	544	112	351	6.64	103			2140	970	1.7	20.7	5.96	1.29
AA-07	Shallow	7.4	291	93.1	222	45.5	86			1090	336		12	3.41	0.484
AA-08	Shallow	7.1	459	209	630	31.4	178			2140	1490	1.4	7.2		5.18
AA-09	Shallow	7.4	595	278	725	19.4	70			3140	1290	0.87	26.8	127	6.29
AA-10	Shallow	7.1	484	235	646	39.1	[illegible]			1800	1050	1.1	7.2	2.01	2.49
AA-13	Shallow	7.4	273	106	351	12.1	262			1050	390	1.1	111		0.0101
AA-18	Shallow	7.3	110	58.6	151	15.5	104			418	202	0.26	8.6		0.109
AA-20	Shallow	7.7	577	252	853	40.5	67			3090	1340		29.5	120	5.75
AA-21	Shallow	7	582	377	872	94.5	161			3590	1430	1.9	8.3		0.0702
AA-22	Shallow	7.4	359	59.4	254	18.6	172			1170	384	0.44	1.9		0.0435
AA-26	Shallow	7.1	247	82.6	342	41.2	81			1590	492	0.64	5670		0.0211
AA-27	Shallow UG	7.2	477	178	444	7.6	130			2800	605	1.9	12.6		0.249
BEC-6	Middle	7.3	586	256	621	35.7	61			2260	1990		39.9	42.2	16.7
BEC-9	Middle	5.5	756	289	500	62.3	121			2380	1550		51.3	8.14	0.742
COH-1	Middle	7.6	531	7810	14800	5370	110			40300	25000				
COH-2	Middle	7.4	2.1	0.6427	1.1	1	105			35600	28000				
COH-2A	Shallow	7.5	559	340	1140	40	122			3570	1860		25.8	102	8.7
DM-1	Shallow	7.3	428	150	385	7.96	167			2470	448	1.9	49.9	4.91	0.0564
HMW-08	Middle	7.1	563	118	394	55.8	129			1940	653	0.23	1.1		0.0881
HMW-09	Shallow	7.1	495	148	383	47.6	144			1.5	2.1			2.84	0.866
HMWWT-6	Middle	7.5	176	97.2	209	6.81	77			641	523		30.1	7.63	0.0788
MCF-01A	Deep	8.4	475	157	414	23.6			143	3080	128				
MCF-01B	Middle	7.5	111	64.2	384	10.7	123			998	370		1.5	1.53	0.628
MCF-02A	Deep	7.7	26	8.48	175	10.7	74			169	140	0.39			
MCF-02B	Middle	8	24.3	11.1	201	9.53	40			310	123	0.79	1.5		
MCF-03A	Deep	7	28.9	13.7	186	13.1	55			316	[illegible]	0.53	2410		
MCF-03B	Middle	7.7	165	102	555	14.6	84			1370	350	0.31	13.4	5.83	0.0846
MCF-04	Deep	7.2	569	143	793	97.2	40			3300	485				
MCF-05	Middle	8	214	15300	21500	13500	141			75600	29600		141		
MCF-06A	Deep	6.6	219	10500	15600	8460	64			55600	65500				
MCF-06B	Middle	8.2	524	3770	4230	3830			117	17500	7760		4.9	6.39	5.68
MCF-06C	Shallow	7.2	668	356	666	198	77			2740	1920	0.4	52.3	39.9	3.44
MCF-07	Deep	7	190	13500	24600	10200	162			103000	47700				
MCF-08A	Deep	7.2	701	6650	19900	3380	128			20200	73900				
MCF-08B	Middle	8.6	5850	15100	4900	7280		60	66	10800	8870				
MCF-09A	Deep	7.4	489	1910	4720	577	72			13000	4350				
MCF-09B	Middle	7.1	424	125	366	39.1	84			2180	157	0.32			
MCF-10A	Deep	7.5	604	265	1360	176	40			3730	1440	0.36			
MCF-10B	Middle	7.6	287	91.3	230	39	53			1710	364				
MCF-11	Middle	7.3	426	131	440	64.5	75			1760	383	1	0.42		0.0119
MCF-12A	Deep	7.6	585	222	966	396	48			3240	1320	0.55			
MCF-12B	Shallow	7.2	312	139	316	77.6	61			1800	403			2.96	3.22
MCF-12C	Middle	7.6	231	90.4	200	72.4	65			1110	244		2.1		0.338
MCF-16A	Deep	7.6	579	8930	4170	16000	119			56500	4620				
MCF-16B	Middle	7.9	541	5760	3260	14900	139			50400	2670				
MCF-16C	Shallow	6.7	681	485	562	204	87			5330	1350	0.65	21.4	15.2	15.3
MCF-27	Deep	7.4	67.5	24.8	225	12.8	54			646	104	0.33	1.2		
MW-01	Shallow	7.6	326	120	410	71.3	84			2210	[illegible]	0.34	5.5		0.222
MW-03	Shallow	7.5	441	203	731	74.9	94			2080	1760	0.96			0.0941
MW-04	Shallow	7.4	588	1020	2090	812	71			7230	3050	0.44		14.4	9.49
MW-13	Shallow	7.3	244	108	376	78.6	178			1280	678	0.34		6.98	0.432
MW-15	Middle	6.5	431	174	621	56.6	142			2890	331	2.5			
PC-108	Shallow	7.2	211	76.5	501	18.5	460			656	842	0.65	0.13		
PC-2	Shallow	7.2	570	145	466	27.8	114			2470	710	0.91	14.9	11.5	1.82
PC-24	Shallow	7.5	1250	563	2140	28.1	80			2290	4570	0.72	52.9	266	13.5
PC-28	Shallow	7.3	689	254	1100	7.66	88			3330	1370	0.59	53.1	787	443
PC-4	Shallow	7.1	533	318	1000	87	104			3710	1710	1	30	128	7.5
PC-67	Shallow	7.4	804	481	3530	26.1	128			3290	4960	1.1	55.6	411	55
PC-79	Shallow	7.3	247	87.8	445	21.1	264			1180	740	1.2			
PC-80	Shallow	7.2	220	62.8	409	23.7	[illegible]			574	635	1.2			
PC-81	Shallow	7.2	218	99.9	923	31.5	340			1710	1440	3.2			0.0832
PC-90	Shallow	7.3	554	272	1150	32.7	[illegible]			3020	1580	2.2	13.9	47.3	6.38
PC-94	Shallow	6.1	410	166	477	43.3	127			2110	745	0.21	10.1	6.64	1.71
POD2	Shallow	7.4	617	183	679	17.3	128			2960	1270	3.9	31.3	63.3	6.07
POD8	Shallow	7.2	374	243	401	23.5	208			1840	824	0.87	31.3	4.04	0.226
POU3	Shallow	7.3	696	353	1550	25.7	70			3700	2910		19.9	352	31.8
WMW5.58SD	Middle	7.3	730	8680	16600	11400	316			71900	32600				
WMW5.58SI	Middle	7.8	207	99.2	372	27.2	168			962	690	0.46	10.4	8.39	0.89
WMW5.58SS	Shallow	7.7	146	72.3	273	23.5	143			761	368	0.82	16.9	7.64	0.0322

