ANACONDA SMELTER NPL SITE
ANACONDA REGIONAL WATER, WASTE, AND SOILS OPERABLE UNIT

2011 GROUNDWATER MONITORING PROGRAM

Prepared for:
Atlantic Richfield Company
U.S. Environmental Protection Agency
Montana Department of Environmental Quality

(Photo courtesy of World Museum of Mining, Butte, MT)

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ACM	Anaconda Copper Mining Company
ADLC	Anaconda–Deer Lodge County
AOC	Area of Concern
ARARs	Applicable or Relevant and Appropriate Requirements
AR	Atlantic Richfield Company
ARWWS	Anaconda Regional Water, Waste, and Soils
CGWA	Controlled Groundwater Area
COCs	Contaminants of Concern
DAR	Data Analysis Report
DEQ	Montana Department of Environmental Quality
DO	Dissolved Oxygen
DSR	Data Summary Report
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
GWIC	Groundwater Information Center
HAA	High Arsenic Area
IC	Institutional Control
LTGWMP	Long-Term Groundwater Monitoring Program
MBMG	Montana Bureau of Mines and Geology
mg/L	Milligrams per Liter
NPL	National Priorities List
ORP	Oxidation-Reduction Potential
OU	Operable Unit
POC	Points of Compliance
PPOC	Potential Points of Compliance
RA	Remedial Action
RD	Remedial Design
RDU	Remedial Design Unit
RDWP	Remedial Design Work Plan
RI	Remedial Investigation
RO	Reverse Osmosis
ROD	Record of Decision
SAP	Sampling and Analysis Plan
SC	Specific Conductance
STGWMP	Short-Term Groundwater Monitoring Program
TI	Technical Impracticability
μg/L	Micrograms per Liter
WMA	Waste Management Area

ABSTRACT

The 2011 Anaconda Regional Water, Waste, and Soils (ARWWS) Groundwater Monitoring Program continued the transition from the Record of Decision (ROD)-implemented Short-Term Groundwater Monitoring and Sampling Program (STGWMP) toward the Long-Term Groundwater Monitoring and Sampling Program (LTGWMP) that began in 2009. The number of geographic areas where monitoring and sampling occurred was reduced from seven to three based upon the 2009 STGWMP. Springs and surface-water locations were not part of the 2011 monitoring program. The reduction in number of sites monitored and sampled is the result of the 2009 sampling events being part of the 5-year annual review period when additional sites (wells and springs) are sampled. There are fewer non-5-year review monitoring sites.

The U.S. Environmental Protection Agency (EPA), in consultation and concurrence with Montana Department of Environmental Quality (DEQ), released a Record of Decision Amendment in September 2011. Contained in the amendment were changes to the water-quality standards contained in the 1998 ROD, bringing ARWWS site contaminant of concern (COC) standards into compliance with current Montana DEQ-7 standards.

The defined domestic well sampling program was continued based upon U.S. Environmental Protection Agency (EPA) and Montana Department of Environmental Quality (DEQ) boundaries. Boundary adjustments resulted in a number of wells being sampled outside the boundary; information from those wells was used as reference sites.

The final 12 monitoring wells were installed during late summer and early fall of 2011, with water-quality samples collected from all but one of the wells following their development and completion. One well was flowing and needed additional completion efforts to weatherize the wellhead from freezing.

Arsenic is the primary contaminant of concern (COC) throughout this operable unit (OU), while cadmium, copper, lead, and zinc are also of concern in two of the three areas that constitute the 2011 program. Listed below are the seven geographical areas within the OU and the number of wells and COC exceedances during the 2011 sampling:

ARWWS Geographical Areas	No. Wells	No. Arsenic Exceedances	No. Other Exceedances
Stucky Ridge/Lost Creek	No 2011 samples	—	—
Mount Haggin/Smelter Hill	No 2011 samples	—	—
Smelter Hill/Opportunity Ponds	24	2	10
Old Works	14	0	8
South Opportunity/Yellow Ditch	7	0	0
Blue Lagoon	No 2011 samples	—	—
Dutchman Creek	No 2011 samples	—	—
Totals	45	2	18

The two arsenic exceedances occurred within the Opportunity Ponds; the other COC exceedances (cadmium, copper, and zinc) were within the Red Sands area of the Old Works. The highest arsenic and cadmium concentrations in the monitoring wells were 179 and 10.82 µg/L, respectively.

Twenty-six points of compliance (POC) or potential points of compliance (PPOC) monitoring wells are distributed throughout the ARWWS monitoring area to ensure that no groundwater contamination migrates offsite from any of the primary source areas: 17 of the POC wells were sampled twice during 2011 and 8 PPOC wells were sampled in the fall of 2011 following their installation. No COC exceedances were observed in the POC or PPOC wells; water-quality concentrations were below specified water-quality standards in all the POC and PPOC sampled wells. Based upon the 2011 water-quality results, there are no indications that the area of historic contamination is spreading, or that contaminants are leaving the site.

The domestic well area boundary was changed in 2011 back to a previous boundary, which was smaller than the 2010 boundary under which we started sampling in 2011. Some of the wells sampled in 2011 were outside the final 2011 boundary. Wells outside the final boundary were sampled prior to learning of the new boundary or because contact had been made with the homeowners prior to the boundary change.

The goal of sampling 120 new domestic wells in 2011 was achieved, with 120 new wells sampled. Arsenic concentrations exceeded 5 µg/L in 6 of the new wells sampled, but 2 of these wells were outside the final 2011 boundary. Arsenic concentrations exceeded 10 µg/L in 11 wells, but 4 of these wells were outside the final 2011 boundary. Confirmation samples (total recoverable and dissolved) were collected from 10 wells with concentrations greater than 10 µg/L collected in 2010 or 2011. In addition to the new well and confirmation samples, 22 wells were resampled based on previous arsenic samples greater than 5 or 10 µg/L.

Thirteen reverse osmosis (RO) units were installed in 12 homes (one home had an apartment). The home receiving two RO units was the only location within the current boundary. Two homes were in the Crackerville area, which is outside the current boundary, but this area has been historically sampled by the MBMG and others as part of domestic well sampling. The remaining 9 homes were outside the final 2011 boundary, and RO units were installed at those homes with the understanding that the homeowner would be responsible for further upkeep on the units. Nine RO systems were sampled in 2011; all had arsenic concentrations less than 0.8 µg/L.

Five replacement domestic wells were installed during 2011; two of the replacement wells failed to provide suitable water, and two others are undergoing further evaluation. The fifth well was equipped with an RO unit and hooked up to the household, as the former well had significant casing integrity problems that were possibly allowing surface and shallow water to enter the deeper aquifer. Following the failed replacement well in 2009 and a greater number of deep domestic wells identified with elevated arsenic, a review of existing data and geologic conditions was undertaken. Bottled water was provided to all residences with arsenic concentrations above 10 µg/L.