meq/l Calculations

Sample Name	Ca 20.04 (mg/meq) (meq/l)	Mg 12.16 (mg/meq) (meq/l)	Na 22.99 (mg/meq) (meq/l)	K 39.1 (mg/meq) (meq/l)	HCO_3 61.02 (mg/meq) (meq/l)	CO_3 30.01 (mg/meq) (meq/l)	OH 17 (mg/meq) (meq/l)	SO_4 48.03 (mg/meq) (meq/l)	Cl 35.5 (mg/meq) (meq/l)	F 19 (mg/meq) (meq/l)	NO_3 61.91 (mg/meq) (meq/l)	ClO_3 83.4 (mg/meq) (meq/l)	ClO_4 99.5 (mg/meq) (meq/l)
AA-01	27.15	9.21	15.27	0.17	1.69	0.00	0.00	44.56	27.32	0.09	0.33	0.07	0.01
AA-07	14.52	7.66	9.66	1.16	1.41	0.00	0.00	22.69	9.46		0.19	0.04	0.00
AA-08	22.90	17.19	27.40	0.80	2.92	0.00	0.00	44.56	41.97	0.07	0.12		0.05
AA-09	29.69	22.86	31.54	0.50	1.15	0.00	0.00	65.38	36.34	0.05	0.43	1.52	0.06
AA-10	24.15	19.33	28.10	1.00	0.96	0.00	0.00	37.48	29.58	0.06	0.12	0.02	0.03
AA-13	13.62	8.72	15.27	0.31	4.29	0.00	0.00	21.86	10.99	0.06	1.79		0.00
AA-18	5.49	4.82	6.57	0.40	1.70	0.00	0.00	8.70	5.69	0.01	0.14		0.00
AA-20	28.79	20.72	37.10	1.04	1.10	0.00	0.00	64.33	37.75		0.48	1.44	0.06
AA-21	29.04	31.00	37.93	2.42	2.64	0.00	0.00	74.74	40.28	0.10	0.13		0.00
AA-22	17.91	4.88	11.05	0.48	2.82	0.00	0.00	24.36	10.82	0.02	0.03		0.00
AA-26	12.33	6.79	14.88	1.05	1.33	0.00	0.00	33.10	13.86	0.03	91.58		0.00
AA-27	23.80	14.64	19.31	0.19	2.13	0.00	0.00	58.30	17.04	0.10	0.20		0.00
BEC-6	29.24	21.05	27.01	0.91	1.00	0.00	0.00	47.05	56.06		0.64	0.51	0.17
BEC-9	37.72	23.77	21.75	1.59	1.98	0.00	0.00	49.55	43.66		0.83	0.10	0.01
COH-1	26.50	642.27	643.76	137.34	1.80	0.00	0.00	839.06	704.23				
COH-2	0.10	0.05	0.05	0.03	1.72	0.00	0.00	741.20	788.73				
COH-2A	27.89	27.96	49.59	1.02	2.00	0.00	0.00	74.33	52.39		0.42	1.22	0.09
DM-1	21.36	12.34	16.75	0.20	2.74	0.00	0.00	51.43	12.62	0.10	0.81	0.06	0.00
HMW-08	28.09	9.70	17.14	1.43	2.11	0.00	0.00	40.39	18.39	0.01	0.02		0.00
HMW-09	24.70	12.17	16.66	1.22	2.36	0.00	0.00	0.03	0.06			0.03	0.01
HMWWT-6	8.78	7.99	9.09	0.17	1.26	0.00	0.00	13.35	14.73		0.49	0.09	0.00
MCF-01A	23.70	12.91	18.01	0.60	0.00	0.00	8.41	64.13	3.61				
MCF-01B	5.54	5.28	16.70	0.27	2.02	0.00	0.00	20.78	10.42			0.02	0.01
MCF-02A	1.30	0.70	7.61	0.27	1.21	0.00	0.00	3.52	3.94	0.02			
MCF-02B	1.21	0.91	8.74	0.24	0.66	0.00	0.00	6.45	3.46	0.04	0.02		
MCF-03A	1.44	1.13	8.09	0.34	0.90	0.00	0.00	6.58	4.35	0.03	38.93		
MCF-03B	8.23	8.39	24.14	0.37	1.38	0.00	0.00	28.52	9.86	0.02	0.22	0.07	0.00
MCF-04	28.39	11.76	34.49	2.49	0.66	0.00	0.00	68.71	13.66				
MCF-05	10.68	1258.22	935.19	345.27	2.31	0.00	0.00	1574.02	833.80		2.28		
MCF-06A	10.93	863.49	678.56	216.37	1.05	0.00	0.00	1157.61	1845.07				
MCF-06B	26.15	310.03	183.99	97.95	0.00	0.00	6.88	364.36	218.59		0.08	0.08	0.06
MCF-06C	33.33	29.28	28.97	5.06	1.26	0.00	0.00	57.05	54.08	0.02	0.84	0.48	0.03
MCF-07	9.48	1110.20	1070.03	260.87	2.65	0.00	0.00	2144.49	1343.66				
MCF-08A	34.98	546.88	865.59	86.45	2.10	0.00	0.00	420.57	2081.69				
MCF-08B	291.92	1241.78	213.14	186.19	0.00	2.00	3.88	224.86	249.86				
MCF-09A	24.40	157.07	205.31	14.76	1.18	0.00	0.00	270.66	122.54				
MCF-09B	21.16	10.28	15.92	1.00	1.38	0.00	0.00	45.39	4.42	0.02			
MCF-10A	30.14	21.79	59.16	4.50	0.66	0.00	0.00	77.66	40.56	0.02			
MCF-10B	14.32	7.51	10.00	1.00	0.87	0.00	0.00	35.60	10.25				
MCF-11	21.26	10.77	19.14	1.65	1.23	0.00	0.00	36.64	10.79	0.05	0.01		0.00
MCF-12A	29.19	18.26	42.02	10.13	0.79	0.00	0.00	67.46	37.18				
MCF-12B	15.57	11.43	13.75	1.98	1.00	0.00	0.00	37.48	11.35			0.04	0.03
MCF-12C	11.53	7.43	8.70	1.85	1.07	0.00	0.00	23.11	6.87		0.03		0.00
MCF-16A	28.89	734.38	181.38	409.21	1.95	0.00	0.00	1176.35	130.14				
MCF-16B	27.00	473.68	141.80	381.07	2.28	0.00	0.00	1049.34	75.21				
MCF-16C	33.98	39.88	24.45	5.22	1.43	0.00	0.00	110.97	38.03	0.03	0.35	0.18	0.15
MCF-27	3.37	2.04	9.79	0.33	0.88	0.00	0.00	13.45	2.93	0.02	0.02		
MW-01	16.27	9.87	17.83	1.82	1.38	0.00	0.00	46.01	5.41	0.02	0.09		0.00
MW-03	22.01	16.69	31.80	1.92	1.54	0.00	0.00	43.31	49.58	0.05			0.00
MW-04	29.34	83.88	90.91	20.77	1.16	0.00	0.00	150.53	85.92	0.02		0.17	0.10
MW-13	12.18	8.88	16.35	2.01	2.92	0.00	0.00	26.65	19.10	0.02		0.08	0.00
MW-15	21.51	14.31	27.01	1.45	2.33	0.00	0.00	60.17	9.32	0.13			
PC-108	10.53	6.29	21.79	0.47	7.54	0.00	0.00	13.66	23.72	0.03	0.00		
PC-2	28.44	11.92	20.27	0.71	1.87	0.00	0.00	51.43	20.00	0.05	0.24	0.14	0.02
PC-24	62.38	46.30	93.08	0.72	1.31	0.00	0.00	47.68	128.73	0.04		3.19	0.14
PC-28	34.38	20.89	47.85	0.20	1.44	0.00	0.00	69.33	38.59			9.44	4.45
PC-4	26.60	26.15	43.50	2.23	1.70	0.00	0.00	77.24	48.17			1.53	0.08
PC-67	40.12	39.56	153.55	0.67	2.10	0.00	0.00	68.50	139.72	0.06	0.90	4.93	0.55
PC-79	12.33	7.22	19.36	0.54	4.33	0.00	0.00	24.57	20.85				
PC-80	10.98	5.16	17.79	0.61	2.45	0.00	0.00	11.95	17.89				
PC-81	10.88	8.22	40.15	0.81	5.57	0.00	0.00	35.60	40.56				0.00
PC-90	27.64	22.37	50.02	0.84	1.86	0.00	0.00	62.88	44.51			0.57	0.06
PC-94	20.46	13.65	20.75	1.11	2.08	0.00	0.00	43.93	20.99	0.01		0.08	0.02
POD2	30.79	15.05	29.53	0.44	2.10	0.00	0.00	61.63	35.77			0.76	0.06
POD8	18.66	19.98	17.44	0.60	3.41	0.00	0.00	38.31	23.21	0.05	0.51	0.05	0.00
POU3	34.73	29.03	67.42	0.66	1.15	0.00	0.00	77.04	81.97			4.22	0.32
WMW5.58SD	36.43	713.82	722.05	291.56	5.18	0.00	0.00	1496.98	918.31				
WMW5.58SI	10.33	8.16	16.18	0.70	2.75	0.00	0.00	20.03	19.44	0.02	0.17	0.10	0.01
WMW5.58SS	7.29	5.95	11.87	0.60	2.34	0.00	0.00	15.84	10.37	0.04	0.27	0.09	0.00