ANACONDA SMELTER NPL SITE

1.0 Introduction

The Groundwater Monitoring and Sampling Program that was implemented in 2009 was a transition from the Short-Term Groundwater Monitoring and Sampling Program (STGWMP) toward the Long-Term Monitoring and Sampling Program (LTGWMP). The 1998 Record of Decision (ROD) specified the establishment of an interim groundwater program, which has been conducted by Atlantic Richfield Company (AR) seasonally since 2000. Results were presented in semi-annual Data Summary Reports (DSR), followed by an annual Data Analysis Report (DAR). A complete listing of the reports can be found in the Draft Final—2008 Short-Term Groundwater Monitoring, Low-Water Table Event, DSR (Atlantic Richfield Company, 2009a).

The monitoring conducted from 2000 through 2008 followed the objectives contained in the 2000 Anaconda Regional Water, Waste, and Soils (ARWWS) Operable Unit (OU) Short-Term Groundwater Monitoring Sampling and Analysis Plan (SAP). The objectives stated in this SAP were:

1. Assess current groundwater quality in areas where water quality must comply with the appropriate standards as specified in the ROD;
2. Assess current groundwater quality in plumes in areas of concern (AOC) identified in the ROD;
3. Monitor effectiveness of Remedial Actions (RAs), including reclamation and natural attenuation;
4. Evaluate changes in hydrologic conditions since the remedial investigation (RI) that may affect design of a long-term groundwater monitoring plan; and
5. For wells drilled in the past several years, provide data that will supplement the RI for developing a long-term groundwater monitoring plan.

To make the transition from the Short-Term Program to the Long-Term Program, Addendum No. 1 was prepared for the Short-Term SAP. The objectives of SAP Addendum No. 1 (Atlantic Richfield Company, 2009b) were:

1. Modify the current monitoring well network (AERL, Short-Term Program, 2000) to be more consistent with the anticipated LTGWMP well network;
2. Add monitoring of domestic wells to the network;
3. Add installation of new monitoring wells anticipated in the LTGWMP, so that monitoring can begin in 2009; and
4. Add replacement of domestic wells that exceed action levels contained in the 2000 SAP to the established monitoring program.

The 2009 monitoring program included all monitoring sites and coincides with the EPA 5-year site review (Table 1.0-1). (EPA issued a ROD amaendment in 2011 changing two wells in the South Opportunity/Yellow Ditch Area to POC wells; these changes have been made in Table 1.01. Changes in newly installed well names occurred also; the old and new well names are both shown on Table 1.0.1.) Since 2009, the monitoring program has been conducted by the Montana Bureau of Mines and Geology (MBMG). Sample site information is contained in the MBMG online database, the Groundwater Information Center (GWIC). Information for a particular site can be accessed using the site's unique identifier, referred to as the GWIC ID. The web address for GWIC is: http://www.mbmggwic.mtech.edu. The 2011 monitoring program contained a subset of wells (non-5-year review), shown in red in table 1.0-1. Table 1.0-1 also contains a listing of sites that constitute the current approved sampling program, the GWIC identifier, and the sampling frequency. The sites are broken out into categories based upon Remedial Design Units (RDU) established for the ARWWS-OU.

Table 1.0-1. Summary of monitoring sites, sample frequency, and location

Well ID	New ID	GWIC ID	Type	Purpose	New Well	Frequency[1]	Location
STUCKY RIDGE/LOST CREEK EXPANSION AREA TI ZONE							
FH-2		121004	Well	5-year Review		2 seasons each 5 years	Stucky Ridge
MW-248d		250004	Well	5-year Review		2 seasons each 5 years	Stucky Ridge
MW-248e		250031	Well	5-year Review		2 seasons each 5 years	Stucky Ridge
MW-248s		250007	Well	5-year Review		2 seasons each 5 years	Stucky Ridge
SP97-20		249915	Spring	5-year Review		1 season each 5 years	Stucky Ridge
SP98-26		249920	Spring	5-year Review		1 season each 5 years	Lost Creek Expansion Area
SP98-27		249921	Spring	5-year Review		1 season each 5 years	Lost Creek Expansion Area
SP98-28		249922	Spring	5-year Review		1 season each 5 years	Stucky Ridge
SP98-30		249923	Spring	5-year Review		1 season each 5 years	Lost Creek Expansion Area
SP98-31		249924	Spring	5-year Review		1 season each 5 years	Lost Creek Expansion Area
SP98-32		249925	Spring	5-year Review		1 season each 5 years	Stucky Ridge
SP98-34		249926	Spring	5-year Review		1 season each 5 years	Stucky Ridge
SP99-01		249930	Spring	5-year Review		1 season each 5 years	Stucky Ridge
MOUNT HAGGIN/SMELTER HILL HAA TI ZONE							
F2-BR		51388	Well	5-year Review		2 seasons each 5 years	Smelter Hill Loop Track
MW-233		138016	Well	5-year Review		2 seasons each 5 years	Smelter Hill – Mill Creek
MW-245d		249966	Well	5-year Review		2 seasons each 5 years	Weather Hill - Lost Horse Cr
MW-245e		250050	Well	5-year Review		2 seasons each 5 years	Weather Hill - Lost Horse Cr
MW-245s		250003	Well	5-year Review		2 seasons each 5 years	Weather Hill - Lost Horse Cr
MW-249d		250008	Well	5-year Review		2 seasons each 5 years	Mill Creek - Cabbage Gulch
MW-249s		250009	Well	5-year Review		2 seasons each 5 years	Mill Creek - Cabbage Gulch
MW-250d		249958	Well	5-year Review		2 seasons each 5 years	Mill Creek - Joyner Gulch
MW-250s		249957	Well	5-year Review		2 seasons each 5 years	Mill Creek - Joyner Gulch
NGP-1		250017	Well	5-year Review		2 seasons each 5 years	Mt. Haggin/Smelter Hill TI Zone
WGP-1		250053	Well	5-year Review		2 seasons each 5 years	Mt. Haggin/Smelter Hill TI Zone
SH-3		250052	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP97-12		249913	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP97-19		249914	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP97-31		249916	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP98-16		249917	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP98-20		249918	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP98-23		249919	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP98-36		249927	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP98-37		249928	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SP98-8		249929	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SST-1		249931	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SST-26		249932	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SST-29		249933	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone
SST-30		249934	Spring	5-year Review		1 season each 5 years	Mt. Haggin/Smelter Hill TI Zone

Table 1.0-1. Summary of monitoring sites, sample frequency, and location *(continued)*