Cation-Anion Balance Tests / TDS Checks / TDS and EC

Sample Name	Sum Cations (meq/l)	Sum Anions (meq/l)	Cat/An Ratio -	(Cat-An)/(Cat+An) (%)	Balance Variance >5%?	TDS Sum (mg/l)	TDS Lab (mg/l) TDS	Lab/Sum Ratio -	Acceptable Ratio 1.0 - 1.2	EC (umhos/cm) Electrical Conductivity	Lab TDS / EC Ratio -	Acceptable Range 0.55 - 0.7
AA-01	51.79	74.08	0.70	17.70	FAIL	4256	3730	0.88	FAIL	2250	1.658	FAIL
AA-07	33.00	33.81	0.98	1.21	PASS	2179	2170	1.00	PASS	2900	0.748	FAIL
AA-08	68.30	89.69	0.76	13.54	FAIL	5151	4700	0.91	FAIL	4990	0.942	FAIL
AA-09	84.58	104.93	0.81	10.73	FAIL	6278	6050	0.96	FAIL	2540	2.382	FAIL
AA-10	72.58	68.24	1.06	3.08	PASS	4325	4560	1.05	PASS	6280	0.726	FAIL
AA-13	37.92	38.99	0.97	1.40	PASS	2556	2640	1.03	PASS	2270	1.163	FAIL
AA-18	17.27	16.25	1.06	3.05	PASS	1068	1050	0.98	FAIL	2350	0.447	FAIL
AA-20	87.65	105.15	0.83	9.08	FAIL	6375	5990	0.94	FAIL	3200	1.872	FAIL
AA-21	100.39	117.90	0.85	8.02	FAIL	7117	6390	0.90	FAIL	3080	2.075	FAIL
AA-22	34.32	38.05	0.90	5.15	FAIL	2419	2310	0.95	FAIL	2460	0.939	FAIL
AA-26	35.05	139.91	0.25	59.94	FAIL	8546	2200	0.26	FAIL	3100	0.710	FAIL
AA-27	57.95	77.78	0.75	14.61	FAIL	4656	4340	0.93	FAIL	2360	1.839	FAIL
BEC-6	78.22	105.43	0.74	14.82	FAIL	5909	5830	0.99	FAIL	2490	2.341	FAIL
BEC-9	84.83	96.13	0.88	6.24	FAIL	5718	5900	1.03	PASS	2770	2.130	FAIL
COH-1	1449.87	1545.09	0.94	3.18	PASS	93921	114000	1.21	FAIL	142000	0.803	FAIL
COH-2	0.23	1531.66	0.00	99.97	FAIL	63710	105000	1.65	FAIL	16100	6.522	FAIL
COH-2A	106.46	130.45	0.82	10.12	FAIL	7768	6950	0.89	FAIL	3520	1.974	FAIL
DM-1	50.64	67.75	0.75	14.45	FAIL	4113	3580	0.87	FAIL	2240	1.598	FAIL
HMW-08	56.36	60.93	0.93	3.89	PASS	3854	3580	0.93	FAIL	2340	1.530	FAIL
HMW-09	54.75	2.49	21.96	91.29	FAIL	1225	3760	3.07	FAIL	4410	0.853	FAIL
HMWWT-6	26.04	29.92	0.87	6.93	FAIL	1768	1820	1.03	PASS	2390	0.762	FAIL
MCF-01A	55.23	76.14	0.73	15.92	FAIL	4421	3930	0.89	FAIL	2360	1.665	FAIL
MCF-01B	27.80	33.24	0.84	8.92	FAIL	2065	1830	0.89	FAIL	2720	0.673	PASS
MCF-02A	9.88	8.70	1.14	6.38	FAIL	604	623	1.03	PASS	975	0.639	PASS
MCF-02B	11.11	10.64	1.04	2.17	PASS	721	638	0.88	FAIL	9980	0.064	FAIL
MCF-03A	10.99	50.79	0.22	64.41	FAIL	3178	640	0.20	FAIL	1200	0.533	FAIL
MCF-03B	41.14	40.06	1.03	1.32	PASS	2660	2610	0.98	FAIL	3000	0.870	FAIL
MCF-04	77.13	83.02	0.93	3.68	PASS	5427	4910	0.90	FAIL	5100	0.963	FAIL
MCF-05	2549.36	2412.41	1.06	2.76	PASS	155996	161000	1.03	PASS	2520	63.889	FAIL
MCF-06A	1769.34	3003.73	0.59	25.86	FAIL	155943	191000	1.22	FAIL	814000	0.235	FAIL
MCF-06B	618.13	590.04	1.05	2.32	PASS	37748	39700	1.05	PASS	4290	9.254	FAIL
MCF-06C	96.64	113.77	0.85	8.14	FAIL	6721	6980	1.04	PASS	2400	2.908	FAIL
MCF-07	2450.58	3490.81	0.70	17.51	FAIL	199352	193000	0.97	FAIL	375000	0.515	FAIL
MCF-08A	1533.89	2504.36	0.61	24.03	FAIL	124859	116000	0.93	FAIL	135000	0.859	FAIL
MCF-08B	1933.02	480.60	4.02	60.18	FAIL	52926	28300	0.53	FAIL	27500	1.029	FAIL
MCF-09A	401.54	394.38	1.02	0.90	PASS	25118	30700	1.22	FAIL	21600	1.421	FAIL
MCF-09B	48.36	51.20	0.94	2.86	PASS	3375	3620	1.07	PASS	3250	1.114	FAIL
MCF-10A	115.59	118.90	0.97	1.41	PASS	7615	7270	0.95	FAIL	7560	0.962	FAIL
MCF-10B	32.83	46.72	0.70	17.46	FAIL	2774	2150	0.77	FAIL	2850	0.754	FAIL
MCF-11	52.82	48.72	1.08	4.04	PASS	3281	3520	1.07	PASS	4280	0.822	FAIL
MCF-12A	99.59	105.43	0.94	2.85	PASS	6778	6320	0.93	FAIL	7610	0.830	FAIL
MCF-12B	42.73	49.90	0.86	7.74	FAIL	3115	2760	0.89	FAIL	3140	0.879	FAIL
MCF-12C	29.51	31.09	0.95	2.60	PASS	2015	2100	1.04	PASS	2510	0.837	FAIL
MCF-16A	1353.86	1308.44	1.03	1.71	PASS	90918	88300	0.97	FAIL	131000	0.674	PASS
MCF-16B	1023.56	1126.83	0.91	4.80	PASS	77670	74400	0.96	FAIL	89400	0.832	FAIL
MCF-16C	103.53	151.14	0.68	18.70	FAIL	8752	6480	0.74	FAIL	7910	0.819	FAIL
MCF-27	15.52	17.30	0.90	5.42	FAIL	1136	968	0.85	FAIL	1600	0.605	PASS
MW-01	45.79	52.91	0.87	7.21	FAIL	3419	3160	0.92	FAIL	3500	0.903	FAIL
MW-03	72.41	94.48	0.77	13.22	FAIL	5385	4800	0.89	FAIL	5220	0.920	FAIL
MW-04	224.90	237.90	0.95	2.81	PASS	14885	14000	0.94	FAIL	13500	1.037	FAIL
MW-13	39.42	48.77	0.81	10.60	FAIL	2950	2520	0.85	FAIL	3670	0.687	PASS
MW-15	64.28	71.95	0.89	5.64	FAIL	4648	4400	0.95	FAIL		N/A	FAIL
PC-108	39.09	44.95	0.87	6.98	FAIL	2766	2520	0.91	FAIL	2420	1.041	FAIL
PC-2	61.35	73.74	0.83	9.17	FAIL	4532	4040	0.89	FAIL	4030	1.002	FAIL
PC-24	202.48	181.08	1.12	5.58	FAIL	11254	12700	1.13	PASS	14000	0.907	FAIL
PC-28	103.31	123.25	0.84	8.80	FAIL	8122	7480	0.92	FAIL	8130	0.920	FAIL
PC-4	98.47	128.73	0.76	13.32	FAIL	7629	6930	0.91	FAIL	9060	0.765	FAIL
PC-67	233.89	216.75	1.08	3.80	PASS	13742	14000	1.02	PASS	19300	0.725	FAIL
PC-79	39.44	49.74	0.79	11.55	FAIL	2986	2740	0.92	FAIL	2340	1.171	FAIL
PC-80	34.54	32.29	1.07	3.37	PASS	2075	1950	0.94	FAIL	3390	0.575	PASS
PC-81	60.05	81.74	0.73	15.30	FAIL	4766	3820	0.80	FAIL	4790	0.797	FAIL
PC-90	100.87	109.88	0.92	4.27	PASS	6792	6600	0.97	FAIL	7780	0.848	FAIL
PC-94	55.97	67.11	0.83	9.05	FAIL	4097	3830	0.93	FAIL	2360	1.623	FAIL
POD2	75.81	100.32	0.76	13.91	FAIL	5959	5500	0.92	FAIL	2470	2.227	FAIL
POD8	56.69	65.53	0.87	7.23	FAIL	3950	3760	0.95	FAIL	2280	1.649	FAIL
POU3	131.84	164.69	0.80	11.08	FAIL	9708	9690	1.00	PASS	3010	3.219	FAIL
WMW5.58SD	1763.86	2420.47	0.73	15.69	FAIL	142226	152000	1.07	PASS	174000	0.874	FAIL
WMW5.58SI	35.36	42.52	0.83	9.19	FAIL	2546	2300	0.90	FAIL	2400	0.958	FAIL
WMW5.58SS	25.71	28.96	0.89	5.95	FAIL	1812	1720	0.95	FAIL	23400	0.074	FAIL