Well ID	New ID	GWIC ID	Type	Purpose	New Well	Frequency[1]	Location
OPPORTUNITY PONDS/SMELTER HILL WMA							
A1-BR2		51384	Well	5-year Review		2 seasons each 5 years	Smelter Hill
A2-BR		51383	Well	5-year Review		2 seasons each 5 years	Smelter Hill
B4-BR		51382	Well	5-year Review		2 seasons each 5 years	Smelter Hill
C2-AL1		249864	Well	5-year Review		2 seasons each 5 years	Smelter Hill
D3-AL1		249866	Well	5-year Review		2 seasons each 5 years	Smelter Hill
E2-AL1		249961	Well	5-year Review		2 seasons each 5 years	Smelter Hill (northeast)
MW-210		138024	Well	5-year Review		2 seasons each 5 years	Anaconda Ponds Northwest Toe
MW-211		138028	Well	5-year Review		2 seasons each 5 years	Anaconda Ponds Northwest Toe
MW-212		**138007**	**Well**	**POC**		**Semi-Annually**	**North of Triangle Waste**
MW-214		**138065**	**Well**	**POC**		**Semi-Annually**	**North toe of Opportunity Ponds**
MW-216		**137957**	**Well**	**POC**		**Semi-Annually**	**East toe of Opportunity Ponds**
MW-218d		138013	Well	5-year Review		2 seasons each 5 years	Anaconda Ponds Middle Toe
MW-218s		138011	Well	5-year Review		2 seasons each 5 years	Anaconda Ponds Middle Toe
MW-219		138015	Well	5-year Review		2 seasons each 5 years	Anaconda Ponds Northeast Toe
MW-220		249963	Well	5-year Review		2 seasons each 5 years	Anaconda Ponds - Toe East
NW-6s	**MW-258**	**249909**	**Well**	**POC**	**2009**	**Semi-Annually**	**Anaconda Ponds - Toe East**
MW-227		138026	Well	5-year Review		2 seasons each 5 years	East corner of Smelter Hill WMA
MW-244		249795	Well	5-year Review		2 seasons each 5 years	Smelter Hill (northwest)
MW-247		249806	Well	5-year Review		2 seasons each 5 years	Smelter Hill (northwest)
MW-243		249965	Well	5-year Review		2 seasons each 5 years	Triangle Waste Area
MW-253		249847	Well	5-year Review		2 seasons each 5 years	Triangle Waste Area
MW-254		249798	Well	5-year Review		2 seasons each 5 years	Triangle Waste Area
MW-256		**249851**	**Well**	**POC**		**Semi-Annually**	**Triangle Waste Area**
MW-26		**249793**	**Well**	**POC**		**Semi-Annually**	**Northeast toe of Opportunity Ponds**
MW-26M		**249790**	**Well**	**POC**		**Semi-Annually**	**Northeast toe of Opportunity Ponds**
MW-31		**249794**	**Well**	**5-year Review**		**semi-annual first 5 years after cover installed**	**East toe of Opportunity Ponds**
MW-31M		**249785**	**Well**	**5-year Review**		**semi-annual first 5 years after cover installed**	**East toe of Opportunity Ponds**
MW-82		**249840**	**Well**	**5-year Review**		**semi-annual first 5 years after cover installed**	**Inside East toe of Opportunity Ponds**
MW-82M		**249896**	**Well**	**5-year Review**	**2011**	**semi-annual first 5 years after cover installed**	**Inside East toe of Opportunity Ponds**
MW-85		**249843**	**Well**	**5-year Review**		**semi-annual first 5 years after cover installed**	**Interior of Opportunity Ponds**
MW-85M		**249897**	**Well**	**5-year Review**	**2011**	**semi-annual first 5 years after cover installed**	**Interior of Opportunity Ponds**
MW-90		**249844**	**Well**	**5-year Review**		**semi-annual first 5 years after cover installed**	**Interior of Opportunity Ponds**
MW-90M		**249899**	**Well**	**5-year Review**	**2011**	**semi-annual first 5 years after cover installed**	**Interior of Opportunity Ponds**
MW-10R/NW-5s	**MW-273**	**249942**	**Well**	**POC**	**2011**	**Semi-Annually**	**Opportunity Ponds South Flank**
NW-1-OPd	**MW-265**	**249901**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-1-OPs	**MW-266**	**249900**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-2-OPd	**MW-267**	**249903**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-2-OPs	**MW-268**	**249904**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-3-OPd	**MW-269**	**249905**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-3-OPs	**MW-270**	**249906**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-4-OPd	**MW-271**	**249907**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
NW-4-OPs	**MW-272**	**249908**	**Well**	**POC**	**2011**	**Semi-Annually**	**East toe of Opportunity Ponds**
MW-24		249791	Well	5-year Review		2 seasons each 5 years	North toe of Opportunity Ponds
MW-25		249792	Well	5-year Review		2 seasons each 5 years	North toe of Opportunity Ponds

Table 1.0-1. Summary of monitoring sites, sample frequency, and location *(continued)*

Well ID	New ID	GWIC ID	Type	Purpose	New Well	Frequency[1]	Location
OLD WORKS WMA							
IW-01		**250038**	**Well**	**Event Driven**		**Event Driven**	**NE Quarter Section 2**
IW-05		250039	Well	5-year Review		2 seasons each 5 years	NE Quarter Section 2
LF-4		249800	Well	5-year Review		2 seasons each 5 years	NW Quarter Section 1
MW-201		249804	Well	5-year Review		2 seasons each 5 years	NE Quarter Section 2
MW-204		**250041**	**Well**	**Event Driven**		**Event Driven**	**Old Works Red Sands**
MW-205		249803	Well	5-year Review		2 seasons each 5 years	NE Quarter Section 1
MW-206		**250042**	**Well**	**Event Driven**		**Event Driven**	**Section 1 west of sewer lagoons**
MW-206d		**250054**	**Well**	**Event Driven**		**Event Driven**	**Section 1 west of sewer lagoons**
MW-207		**250043**	**Well**	**POC/Event Driven**		**Semi-Annually/Event Driven**	**SE corner of Old Works WMA**
MW-208		**250044**	**Well**	**Event Driven**		**Event Driven**	**SE Quarter Section 31**
MW-209		**250045**	**Well**	**Event Driven**		**Event Driven**	**SE Quarter Section 31**
MW-213		**138022**	**Well**	**Event Driven**		**Event Driven**	**Old Works Red Sands**
MW-240		**250047**	**Well**	**Event Driven**		**Event Driven**	**SE Quarter Section 32**
MW-241		**250048**	**Well**	**Event Driven**		**Event Driven**	**SE Quarter Section 31**
MW-242		**250049**	**Well**	**Event Driven**		**Event Driven**	**West of Old Works WMA**
MW-251		**250014**	**Well**	**POC/Event Driven**		**Semi-Annually/Event Driven**	**NE corner of Old Works WMA**
MW-252		**249797**	**Well**	**POC/Event Driven**		**Semi-Annually/Event Driven**	**West of Old Works WMA**
MW-255		**250055**	**Well**	**POC/Event Driven**		**Semi-Annually/Event Driven**	**West of Old Works WMA**
MW-72		250051	Well	5-year Review		2 seasons each 5 years	SW Quarter Section 31
TI-A		249801	Well	5-year Review		2 seasons each 5 years	NW Quarter Section 2
SOUTH OPPORTUNITY/YELLOW DITCH AREA OF CONCERN							
LTW-1-SOd	**MW-263**	**249936**	**Well**	**POC**	**2009**	**Semi-Annually**	**North of Hwy. 1, NE Section 16**
LTW-1-SOs	**MW-264**	**249937**	**Well**	**POC**	**2009**	**Semi-Annually**	**North of Hwy. 1, NE Section 16**
LTW-3-SOd	**MW-261**	**249938**	**Well**	**POC**	**2009**	**Semi-Annually**	**North of Hwy. 1, Section 15**
LTW-3-SOs	**MW-262**	**249939**	**Well**	**POC**	**2009**	**Semi-Annually**	**North of Hwy. 1, Section 15**
MW-225		249940	Well	5-year Review		2 seasons each 5 years	SW Quarter Section 14
MW-232		249941	Well	5-year Review		2 seasons each 5 years	Mount Haggin Ranch
MW-231		138061	Well	5-year Review		2 seasons each 5 years	Willow Creek
MW-9 (Lab)		**138020**	**Well**	**Town of Opportunity**		**Semi-Annually**	**West of Highway 1 and Fairmont Rd.**
LTW-4-SOd	**MW-259**	**138017**	**Well**	**POC**	**2009**	**Semi-Annually**	**Section 16 - Hwy 1**
LTW-4-SOs	**MW-260**	**249898**	**Well**	**POC**	**2009**	**Semi-Annually**	**Section 16 - Hwy 1**
OD-2D		249778	Well	Town of Opportunity		2 seasons each 5 years	Northeast of Opportunity
OD-2S		249799	Well	Town of Opportunity		2 seasons each 5 years	Northeast of Opportunity
OD-3D		249781	Well	Town of Opportunity		2 seasons each 5 years	East Opportunity near Willow Creek
OD-3S		249782	Well	Town of Opportunity		2 seasons each 5 years	East Opportunity near Willow Creek
WCT-27		249935	Surface expression of groundwater	Town of Opportunity		2 seasons each 5 years	South of Highway 1 at Opportunity
BLUE LAGOON AOC							
MW-235		250046	Well	5-year Review		2 seasons each 5 years	Blue Lagoon
MW-257		250015	Well	5-year Review		2 seasons each 5 years	Blue Lagoon
DUTCHMAN CREEK HIGH ARSENIC AREA							
SP-07-01		249910	Spring	5-year Review		1 season each 5 years	North Opportunity
SP-07-02		249911	Spring	5-year Review		1 season each 5 years	North Opportunity
SP-07-03		249912	Spring	5-year Review		1 season each 5 years	North Opportunity
MW-224		138068	Well	5-year Review		2 seasons each 5 years	North Opportunity
MW-230		128740	Well	5-year Review		2 seasons each 5 years	North Opportunity

1. New wells in new cover areas will be sampled semi-annually for 5 years, then semi-annually once each 5 years. New Town of Opportunity wells will be sampled semi-annually perpetually.

2.0 Historical Background

The town of Anaconda, Montana was founded by Marcus Daly on June 25, 1883 for the purpose of constructing a smelter to process ore being mined by Daly and his partners in Butte, 26 miles to the east (Morris, 1997). Daly chose this location due to the abundant supply of water from Warm Springs Creek. The mining company [Anaconda Copper Mining Company (ACM)] operated by Daly and his partners began construction of the first concentrator and smelter on the north side of Warm Springs Creek in 1883, with the facility put into operation in 1884. This facility was known as the Upper Works and consisted of the following facilities: concentrator, smelter buildings including roasters, reverberatory furnaces, long masonry flues, and two smokestacks measuring 115 and 175 ft in height (Shovers and others, 1991).

As ore production from the ACM mines in Butte increased, Daly built an additional smelter in 1897, which became known as the Lower Works. The Lower Works was located 1 mile east of the Upper Works facilities, again adjacent to Warm Springs Creek (fig. 2.0-1).

ACM continued to add facilities at both the Upper and Lower Works to handle increased ore production from its Butte mines. In 1902, ACM moved their processing facilities to the south side of Warm Springs Creek with the construction of the Washoe Reduction Works. The Washoe facility was designed so that processing facilities could expand as needed. In 1902, when it was put into operation, it had a capacity of 4,800 tons per day, producing 600,000 pounds of copper in 1908; increases in capacity led to the production of 1,000,000 pounds of copper per day in 1933 (Shovers and others, 1991). Figure 2.0-2 shows the general layout of the Washoe Reduction Works, while figure 2.0-3 is a picture of the facility from the 1950s. Figure 2.0-4 shows the locations of the three smelter facilities and their proximity to the town of Anaconda.

Byproducts of the smelting process were slimes, slag, tailings, and airborne emissions of gases from the smelter stack. Tailings were sluiced to a series of ponds north of the town of Opportunity (which became known as the Opportunity Ponds), and beginning in 1947, to two ponds just below the concentrator, known as the Anaconda Ponds (Shovers and others, 1991).

Residual arsenic was one of the primary waste byproducts, with large concentrations emitted from the stack. Originally, the Washoe Reduction Works had four small stacks, which were replaced by one larger 300-ft stack in 1904. This stack was replaced by a 585-ft stack in 1918. In addition to the new stack, which measured 75 ft at the base and 65 ft at the top, ACM constructed an electrostatic plant at the base of the stack to more efficiently remove flue dust and the associated arsenic from leaving the stack. According to Shovers and others (1991), this plant removed 90 percent of the dust leaving the plant. ACM continued to make modifications to the smelter operations through the 1970s until the plant closed in 1980.