The reporting limit (RL) was multipled by 0.5 in the calculations for non-detect results

8.6 - pH at or above 8.2.

mg/L - Milligrams per Liter

Cat - Cation

An - Anion

Blank cells for minor consistuents (F, NO3, ClO3, ClO4) indicate sample not collected or below detection limit

Flagged cells with red indicate that the sample result was non-detect, and 1/2 the detection limit is used here

Ion Balance Summary
BRC Eastside Groundwater Monitoring Data
Fifth Round Event

Major Ion Chemistry Data Input

Description / Sample Name	Zone	pH	Ca (mg/l) Calcium	Mg (mg/l) Magnesium	Na (mg/l) Sodium	K (mg/l) Potassium	HCO_3 (mg/l) Bicarbonate alkalinity	CO_3 (mg/l) Carbonate alkalinity	OH (mg/l) Alkalinity	SO_4 (mg/l) Sulfate	Cl (mg/l) Chloride	F (mg/l) Fluoride	NO_3 (mg/l) Nitrate (as N)	ClO_3 (mg/l) Chlorate	ClO_4 (mg/l) Perchlorate
AA-01	Shallow	7.1	526	135	377	7.02	101			1460	711	1.7	8.3	4.2	0.00
AA-07	Shallow	7.4	264	81.8	199	39.8	95			1010	273	0.8	10.5	0.79	0.48
AA-08	Shallow	7.1	384	191	601	27.9	144			1820	1350	1.2	6.8	1.2	5.08
AA-09	Shallow	7.1	531	342	1070	33.6	73			3050	1390	0.48	20	89	6.51
AA-10	Shallow	7.5	470	224	640	36.3	123			1960	1170	0.9	6.9	0.48	3.43
AA-13	Shallow	7.7	284	125	398	21.1	233			1370	322	0.92	26		0.04
AA-18	Shallow	7.9	96.4	54.4	137	15.1	100			429	225	0.71	10.8		0.11
AA-20	Shallow	7.4	483	205	668	32.9	79			2660	1200	0.31	20.5	97.5	7.18
AA-21	Shallow	7.4	526	315	696	79.4	165			2950	971	1.9	6.6		0.06
AA-22	Shallow	7.5	495	70.4	280	22.4	166			1660	385	0.63	2.8	0.26	0.09
AA-23R	Shallow	6.9	617	121	314	32.9	157			1920	578	0.33	9.8	5.2	0.68
AA-26	Shallow	7.4	234	83.9	309	40	66			1170	326	0.77	5.8		0.03
AA-27	Shallow	7.2	452	161	381	7.02	108			2380	450	1.6	12.3	0.32	0.27
AA-UW1	Shallow	7.6	539	202	319	7.39	85			2120	439	1.1	5	1.3	0.70
AA-UW2	Shallow	7.3	392	203	482	8.12	123			1930	522	1.2	10.6	0.76	0.11
AA-UW3	Shallow	7.6	293	185	830	14.9	81			3070	264	1.5	7.9		0.08
AA-UW4	Shallow	7.6	337	173	640	13.1	84			2970	331	1	11.9		0.09
AA-UW5	Shallow	7.8	75.4	45.8	97.7	7.56	124			271	176	0.72	14.7		0.06
AA-UW6	Shallow	7.8	370	157	324	63.3	57			2480	226	0.62	7.6		0.07
BEC-6	Middle	7	579	267	568	37	105			1890	1700	0.57	30.4	27.7	
BEC-9	Middle	5.7	712	298	443	61	109			2080	1600	0.7	46.2	1.9	
COH-1	Middle	7.5	436	8370	15100	5320	83			43000	24100	< 2	< 0.024		0.01
COH-2	Middle	7.5	499	7190	16500	4610	104			36100	28500	< 2	< 0.024		0.01
COH-2A	Shallow	7.3	544	308	1080	36	146			3030	1500	1.3	19.5	63.4	8.33
DBMW-1	Shallow	7.4	624	306	634	51.9	63			2810	991	0.33	8.8	26.2	8.02
DBMW-10	Shallow	7.6	212	89.6	244	57.1	71			916	317	0.59	10.1	2.6	0.55
DBMW-11	Shallow	7.5	645	481	712	233	65			3120	1880	0.35	24.3	35.3	0.49
DBMW-12	Shallow	7.1	675	859	912	526	55			5040	2480	< 0.02	25.4	38.9	18.80
DBMW-13	Shallow	7.6	613	284	624	134	51			2640	1060	0.27	14.7	19	10.60
DBMW-14	Shallow	7.4	607	211	515	127	55			2390	1100	0.09	16.7	20.4	14.30
DBMW-15	Shallow	7.6	570	219	416	94.7	56			2600	397	0.34	8.3	4.6	1.46
DBMW-16	Shallow	7.8	76.8	36.1	197	20.9	76			445	129	0.72	2.2		0.01
DBMW-17	Shallow	7.8	124	55.5	270	25.2	79			970	49.7	0.8	1.5		0.01
DBMW-19	Shallow	7.6	586	182	504	55.5	121			2470	690	0.68	19.3	20.4	1.53
DBMW-2	Shallow	7.3	551	299	792	72.8	94			3160	1280	0.82	6.7	17.5	5.56
DBMW-20	Shallow	7.5	523	219	460	103	121			2010	985	0.78	22.7	4.6	2.14
DBMW-22	Shallow	5.8	596	179	254	149	52			2510	322	0.27	1.2	0.74	0.24
DBMW-3	Shallow	7.3	539	297	687	75.5	57			2920	1470	0.51	14.9	59.9	6.40
DBMW-4	Shallow	6.2	544	227	552	47.1	161			2620	1120	0.32	24.9	37	4.23
DBMW-5	Shallow	6.7	609	221	464	31.6	88			2310	983	0.24	30.5	30	3.33
DBMW-6	Shallow	7.3	767	331	527	117	91			2120	2020	< 1	56.9	0.6	1.97
DBMW-7	Shallow	7.6	652	273	562	65.3	62			2440	1660	0.42	44.6	9.7	2.74
DBMW-8	Shallow	7.6	708	300	613	78.4	55			2330	1740	0.37	46	10.5	3.34
DBMW-9	Shallow	7.6	582	153	282	54.7	89			2250	442	0.91	17.3	8.1	3.43
DM-1	Shallow	7.2	603	195	423	8.05	185			2460	321	2	12.7	0.12	
HMW-08	Middle	6.9	415	90.4	257	40.8	225			1270	411	0.76	5.4	0.59	0.15
HMW-09	Shallow	7.3	477	160	478	50.3	127			1970	606	0.57	9.2	5.3	1.67
HMWWT-6	Middle	7.7	154	86.5	182	5.61	73			452	435	0.66	17.2		
MCF-01A	Deep	8	493	163	387	23.6	49			2650	109	0.24	0.014		
MCF-01B	Middle	7.5	117	66.4	379	10.9	132			997	299	0.77	1.6	1.4	0.67
MCF-02A	Deep	7.2	21.9	6.82	152	8.85	73			193	125	0.87	1.1		0.00
MCF-02B	Middle	7.9	22.5	9.65	170	7.99	95			254	95	1.4	1.4		
MCF-03A	Deep	8	26.5	14	160	13.2	69			230	134	0.85	2.3		
MCF-03B	Middle	7.8	157	93.3	485	11.7	129			1200	313	0.75	11	0.099	0.09
MCF-04	Deep	7.3	513	129	712	90.5	38			3100	425	0.38	< 0.0024		0.00
MCF-05	Middle	7.8	330	13900	5	[illegible]	144			79900	31700	< 2	< 0.48		0.01
MCF-06A	Deep	6.8	264	13700	33100	9060	99			78400	68600	< 1	< 0.24		
MCF-06B	Middle	8.3	482	3600	4000	3570			83	18300	7290	0.44	4	5.6	5.58
MCF-06C	Shallow	7.6	621	351	615	195	55			2640	1710	0.41	51.5	4.2	3.62
MCF-07	Deep	8.1	[illegible]	15700	24500	12300	140			84700	44600	< 1	< 0.24		0.01
MCF-08A	Deep	7.3	595	6220	26300	3080	111			25700	52800	< 2	< 0.48		0.01
MCF-08B	Middle	7.6	620	2090	5360	737	49			11900	7750	< 1	< 0.24		0.01
MCF-09A	Deep	7.1	472	2170	4450	615	71			13300	4280	< 0.1	< 0.024		
MCF-09B	Middle	7.5	429	132	330	40.6	59			2210	148	0.68	< 0.0024		
MCF-10A	Deep	7.4	522	244	1190	154	50			3930	1390	< 0.1	< 0.024		0.00
MCF-10B	Middle	7.8	245	90.8	202	33.7	54			1170	206	0.4	0.22		0.00
MCF-11	Middle	7.5	401	121	384	55.7	80			2100	357	1.1	< 0.0024		0.00
MCF-12A	Deep	7.5	498	187	807	329	47			3410	937	0.46	< 0.024		0.00
MCF-12B	Shallow	7.3	263	125	270	67.3	69			1570	317	0.45	6.4	4.6	4.13
MCF-12C	Middle	8.1	221	88.8	188	68.5	77			1260	109	0.51	1.4	0.21	0.44
MCF-16A	Deep	5.8	429	6390	2780	11900	109			55700	3660	< 2	< 0.024		0.01
MCF-16B	Middle	6	453	6070	2710	13700	143			45900	2570	0.33	< 0.024		0.02
MCF-16C	Shallow	7.4	590	671	542	357	74			5570	1230	0.5	23.8	19	11.10
MCF-17A	Deep	7.5	846	3320	16800	1790	54			15600	30100	< 1	< 0.24		
MCF-18A	Deep	6.7	3120	2700	48200	6600	24			3720	123000	< 1	< 0.24		0.05
MCF-19A	Deep	7.9	574	12000	21200	5420	110			62900	34900	< 1	< 0.24		
MCF-20A	Deep	6.8	485	14000	33000	9730	40			74400	72000	< 1	< 0.24		0.05
MCF-21A	Deep	7.4	127	12800	13500	12200	136			77400	18000	< 1	< 0.24		0.02
MCF-22A	Deep	7.6	542	109	224	90	64			2140	108	0.8	< 0.024		0.00
MCF-23A	Deep	7.1	616	7700	13300	3170	73			41100	16200	< 1	< 0.24		
MCF-24A	Deep	7.6	100	16600	6950	13800	136			73500	10100	< 1	< 0.24		0.01
MCF-25A	Deep	8	507	179	999	157	50			3670	596	0.26	< 0.024		0.00
MCF-27	Deep	7.6	68.7	25	201	11.9	63			492	98.9	0.8	0.96		0.00
MW-03	Shallow	8	438	196	687	69.7	108			2050	1170	1.4	< 0.024		0.03
MW-04	Shallow	7.4	577	1000	2040	791	65			6110	3380	0.32	13.8	14.3	9.85
MW-13	Shallow	7.4	586	245	486	110	136			2130	1020	0.53	22.3	4.9	2.34
MW-15	Middle	7.4	428	185	580	55.4	115			2360	489	2.2	0.018		0.00
PC-108	Shallow	7.3	214	76.2	490	14.9	399			720	652	1.2	0.11		0.00
PC-2	Shallow	7.6	640	212	667	37.5	109			2390	1470	1.1	16.7	43.6	
PC-24	Shallow	7.3	1080	498	1870	22.5	96			2340	5170	0.76	53.9	277	17.60
PC-28	Shallow	7.2	637	228	914	7.41	85			2270	1370	0.9	36.9	912	523.00
PC-4	Shallow	5.5	582	347	979	107	150			3120	1440	0.5	25.7	85.8	
PC-67	Shallow	7.4	703	357	2650	20.5	125			3370	4800	1.6	55.8	499	87.50
PC-76	Shallow	5.7	341	252	672	35.7	249			1800	1130	1.2	1.2		0.02
PC-79	Shallow	7.2	232	96.4	418	20.5	238			914	501	1.2	0.047		
PC-80	Shallow	7.4	206	48.6	413	20.9	310			578	470	1.6	0.014		0.00
PC-81	Shallow	7.4	119	55.8	642	22.7	342			757	585	2.7	0.03		0.00
PC-88	Shallow	7.2	250	113	1010	26.6	257			1320	1550	1.6	8	22.9	11.80
PC-90	Shallow	7.3	286	115	860	20.8	208			1400	1390	1.8	8.6	23.5	9.94
PC-94	Shallow	7.3	478	183	480	47.7	135			2130	664	0.66	15.3	11.7	1.90
POD2	Shallow	7.3	652	211	813	18.1	111			2510	1760	< 1	20.3	194	3.69
POD8	Shallow	6.4	394	262	421	24.9	217			1410	1230	1.1	41.6	3.2	0.23
POU3	Shallow	7.4	719	362	1600	26.9	68			2470	2790	< 1	12.8	330	
WMW5.58SD	Middle	7.5	383	11800	21200	14100	277			71500	30600	< 1	< 0.024		0.01
WMW5.58SI	Middle	6.1	217	96.7	334	24.2	174			911	483	0.85	9.5	0.58	0.68
WMW5.58SS	Shallow	6.8	144	67.2	263	27.5	141			540	321	1	12.8		0.03