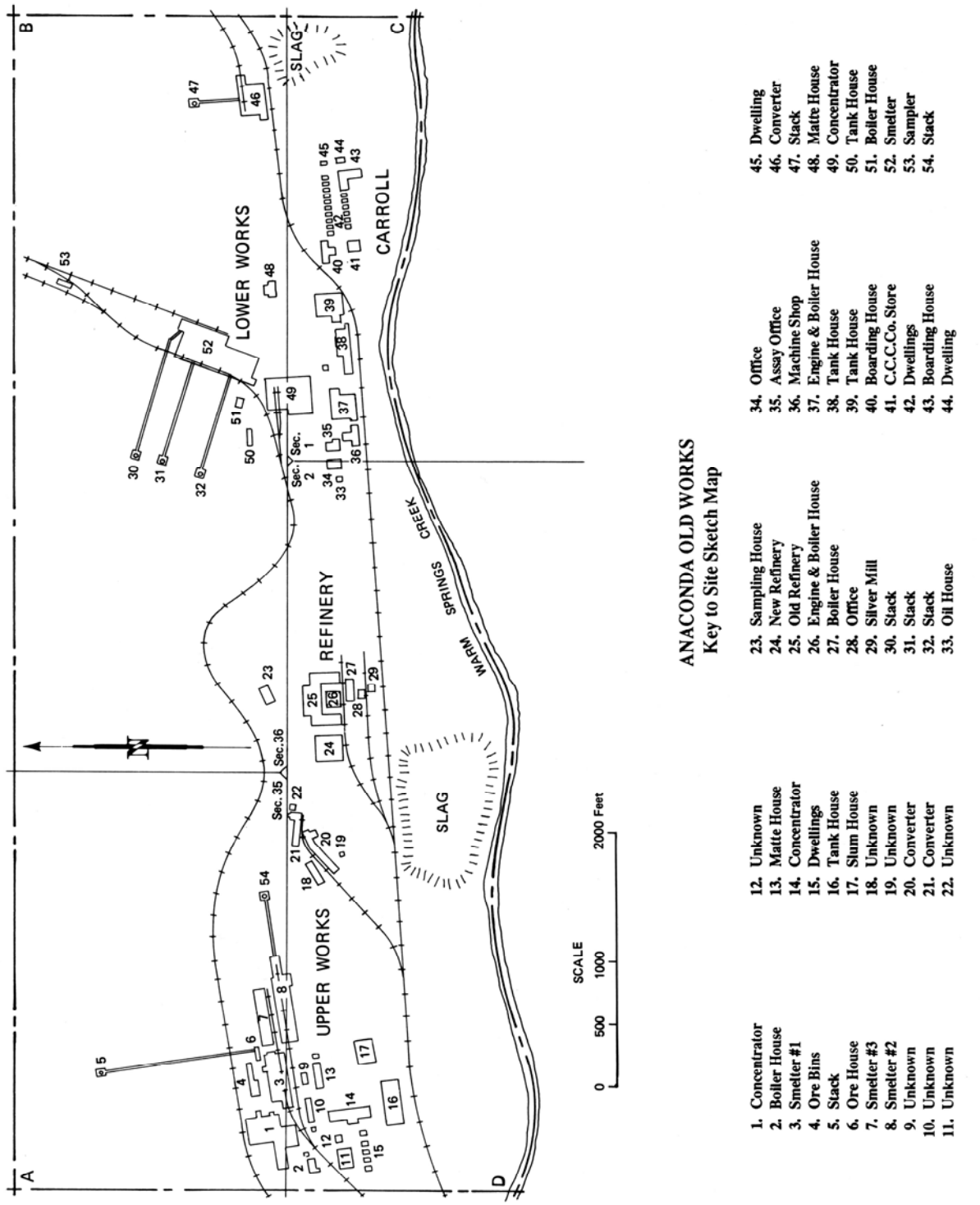

Figure 2.0-1. Location of Upper Works and Lower Works facilities that make up the Old Works Smelter Complex. Modified with permission from Shovers and others, 1991.

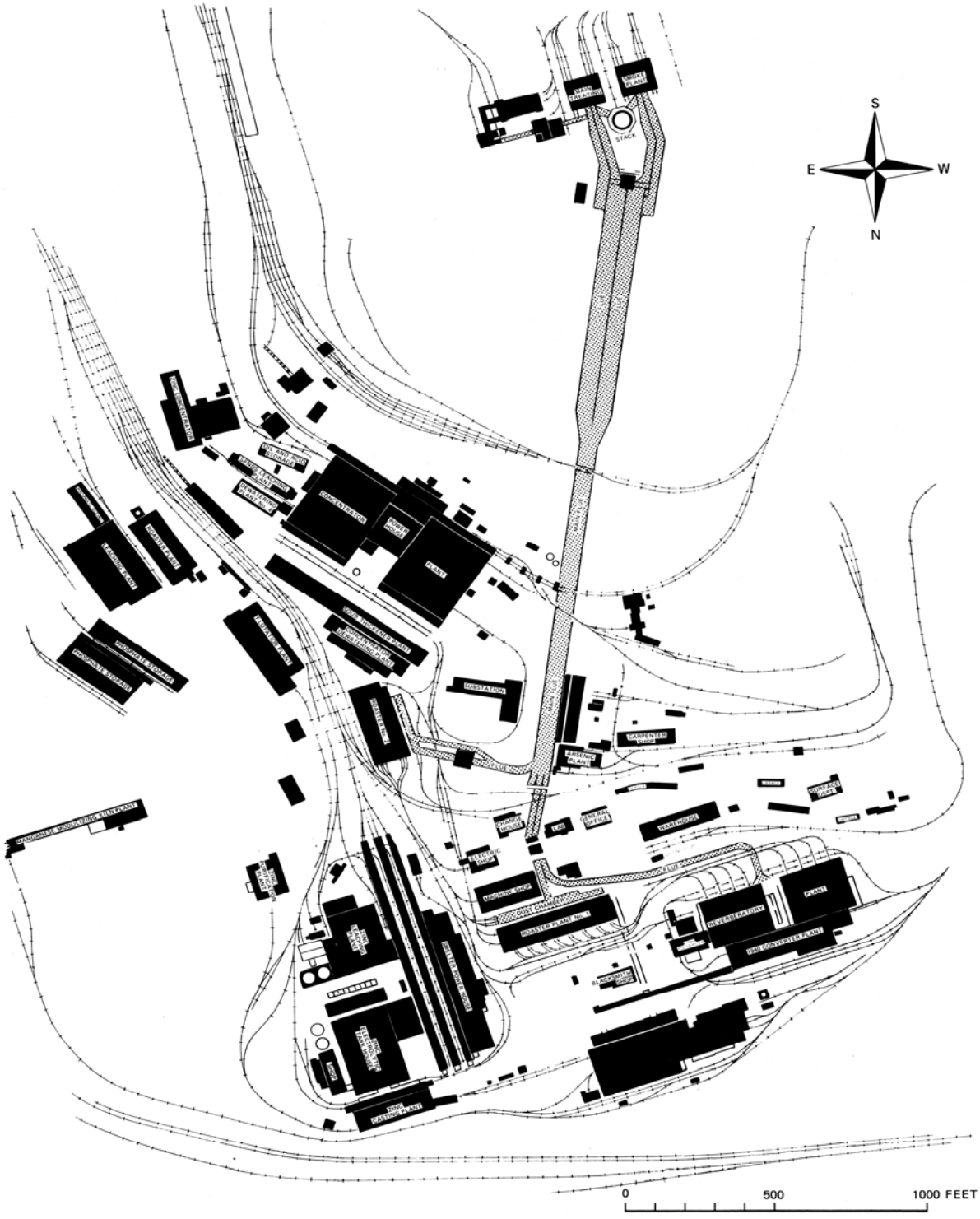

Figure 2.0-2. General layout of the Washoe Smelter facilities. Modified with permission from Shovers and others, 1991.

Figure 2.0-3. View looking south toward the Washoe Smelter and associated facilities, circa 1950s. Photo courtesy of the World Museum of Mining.

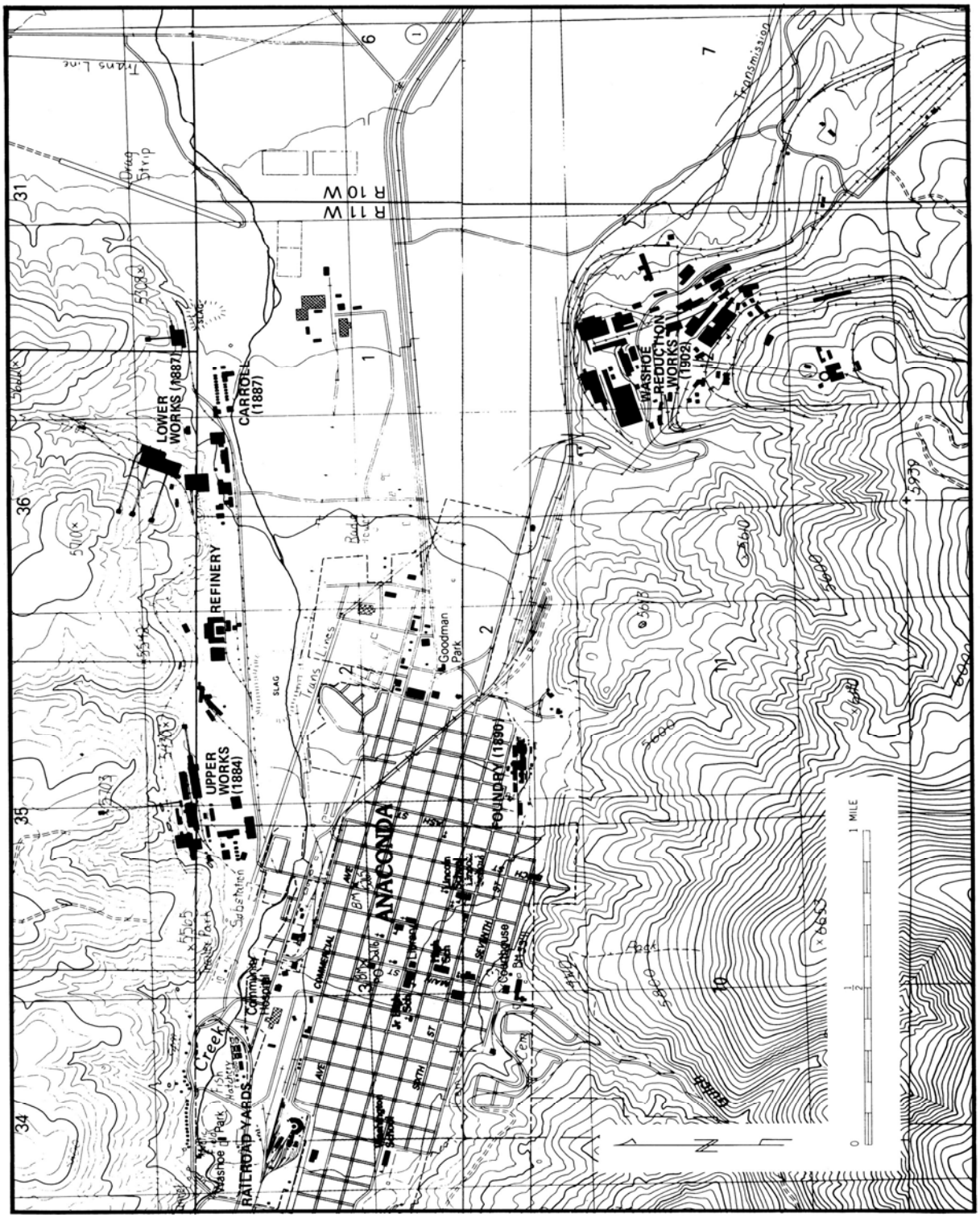

Figure 2.0-4. Locations of Upper Works, Lower Works, and Washoe Smelter in relation to the town of Anaconda. Modified with permission from Shovers and others, 1991.

Areas around the Washoe Reduction Works and other historic smelting facilities were placed on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL) in September 1983. Since that time, AR has been actively involved with EPA and the Montana Department of Environmental Quality (DEQ) in conducting investigations to determine the extent of contamination from historic smelting and associated processes. Numerous response actions have taken place to limit exposure, i.e., the 1984 and 1986 Administrative Orders on Consent relating to the demolition of the Washoe Reduction Works and Mill Creek resident relocation activities (U.S. EPA 1984, 1986). Upon completion of numerous investigations and several RI and Feasibility Study (FS) Reports, EPA issued the ROD for the Anaconda Regional Water, Waste, and Soils Operable Unit, Anaconda Smelter NPL site, in 1998 (U.S. EPA, 1998). The ROD contained water-quality standards for groundwater and surface-water sites. Groundwater standards are based upon the dissolved portion of the sample, while surface-water standards are based upon the total recoverable concentration. EPA, in consultation and concurrence with DEQ, released a Record of Decision Amendment in September 2011. Contained in the amendment were changes to the water-quality standards contained in the 1998 ROD, bringing ARWWS site contaminant of concern (COC) standards into compliance with current Montana DEQ-7 standards (Montana DEQ, 2012).

Groundwater COC standards listed in the 1998 ROD and 2011 ROD Amendment, based upon Circular DEQ-7 limits, are shown below:

COC	DEQ-7 Standard Drinking Water (1998 ROD)	DEQ-7 Standard Drinking Water (2011 ROD Amendment)
Arsenic	18 µg/L	10 µg/L
Beryllium	4 µg/L	4 µg/L
Cadmium	5 µg/L	5 µg/L
Copper	1,000 µg/L	1,000 µg/L
Iron	300 µg/L	N/A
Lead	15 µg/L	15 µg/L
Zinc	5,000 µg/L	2,000 µg/L

The 2011 ROD Amendment arsenic and zinc standards are more stringent than those contained in the 1998 ROD; the arsenic human health standard was waived for groundwater within Technical Impracticability (TI) zones. The iron standard is no longer applicable.

The 1998 ROD-listed COCs and their respective water-quality standards were also modified in the 2011 ROD Amendment. The arsenic human health standard was waived for surface water within TI zones identified in the ROD amendment. The Aquatic Life-Acute and Aquatic Life-Chronic standards remain performance standards for surface-water TI reaches (U.S. EPA, September 2011). The 1998 and 2011 COC surface-water human health standards are shown below:

COC	DEQ-7 Standard Surface Water (1998 ROD) Human Health Standard	DEQ-7 Standard Surface Water (2011 ROD Amendment) Human Health Standard
Arsenic	18 µg/L	10 µg/L
Berryllium	4 µg/L	4 µg/L
Cadmium	1.1 µg/L	5 µg/L
Copper	12.0 µg/L	1,000 µg/L
Iron	300 µg /L	300 µg/L
Lead	3.2 µg/L	15 µg/L
Zinc	100 µg/L	2,000 µg/L

The DEQ-7 Aquatic Life standards contained in the 2011 ROD Amendment are listed below:

COC	DEQ-7 Standard Surface Water Aquatic Life-Acute Standard	DEQ-7 Standard Surface Water Aquatic Life-Chronic Standard
Arsenic	340 µg/L	150 µg/L
Berryllium	None	None
Cadmium[1]	2.13 µg/L	0.27 µg/L
Copper[1]	14.0 µg/L	9.33 µg/L
Iron	none	1,000 µg/L
Lead[1]	81.65 µg/L	3.18 µg/L
Zinc[1]	120 µg/L	110 µg/L

[1]Cadmium, copper, lead, and zinc concentrations are calculated at a hardness of 100 mg/L $CaCO_3$ equivalent.

3.0 Description of Long-Term Groundwater Monitoring Program (LTGWMP)

The Monitoring Program described in the STGWM SAP Addendum No. 1 (Atlantic Richfield Company, 2009b) consisted of the following components:

1. Groundwater-well monitoring, including the installation of new monitoring wells;
2. Groundwater expression (springs) sampling; and
3. Domestic well program, including the installation of new replacement wells.

Table 1.0-1 contains the 2011 groundwater monitoring wells and their sampling frequency. Plate 1 shows the locations of the 2011 monitoring sites. Prior to water-quality

sampling, a synoptic series of water levels from each well location was measured. Too few wells were monitored during the 2011 program to adequately produce new groundwater flow maps; therefore, plates 2 and 3 show 2009 groundwater contours and flow direction based upon water-level monitoring during each sampling event; plate 2 is based on information from the 2009 low-flow event, while plate 3 is based on the 2009 high-flow event monitoring.