meq/l Calculations

Sample Name	Ca 20.04 (mg/meq) (meq/l)	Mg 12.15 (mg/meq) (meq/l)	Na 22.99 (mg/meq) (meq/l)	K 39.1 (mg/meq) (meq/l)	HCO_3 61.02 (mg/meq) (meq/l)	CO_3 30.01 (mg/meq) (meq/l)	OH 17 (mg/meq) (meq/l)	SO_4 48.03 (mg/meq) (meq/l)	Cl 35.5 (mg/meq) (meq/l)	F 19 (mg/meq) (meq/l)	NO_3 61.91 (mg/meq) (meq/l)	ClO_3 83.4 (mg/meq) (meq/l)	ClO_4 99.5 (mg/meq) (meq/l)
AA-01	26.25	11.10	16.40	0.18	1.66	0.00	0.00	30.40	20.03	0.09	0.13	0.05	0.00
AA-07	13.17	6.73	8.66	1.02	1.56	0.00	0.00	21.03	7.69	0.04	0.17	0.01	0.00
AA-08	19.16	15.71	26.14	0.71	2.36	0.00	0.00	37.89	38.03	0.06	0.11	0.01	0.05
AA-09	26.50	28.13	46.54	0.86	1.20	0.00	0.00	63.50	39.15	0.03	0.32	1.07	0.07
AA-10	23.45	18.42	27.84	0.93	2.02	0.00	0.00	40.81	32.96	0.05	0.11	0.01	0.03
AA-13	14.17	10.28	17.31	0.54	3.82	0.00	0.00	28.52	9.07	0.05	0.42	0.00	0.00
AA-18	4.81	4.47	5.96	0.39	1.64	0.00	0.00	8.93	6.34	0.04	0.17	0.00	0.00
AA-20	24.10	16.86	29.06	0.84	1.29	0.00	0.00	55.38	33.80	0.02	0.33	1.17	0.07
AA-21	26.25	25.90	30.27	2.03	2.70	0.00	0.00	61.42	27.35	0.10	0.11	0.00	0.00
AA-22	24.70	5.79	12.18	0.57	2.72	0.00	0.00	34.56	10.85	0.03	0.05	0.00	0.00
AA-23R	30.79	9.95	13.66	0.84	2.57	0.00	0.00	39.98	16.28	0.02	0.16	0.06	0.01
AA-26	11.68	6.90	13.44	1.02	1.08	0.00	0.00	24.36	9.18	0.04	0.09	0.00	0.00
AA-27	22.55	13.24	16.57	0.18	1.77	0.00	0.00	49.55	12.68	0.08	0.20	0.00	0.00
AA-UW1	26.90	16.61	13.88	0.19	1.39	0.00	0.00	44.14	12.37	0.06	0.08	0.02	0.01
AA-UW2	19.56	16.69	20.97	0.21	2.02	0.00	0.00	40.18	14.70	0.06	0.17	0.01	0.00
AA-UW3	14.62	15.21	36.10	0.38	1.33	0.00	0.00	63.92	7.44	0.08	0.13	0.00	0.00
AA-UW4	16.82	14.23	27.84	0.34	1.38	0.00	0.00	61.84	9.32	0.05	0.19	0.00	0.00
AA-UW5	3.76	3.77	4.25	0.19	2.03	0.00	0.00	5.64	4.96	0.04	0.24	0.00	0.00
AA-UW6	18.46	12.91	14.09	1.62	0.93	0.00	0.00	51.63	6.37	0.03	0.12	0.00	0.00
BEC-6	28.89	21.96	24.71	0.95	1.72	0.00	0.00	39.35	47.89	0.03	0.49	0.33	0.00
BEC-9	35.53	24.51	19.27	1.56	1.79	0.00	0.00	43.31	45.07	0.04	0.75	0.02	0.00
COH-1	21.76	688.32	656.81	136.06	1.36	0.00	0.00	895.27	678.87			0.00	0.00
COH-2	24.90	591.28	717.70	117.90	1.70	0.00	0.00	751.61	802.82			0.00	0.00
COH-2A	27.15	25.33	46.98	0.92	2.39	0.00	0.00	63.09	42.25	0.07	0.31	0.76	0.08
DBMW-1	31.14	25.16	27.58	1.33	1.03	0.00	0.00	58.51	27.92	0.02	0.14	0.31	0.08
DBMW-10	10.58	7.37	10.61	1.46	1.16	0.00	0.00	19.07	8.93	0.03	0.16	0.03	0.01
DBMW-11	32.19	39.56	30.97	5.96	1.07	0.00	0.00	64.96	52.96	0.02	0.39	0.42	0.00
DBMW-12	33.68	70.64	39.67	13.45	0.90	0.00	0.00	104.93	69.86		0.41	0.47	0.19
DBMW-13	30.59	23.36	27.14	3.43	0.84	0.00	0.00	54.97	29.86	0.01	0.24	0.23	0.11
DBMW-14	30.29	17.35	22.40	3.25	0.90	0.00	0.00	49.76	30.99	0.00	0.27	0.24	0.14
DBMW-15	28.44	18.01	18.09	2.42	0.92	0.00	0.00	54.13	11.18	0.02	0.13	0.06	0.01
DBMW-16	3.83	2.97	8.57	0.53	1.25	0.00	0.00	9.27	3.63	0.04	0.04	0.00	0.00
DBMW-17	6.19	4.56	11.74	0.64	1.29	0.00	0.00	20.20	1.40	0.04	0.02	0.00	0.00
DBMW-19	29.24	14.97	21.92	1.42	1.98	0.00	0.00	51.43	19.44	0.04	0.31	0.24	0.02
DBMW-2	27.50	24.59	34.45	1.86	1.54	0.00	0.00	65.79	36.06	0.04	0.11	0.21	0.06
DBMW-20	26.10	18.01	20.01	2.63	1.98	0.00	0.00	41.85	27.75	0.04	0.37	0.06	0.02
DBMW-22	29.74	14.72	11.05	3.81	0.85	0.00	0.00	52.26	9.07	0.01	0.02	0.01	0.00
DBMW-3	26.90	24.42	29.88	1.93	0.93	0.00	0.00	60.80	41.41	0.03	0.24	0.72	0.06
DBMW-4	27.15	18.67	24.01	1.20	2.64	0.00	0.00	54.55	31.55	0.02	0.40	0.44	0.04
DBMW-5	30.39	18.17	20.18	0.81	1.44	0.00	0.00	48.09	27.69	0.01	0.49	0.36	0.03
DBMW-6	38.27	27.22	22.92	2.99	1.49	0.00	0.00	44.14	56.90		0.92	0.01	0.02
DBMW-7	32.53	22.45	24.45	1.67	1.02	0.00	0.00	50.80	46.76	0.02	0.72	0.12	0.03
DBMW-8	35.33	24.67	26.66	2.01	0.90	0.00	0.00	48.51	49.01	0.02	0.74	0.13	0.03
DBMW-9	29.04	12.58	12.27	1.40	1.46	0.00	0.00	46.85	12.45	0.05	0.28	0.10	0.03
DM-1	30.09	16.04	18.40	0.21	3.03	0.00	0.00	51.22	9.04	0.11	0.21	0.00	0.00
HMW-08	20.71	7.43	11.18	1.04	3.69	0.00	0.00	26.44	11.58	0.04	0.09	0.01	0.00
HMW-09	23.80	13.16	20.79	1.29	2.08	0.00	0.00	41.02	17.07	0.03	0.15	0.06	0.02
HMWWT-6	7.68	7.11	7.92	0.14	1.20	0.00	0.00	9.41	12.25	0.03	0.28	0.00	0.00
MCF-01A	24.60	13.40	16.83	0.60	0.80	0.00	0.00	55.17	3.07	0.01	0.00	0.00	0.00
MCF-01B	5.84	5.46	16.49	0.28	2.16	0.00	0.00	20.76	8.42	0.04	0.03	0.02	0.01