The following field parameters were measured during monitoring well sampling:

1. water level;
2. pH;
3. specific conductance (SC);
4. temperature;
5. oxidation-reduction potential (ORP); and
6. dissolved oxygen (DO).

Water-quality samples were collected from monitoring wells during both low-water and high-water conditions, with the exception of 10 wells that were sampled when groundwater levels exceeded a predetermined elevation. Water-quality samples were submitted to the MBMG analytical lab for analysis. Sample results from 2011 activities and previous sampling events are available through GWIC.

Low-water samples were timed to be collected during the period of lowest water levels, while high-water samples were collected during periods of peak, or maximum, water levels. Based upon historic water-level data, it was determined that low-water conditions occur from February through April, while high-water conditions occur from June through August (Atlantic Richfield Company, 2009b). The seven additional wells installed during 2009 were sampled during both 2011 events.

The 2011 sampling program consisted of a reduced subset of the sites listed in table 1.0-1 and shown in red. No springs or surface-water sites were sampled. Eleven of the 12 monitoring wells installed within the Opportunity Ponds during 2011 were sampled in the fall of 2011.

4.0 Monitoring Program—2011 Non-5-Year Review

The current groundwater and surface-water monitoring program contains sites divided among seven different geographical areas and describes the sampling frequency and location for each site. Sampling frequency is broken down into five categories: (1) semi-annual; (2) event-driven; (3) semi-annual 5 years after ground cover installed, then semi-annual every fifth year; (4) semi-annual every fifth year; and (5) annual every fifth year. The monitoring program was designed so that all monitoring sites are sampled every fifth year to coincide with the EPA Superfund 5-Year Site Review. The 2009 sampling program comprised the 5-year sample cycle; therefore, the 2011 monitoring program consisted of the semi-annual, semi-annual for 5 years after cover established, and event-driven sites. The 2011 sites are contained within only three of the seven geographical areas; the number of wells and springs in each area sampled during 2011 is shown in Table 4.0-1. The geographic areas correspond to RDU's Waste Management Areas (WMAs) or TI zones. Monitoring results are discussed based upon their geographical area.

Table 4.0-1. Breakdown of monitoring wells and springs by geographic area sampled in 2011

Well ID	New ID	GWIC ID	Total Depth (ft)	Screen Interval (ft)	Water Quality Analytes
Smelter Hill Sites					
NW-6S	MW-256	249909	98	78-98	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
Opportunity Ponds Sites					
MW-212		138007	62	39.3-53.7	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-214		138065	15	5.6-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-216		137957	15	5-14.3	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-256		249851	95	75-94.7	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-26		249793	15	5-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-26M		249790	71	60.5-70.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-31		249794	15	5-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-31M		249785	88.5	78-88	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-82		249840	50	40-50	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-82M		249896	110	100-110	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-85		249843	56	45-55	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-85M		249897	155	136-146	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-90		249844	66	56-66	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-90M		249899	135	125-135	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-5S	MW-273	249942	18	5-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-1-OPs	MW-266	249901	20	9-19	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-1-OPd	MW-265	249900	77	67-77	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-2-OPs	MW-268	249904	20	8-18	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-2-OPd	MW-267	249903	74.5	64-74	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-3-OPs	MW-270	249906	25	12-22	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-3-OPd	MW-269	249905	76	62.5-72.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-4-OPs	MW-272	249908	21	10.5-20.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-4-OPd	MW-271	249907	81.5	71.5-81.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness

4.1 Smelter Hill/Opportunity Ponds Waste Management Area

The Smelter Hill/Opportunity Ponds WMA contains 44 wells, 24 of which were part of the 2011 monitoring program (fig. 4.1-1). All but one of the 2011 monitoring wells are located within the Opportunity Ponds portion of the WMA. There are nine nested well pairs within this WMA. Table 4.1-1 lists well information and COCs for this group of wells. Wells within this WMA have a broader list of primary COCs, including cadmium (Cd), copper (Cu), lead (Pb), and zinc (Zn). Table 4.1-2 contains a summary of water type, 2011 arsenic concentrations, and general water-quality conditions for wells in this WMA; appendix A contains water-quality results from 2011 sampling activities.

4.1.1 Smelter Hill/Opportunity Ponds Well Water-Quality Results

The Smelter Hill/Opportunity Ponds portion of this WMA contains 24 monitoring wells, including 12 wells that were installed in 2011 following completion of reclamation activities. All of the current wells are installed in valley-fill material. During the 2011 sampling program, samples were collected from 23 of the 24 wells. One of the newly installed wells was not sampled due to a delay in well completion activities. This well (NW-1OPd; MW-265) was flowing and needed

special completion techniques to prevent damage from freezing in winter. Arsenic exceeded DEQ-7 standards in 2 wells.