MCF-02A	1.09	0.56	6.61	0.23	1.20	0.00	0.00	4.02	3.52	0.05	0.02	0.00	0.00
MCF-02B	1.12	0.79	7.39	0.20	1.56	0.00	0.00	5.29	2.68	0.07	0.02	0.00	0.00
MCF-03A	1.32	1.15	6.96	0.34	1.13	0.00	0.00	4.79	3.77	0.04	0.04	0.00	0.00
MCF-03B	7.83	7.67	21.10	0.30	2.11	0.00	0.00	24.98	8.82	0.04	0.18	0.00	0.00
MCF-04	25.60	10.61	30.97	2.31	0.62	0.00	0.00	64.54	11.97	0.02		0.00	0.00
MCF-05	16.47	1143.09	0.22	0.15	2.36	0.00	0.00	1663.54	892.96			0.00	0.00
MCF-06A	13.17	1126.64	1439.76	231.71	1.62	0.00	0.00	1632.31	1932.39			0.00	0.00
MCF-06B	24.05	296.05	173.99	91.30	0.00	0.00	4.88	381.01	205.35	0.02	0.06	0.07	0.06
MCF-06C	30.99	28.87	26.75	4.99	0.90	0.00	0.00	54.97	48.17	0.02	0.83	0.05	0.04
MCF-07	0.72	1291.12	1065.68	314.58	2.29	0.00	0.00	1763.48	1256.34			0.00	0.00
MCF-08A	29.69	511.51	1143.98	78.77	1.82	0.00	0.00	535.08	1487.32			0.00	0.00
MCF-08B	30.94	171.68	233.14	18.85	0.80	0.00	0.00	247.76	218.31			0.00	0.00
MCF-09A	23.55	178.45	193.56	15.73	1.16	0.00	0.00	276.91	120.56			0.00	0.00
MCF-09B	21.41	10.86	14.35	1.04	0.97	0.00	0.00	46.01	4.17	0.04		0.00	0.00
MCF-10A	26.05	20.07	51.76	3.94	0.82	0.00	0.00	81.82	39.15			0.00	0.00
MCF-10B	12.23	7.47	8.79	0.86	0.88	0.00	0.00	24.36	5.80	0.02	0.00	0.00	0.00
MCF-11	20.01	9.95	16.70	1.42	1.31	0.00	0.00	43.72	10.06	0.06		0.00	0.00
MCF-12A	24.85	15.38	35.10	8.41	0.77	0.00	0.00	71.00	26.39	0.02		0.00	0.00
MCF-12B	14.12	10.28	11.74	1.72	1.13	0.00	0.00	32.69	8.93	0.02	0.10	0.06	0.04
MCF-12C	11.03	7.30	8.18	1.75	1.26	0.00	0.00	26.23	3.07	0.03	0.02	0.00	0.00
MCF-16A	21.41	525.49	120.92	304.35	1.79	0.00	0.00	1159.69	103.10			0.00	0.00
MCF-16B	22.60	499.18	117.88	350.38	2.34	0.00	0.00	955.65	72.39	0.02		0.00	0.00
MCF-16C	29.44	55.18	23.58	9.13	1.21	0.00	0.00	115.97	34.65	0.03	0.38	0.23	0.11
MCF-17A	42.22	273.03	730.75	45.78	0.88	0.00	0.00	324.80	847.89			0.00	0.00
MCF-18A	155.69	222.04	2096.56	168.80	0.39	0.00	0.00	77.45	3464.79			0.00	0.00
MCF-19A	28.64	986.84	922.14	138.62	1.80	0.00	0.00	1309.60	983.10			0.00	0.00
MCF-20A	24.20	1151.32	1435.41	248.85	0.66	0.00	0.00	1549.03	2028.17			0.00	0.00
MCF-21A	6.34	1052.63	587.21	312.02	2.23	0.00	0.00	1611.49	507.04			0.00	0.00
MCF-22A	27.05	8.96	9.74	2.30	1.05	0.00	0.00	44.56	3.04	0.04		0.00	0.00
MCF-23A	30.74	633.22	578.51	81.07	1.20	0.00	0.00	855.72	456.34			0.00	0.00
MCF-24A	4.99	1365.13	302.31	352.94	2.23	0.00	0.00	1530.29	284.51			0.00	0.00
MCF-25A	25.30	14.72	43.45	4.02	0.82	0.00	0.00	76.41	16.79	0.01		0.00	0.00
MCF-27	3.43	2.06	8.74	0.30	1.03	0.00	0.00	10.24	2.79	0.04	0.02	0.00	0.00
MW-03	21.86	16.12	29.88	1.78	1.77	0.00	0.00	42.68	32.96	0.07		0.00	0.00
MW-04	28.79	82.24	88.73	20.23	1.07	0.00	0.00	127.21	95.21	0.02	0.22	0.17	0.10
MW-13	29.24	20.15	21.14	2.81	2.23	0.00	0.00	44.35	28.73	0.03	0.36	0.06	0.02
MW-15	21.36	15.21	25.23	1.42	1.88	0.00	0.00	49.14	13.77	0.12	0.00	0.00	0.00
PC-108	10.68	6.27	21.31	0.38	6.54	0.00	0.00	14.99	18.37	0.06	0.00	0.00	0.00
PC-2	31.94	17.43	29.01	0.96	1.79	0.00	0.00	49.76	41.41	0.06	0.27	0.52	0.00
PC-24	53.89	40.95	81.34	0.58	1.57	0.00	0.00	48.72	145.63	0.04	0.87	3.32	0.18
PC-28	31.79	18.75	39.76	0.19	1.39	0.00	0.00	47.26	38.59	0.05	0.60	10.94	5.26
PC-4	29.04	28.54	42.58	2.74	2.46	0.00	0.00	64.96	40.56	0.03	0.42	1.03	0.00
PC-67	35.08	29.36	115.27	0.52	2.05	0.00	0.00	70.16	135.21	0.08	0.90	5.98	0.88
PC-76	17.02	20.72	29.23	0.91	4.08	0.00	0.00	37.48	31.83	0.06	0.02	0.00	0.00
PC-79	11.58	7.93	18.18	0.52	3.90	0.00	0.00	19.03	14.11	0.06	0.00	0.00	0.00
PC-80	10.28	4.00	17.96	0.53	5.08	0.00	0.00	12.03	13.24	0.08	0.00	0.00	0.00
PC-81	5.94	4.59	27.93	0.58	5.60	0.00	0.00	15.76	16.48	0.14	0.00	0.00	0.00
PC-88	12.48	9.29	43.93	0.68	4.21	0.00	0.00	27.48	43.66	0.08	0.13	0.27	0.12
PC-90	14.27	9.46	37.41	0.53	3.41	0.00	0.00	29.15	39.15	0.09	0.14	0.28	0.10
PC-94	23.85	15.05	20.88	1.22	2.21	0.00	0.00	44.35	18.70	0.03	0.25	0.14	0.02
POD2	32.53	17.35	35.36	0.46	1.82	0.00	0.00	52.26	49.58		0.33	2.33	0.04
POD8	19.66	21.55	18.31	0.64	3.56	0.00	0.00	29.36	34.65	0.06	0.67	0.04	0.00
POU3	35.88	29.77	69.60	0.69	1.11	0.00	0.00	51.43	78.59		0.21	3.96	0.00
WMW5.58SD	19.11	970.39	922.14	360.61	4.54	0.00	0.00	1488.65	861.97			0.00	0.00
WMW5.58SI	10.83	7.95	14.53	0.62	2.85	0.00	0.00	18.97	13.61	0.04	0.15	0.01	0.01
WMW5.58SS	7.19	5.53	11.44	0.70	2.31	0.00	0.00	11.24	9.04	0.05	0.21	0.00	0.00

Cation-Anion Balance Tests / TDS Checks / TDS and EC

Sample Name	Sum Cations (meq/l)	Sum Anions (meq/l)	Cat/An Ratio	(Cat-An)/(Cat+An) (%)	Acceptable Variance <5%?	TDS Sum (mg/l)	TDS Lab (mg/l) TDS	Lab/Sum Ratio	Acceptable Ratio 1.0 - 1.2	EC (umhos/cm) Electrical Conductivity	Lab TDS / EC Ratio	Acceptable Range 0.55 - 0.7
AA-01	53.93	52.35	1.03	1.48	PASS	1150	3850	3.35	FAIL	4460	0.863	FAIL
AA-07	29.57	30.50	0.97	1.54	PASS	691	2250	3.25	FAIL	2820	0.798	FAIL
AA-08	61.72	78.52	0.79	11.98	FAIL	4524	4820	1.07	PASS	5910	0.816	FAIL
AA-09	102.02	105.33	0.97	1.60	PASS	2146	7610	3.55	FAIL	8400	0.906	FAIL
AA-10	70.64	75.98	0.93	3.64	PASS	1505	4590	3.05	FAIL	6060	0.757	FAIL
AA-13	42.30	41.88	1.01	0.50	PASS	1061	2760	2.60	FAIL	3600	0.767	FAIL
AA-18	15.63	17.12	0.91	4.56	PASS	1057	1160	1.10	PASS	1740	0.667	PASS
AA-20	70.86	92.07	0.77	13.02	FAIL	5433	5990	1.10	PASS	7530	0.795	FAIL
AA-21	84.46	91.68	0.92	4.10	PASS	1781	4550	2.55	FAIL	7040	0.646	PASS
AA-22	43.24	48.21	0.90	5.43	FAIL	3079	3020	0.98	FAIL	3880	0.778	FAIL
AA-23R	55.24	59.07	0.94	3.36	PASS	1248	4260	3.41	FAIL	4560	0.934	FAIL
AA-26	33.04	34.76	0.95	2.54	PASS	733	2520	3.44	FAIL	2970	0.848	FAIL
AA-27	52.55	64.29	0.82	10.05	FAIL	3940	4570	1.16	PASS	4930	0.927	FAIL
AA-UW1	57.57	58.06	0.99	0.42	PASS	1154	4310	3.73	FAIL	4510	0.956	FAIL
AA-UW2	57.43	57.15	1.00	0.24	PASS	1209	4460	3.69	FAIL	4620	0.965	FAIL
AA-UW3	66.32	72.89	0.91	4.72	PASS	1404	4880	3.48	FAIL	5730	0.852	FAIL
AA-UW4	59.22	72.78	0.81	10.28	FAIL	4548	5990	1.32	FAIL	6710	0.893	FAIL
AA-UW5	11.97	12.91	0.93	3.76	PASS	813	1400	1.72	FAIL	4350	0.322	FAIL
AA-UW6	47.09	59.09	0.80	11.31	FAIL	3686	5850	1.59	FAIL	1360	4.301	FAIL
BEC-6	76.50	89.81	0.85	8.00	FAIL	5174	5900	1.14	PASS	7220	0.817	FAIL
BEC-9	80.86	90.97	0.89	5.88	FAIL	5306	6160	1.16	PASS	8560	0.720	FAIL
COH-1	1502.95	1575.51	0.95	2.36	PASS	29309	104000	3.55	FAIL	82400	1.262	FAIL
COH-2	1451.79	1556.13	0.93	3.47	PASS	28903	101000	3.49	FAIL	89800	1.125	FAIL
COH-2A	100.37	108.96	0.92	4.10	PASS	2205	6900	3.13	FAIL	8950	0.771	FAIL
DBMW-1	85.21	88.01	0.97	1.62	PASS	1713	6180	3.61	FAIL	6780	0.912	FAIL
DBMW-10	30.02	29.40	1.02	1.05	PASS	687	1760	2.56	FAIL	2810	0.626	PASS
DBMW-11	108.67	119.82	0.91	4.88	PASS	2196	7250	3.30	FAIL	9060	0.800	FAIL
DBMW-12	157.45	176.76	0.89	5.78	FAIL	10630	9780	0.92	FAIL	11400	0.858	FAIL
DBMW-13	84.51	86.25	0.98	1.01	PASS	1736	5890	3.39	FAIL	6660	0.884	FAIL
DBMW-14	73.29	82.31	0.89	5.80	FAIL	5040	5680	1.13	PASS	2910	1.952	FAIL
DBMW-15	66.97	66.46	1.01	0.39	PASS	1362	4170	3.06	FAIL	5060	0.824	FAIL
DBMW-16	15.90	14.22	1.12	5.60	FAIL	407	900	2.21	FAIL	1550	0.581	PASS
DBMW-17	23.14	22.96	1.01	0.40	PASS	555	1790	3.22	FAIL	2140	0.836	FAIL
DBMW-19	67.55	73.45	0.92	4.19	PASS	4650	4780	1.03	PASS	5580	0.857	FAIL
DBMW-2	88.40	103.81	0.85	8.02	FAIL	6272	6600	1.05	PASS	7610	0.867	FAIL
DBMW-20	66.75	72.06	0.93	3.83	PASS	1434	5580	3.89	FAIL	5850	0.954	FAIL
DBMW-22	59.32	62.23	0.95	2.39	PASS	1232	3720	3.02	FAIL	4520	0.823	FAIL
DBMW-3	83.13	104.19	0.80	11.24	FAIL	6112	6590	1.08	PASS	7810	0.844	FAIL
DBMW-4	71.03	89.64	0.79	11.58	FAIL	5338	6740	1.26	FAIL	6740	1.000	FAIL
DBMW-5	69.55	78.13	0.89	5.80	FAIL	4771	8000	1.68	FAIL	6040	1.325	FAIL
DBMW-6	91.41	103.48	0.88	6.19	FAIL	6032	6520	1.08	PASS	8110	0.804	FAIL
DBMW-7	81.10	99.46	0.82	10.17	FAIL	5727	6030	1.05	PASS	7460	0.808	FAIL
DBMW-8	88.67	99.35	0.89	5.68	FAIL	5838	5860	1.00	PASS	7600	0.771	FAIL
DBMW-9	55.29	61.21	0.90	5.09	FAIL	3865	3700	0.96	FAIL	4480	0.826	FAIL
DM-1	64.73	63.60	1.02	0.88	PASS	1414	4200	2.97	FAIL	4750	0.884	FAIL
HMW-08	40.37	41.84	0.96	1.80	PASS	2715	2880	1.06	PASS	3530	0.816	FAIL
HMW-09	59.04	60.43	0.98	1.16	PASS	1308	3710	2.84	FAIL	4800	0.773	FAIL
HMWWT-6	22.86	23.17	0.99	0.68	PASS	501	1570	3.13	FAIL	2370	0.662	PASS
MCF-01A	55.44	59.06	0.94	3.16	PASS	1116	4490	4.02	FAIL	321	13.988	FAIL
MCF-01B	28.06	31.43	0.89	5.66	FAIL	2005	1960	0.98	FAIL	2760	0.710	FAIL
MCF-02A	8.49	8.80	0.97	1.78	PASS	263	570	2.17	FAIL	2420	0.236	FAIL
MCF-02B	9.52	9.62	0.99	0.54	PASS	654	766	1.17	PASS	1080	0.709	FAIL
MCF-03A	9.77	9.78	1.00	0.03	PASS	647	683	1.06	PASS	1110	0.615	PASS
MCF-03B	36.90	36.13	1.02	1.05	PASS	876	2970	3.39	FAIL	3520	0.844	FAIL
MCF-04	69.49	77.16	0.90	5.23	FAIL	1483	5380	3.63	FAIL	5840	0.921	FAIL
MCF-05	1159.92	2558.86	0.45	37.62	FAIL	14385	165000	11.47	FAIL	106000	1.557	FAIL
MCF-06A	2811.29	3566.33	0.79	11.84	FAIL	203223	215000	1.06	PASS	138000	1.558	FAIL
MCF-06B	585.40	591.46	0.99	0.51	PASS	11747	48800	4.15	FAIL	38800	1.258	FAIL
MCF-06C	91.59	104.98	0.87	6.81	FAIL	6195	6500	1.05	PASS	8340	0.779	FAIL
MCF-07	2672.10	3022.11	0.88	6.15	FAIL	181955	197000	1.08	PASS	12100	16.281	FAIL
MCF-08A	1763.95	2024.23	0.87	6.87	FAIL	114806	116000	1.01	PASS	11800	9.831	FAIL
MCF-08B	454.81	466.87	0.97	1.31	PASS	8856	46500	5.25	FAIL	32800	1.418	FAIL
MCF-09A	411.30	398.64	1.03	1.56	PASS	7778		N/A	FAIL	27800	0.000	FAIL
MCF-09B	47.65	51.18	0.93	3.57	PASS	3349	3970	1.19	PASS	3930	1.010	FAIL
MCF-10A	101.81	121.80	0.84	8.94	FAIL	7480	5400	0.72	FAIL	8850	0.610	PASS
MCF-10B	29.34	31.07	0.94	2.87	PASS	626	2080	3.32	FAIL	2800	0.743	FAIL
MCF-11	48.09	55.15	0.87	6.84	FAIL	3499	3510	1.00	PASS	4370	0.803	FAIL
MCF-12A	83.75	98.19	0.85	7.94	FAIL	6215	6200	1.00	PASS	7940	0.781	FAIL
MCF-12B	37.87	42.97	0.88	6.32	FAIL	2716	2840	1.05	PASS	3640	0.780	FAIL
MCF-12C	28.26	30.62	0.92	4.01	PASS	2013	1990	0.99	FAIL	2740	0.726	FAIL
MCF-16A	972.17	1264.58	0.77	13.07	FAIL	80968	87300	1.08	PASS	62700	1.392	FAIL
MCF-16B	990.04	1030.41	0.96	2.00	PASS	23076	71900	3.12	FAIL	56100	1.282	FAIL
MCF-16C	117.33	152.58	0.77	13.06	FAIL	9065	16000	1.77	FAIL	4750	3.368	FAIL
MCF-17A	1091.77	1173.57	0.93	3.61	PASS	22810	85600	3.75	FAIL	78800	1.086	FAIL
MCF-18A	2643.09	3542.63	0.75	14.54	FAIL	187364	157000	0.84	FAIL	19200	8.177	FAIL
MCF-19A	2076.24	2294.50	0.90	4.99	PASS	38304	161000	4.10	FAIL	99600	1.616	FAIL
MCF-20A	2859.77	3577.86	0.80	11.15	FAIL	203655	183000	0.90	FAIL	13500	13.556	FAIL
MCF-21A	1958.20	2120.76	0.92	3.99	PASS	38763	153000	3.95	FAIL	87800	1.743	FAIL
MCF-22A	48.05	48.69	0.99	0.66	PASS	1030	3370	3.27	FAIL	38200	0.088	FAIL
MCF-23A	1323.55	1313.25	1.01	0.39	PASS	24859	105000	4.22	FAIL	68900	1.524	FAIL
MCF-24A	2025.37	1817.03	1.11	5.42	FAIL	121186	101000	0.83	FAIL	7800	12.949	FAIL
MCF-25A	87.49	94.03	0.93	3.60	PASS	1892	5090	2.69	FAIL	76600	0.066	FAIL
MCF-27	14.53	14.12	1.03	1.44	PASS	370	1170	3.17	FAIL	1500	0.780	FAIL
MW-03	69.64	77.48	0.90	5.33	FAIL	4719	4820	1.02	PASS	6750	0.714	FAIL
MW-04	219.99	224.00	0.98	0.90	PASS	4497	13300	2.96	FAIL	16600	0.801	FAIL
MW-13	73.34	75.78	0.97	1.63	PASS	1593	4860	3.05	FAIL	6090	0.798	FAIL
MW-15	63.22	64.91	0.97	1.32	PASS	1363	6630	4.86	FAIL	5240	1.265	FAIL
PC-108	38.64	39.96	0.97	1.68	PASS	2566	2810	1.10	PASS	3890	0.722	FAIL
PC-2	79.34	93.81	0.85	8.35	FAIL	5569	5870	1.05	PASS	8310	0.706	FAIL
PC-24	176.76	200.34	0.88	6.25	FAIL	11372	13100	1.15	PASS	16700	0.784	FAIL
PC-28	90.48	104.08	0.87	6.99	FAIL	3307	7370	2.23	FAIL	8470	0.870	FAIL
PC-4	102.90	109.45	0.94	3.09	PASS	2277	8400	3.69	FAIL	8890	0.945	FAIL
PC-67	180.23	215.27	0.84	8.86	FAIL	12668	12600	0.99	PASS	17600	0.716	FAIL
PC-76	67.88	73.47	0.92	3.95	PASS	1550	6340	4.09	FAIL	6240	1.016	FAIL
PC-79	38.21	37.11	1.03	1.47	PASS	1005	3000	2.99	FAIL	3690	0.813	FAIL
PC-80	32.78	30.44	1.08	3.70	PASS	999	2270	2.27	FAIL	3130	0.725	FAIL
PC-81	39.03	37.99	1.03	1.36	PASS	1182	2860	2.42	FAIL	3890	0.735	FAIL
PC-88	66.38	75.96	0.87	6.73	FAIL	4569	4360	0.95	FAIL	6690	0.652	PASS
PC-90	61.67	72.33	0.85	7.95	FAIL	4313	4810	1.12	PASS	6240	0.771	FAIL
PC-94	61.00	65.71	0.93	3.71	PASS	1353	4160	3.07	FAIL	5210	0.798	FAIL
POD2	85.71	106.35	0.81	10.74	FAIL	6293	6170	0.98	FAIL	8040	0.767	FAIL
POD8	60.16	68.33	0.88	6.36	FAIL	3962	4140	1.04	PASS	5770	0.718	FAIL
POU3	135.93	135.30	1.00	0.23	PASS	3106	9680	3.12	FAIL	12000	0.807	FAIL
WMW5.58SD	2272.26	2355.16	0.96	1.79	PASS	47760	195000	4.08	FAIL	109000	1.789	FAIL
WMW5.58SI	33.93	35.64	0.95	2.46	PASS	847	2300	2.71	FAIL	3400	0.676	PASS
WMW5.58SS	24.86	22.86	1.09	4.19	PASS	643	1460	2.27	FAIL	2410	0.606	PASS

8.6 - pH at or above 8.2
mg/L - Milligrams per Liter
Cat - Cation
An - Anion
Blank cells for minor consistuents (F, NO3, ClO3, ClO4) indicate sample not collected or below detection limit
Flagged cells with red indicate that the sample result was non-detect, and 1/2 the detection limit is used here