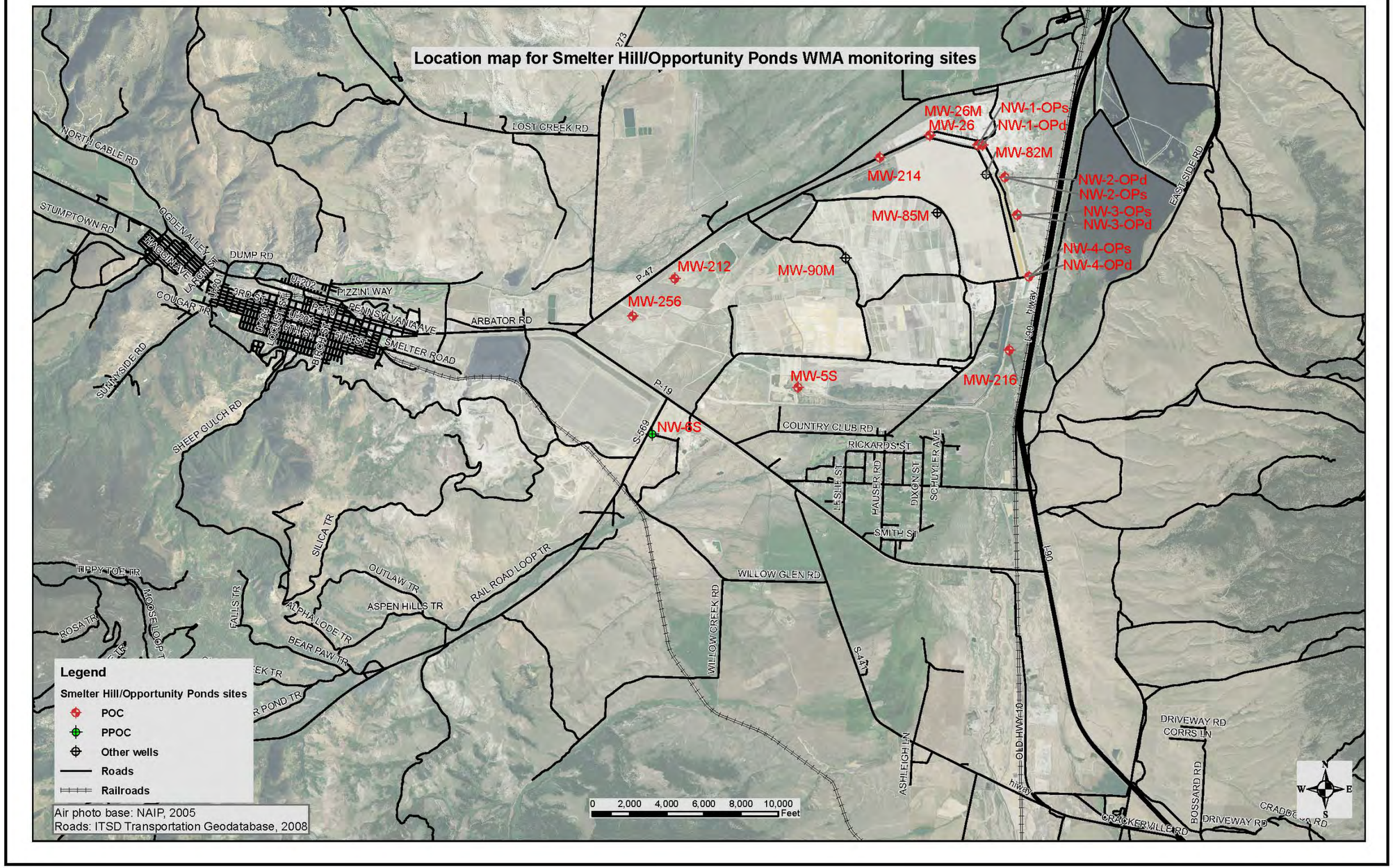

Figure 4.1-1. Location map for Smelter Hill/Opportunity Ponds WMA.

Table 4.1.1. Smelter Hill/Opportunity Ponds Waste Management Area monitoring wells

Well ID	New ID	GWIC ID	Total Depth (ft)	Screen Interval (ft)	Water Quality Analytes
Smelter Hill Sites					
NW-6S	MW-256	249909	98	78-98	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
Opportunity Ponds Sites					
MW-212		138007	62	39.3-53.7	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-214		138065	15	5.6-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-216		137957	15	5-14.3	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-256		249851	95	75-94.7	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-26		249793	15	5-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-26M		249790	71	60.5-70.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-31		249794	15	5-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-31M		249785	88.5	78-88	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-82		249840	50	40-50	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-82M		249896	110	100-110	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-85		249843	56	45-55	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-85M		249897	155	136-146	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-90		249844	66	56-66	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-90M		249899	135	125-135	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-5S	MW-273	249942	18	5-15	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-1-OPs	MW-266	249901	20	9-19	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-1-OPd	MW-265	249900	77	67-77	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-2-OPs	MW-268	249904	20	8-18	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-2-OPd	MW-267	249903	74.5	64-74	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-3-OPs	MW-270	249906	25	12-22	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-3-OPd	MW-269	249905	76	62.5-72.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-4-OPs	MW-272	249908	21	10.5-20.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
NW-4-OPd	MW-271	249907	81.5	71.5-81.5	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness

Table 4.1-2. Smelter Hill/Opportunity Ponds Waste Management Area monitoring well summary

Well ID	New ID	Screen Interval (ft)	Water Type	2011 Low-Water Arsenic (µg/L)	2011 High-Water Arsenic (µg/L)	Long-Term Average Arsenic (µg/L)	Comment
Smelter Hill Site							
NW-6S	**MW-258**	78–98	Ca-HCO_3	0.69	0.63	0.67	Well installed spring 2009—No DEQ-7 exceedances.
Opportunity Ponds Sites							
MW-212		39.3–53.7	Ca-HCO_3	0.65	0.64	1.12	No COC exceedances; slight As decline over time.
MW-214		5.6–15	Ca-SO_4	1.05	1.15	1.49	No COC exceedances; slight As decline over time.
MW-216		5–14.3	Ca-SO_4	1.76	2.46	3.58	No COC exceedances.
MW-256		75–94.7	Ca-HCO_3	0.57	0.51	0.83	No COC exceedances; slight As decline over time.
MW-26		5–15	Ca-SO_4	<0.90	1.30	1.26	Slight As decrease over time; no seasonal trend.
MW-26M		60.5–70.5	Ca-SO_4	<0.90	0.64	1.14	Highest As concentrations usually during high-water sampling events.
MW-31		5–15	Ca-SO_4	4.16	4.95	2.38	No COC exceedances or seasonal trends.
MW-31M		78–88	Ca-SO_4	1.73	1.65	1.77	No COC exceedances. Long-term As concentration decreasing, no seasonal trend.
MW-82		40-50	Ca-SO_4	<0.90	0.83	2.55	
MW-82M		100-110	Ca-SO_4	—	1.00	1.00	First time sampled.
MW-85		45–55	Ca-SO_4	59.3	65.88	65.4	Limited data. As exceeds DEQ-7 standard.

Table 4.1-2. Smelter Hill/Opportunity Ponds Waste Management Area monitoring well summary *(continued)*

Well ID	New ID	Screen Interval (ft)	Water Type	2011 Low-Water Arsenic (µg/L)	2011 High-Water Arsenic (µg/L)	Long-Term Average Arsenic (µg/L)	Comment
MW-85M		136-146	Ca-SO_4	—	0.58	0.58	First time sampled.
MW-90		56–66	Ca-SO_4	174	180	232	As exceeds DEQ-7 standard. Slight As decrease over time; no seasonal trend.
MW-90M		125-135	Ca-SO_4	—	0.34	0.34	First time sampled.
NW-1-OPs	MW-266	9-19	Ca-SO_4	—	2.24	2.24	First time sampled.
NW-1-OPd	MW-265	67-77	Ca-SO_4	—	1.61	1.61	First time sampled.
NW-2-OPs	MW-268	8-18	Ca-SO_4	—	0.53	0.53	First time sampled.
NW-2-OPd	MW-267	64-74	Ca-SO_4	—	0.87	0.87	First time sampled.
NW-3-OPs	MW-270	12-22	Ca-SO_4	—	2.22	2.22	First time sampled.
NW-3-OPd	MW-269	62.5-72.5	Ca-SO_4	—	1.16	1.16	First time sampled.
NW-4-OPs	MW-272	10.5-20.5	Ca-SO_4	—	0.74	0.74	First time sampled.
NW-4-OPd	MW-271	71.5-81.5	Ca-SO_4	—	1.52	1.52	First time sampled.
MW-5s	MW-273	5-15	Ca-HCO_3	—	0.57	0.57	First time sampled.

Well NW-6S (MW-258) was installed during 2009 and is located to the east (downgradient) of the East Anaconda Tailings Pond. The well is 98 ft deep with the screened interval from 78 to 98 ft. It is completed in valley-fill material (table 4.1-1). Arsenic concentrations were below 1 µg/L, while the other COCs were below DEQ-7 standards.

Wells MW-212 and MW-256 are upgradient of current reclamation activities. Well depths vary from 50 to 90 ft within the valley-fill material (table 4.1-1). The long-term average arsenic is below the DEQ standard as are all sample concentrations (fig. 4.1-2). None of the other COCs were exceeded in the 2011 samples for these two wells.

Groundwater samples were collected three times each in 1992 and 1993 and once in 1995 from well MW-212. Samples have been collected semi-annually since 2000 from this well. MW-256 has a shorter period of record, with the first sample collected in 2004 and collected semi-annually from 2005 to 2011.

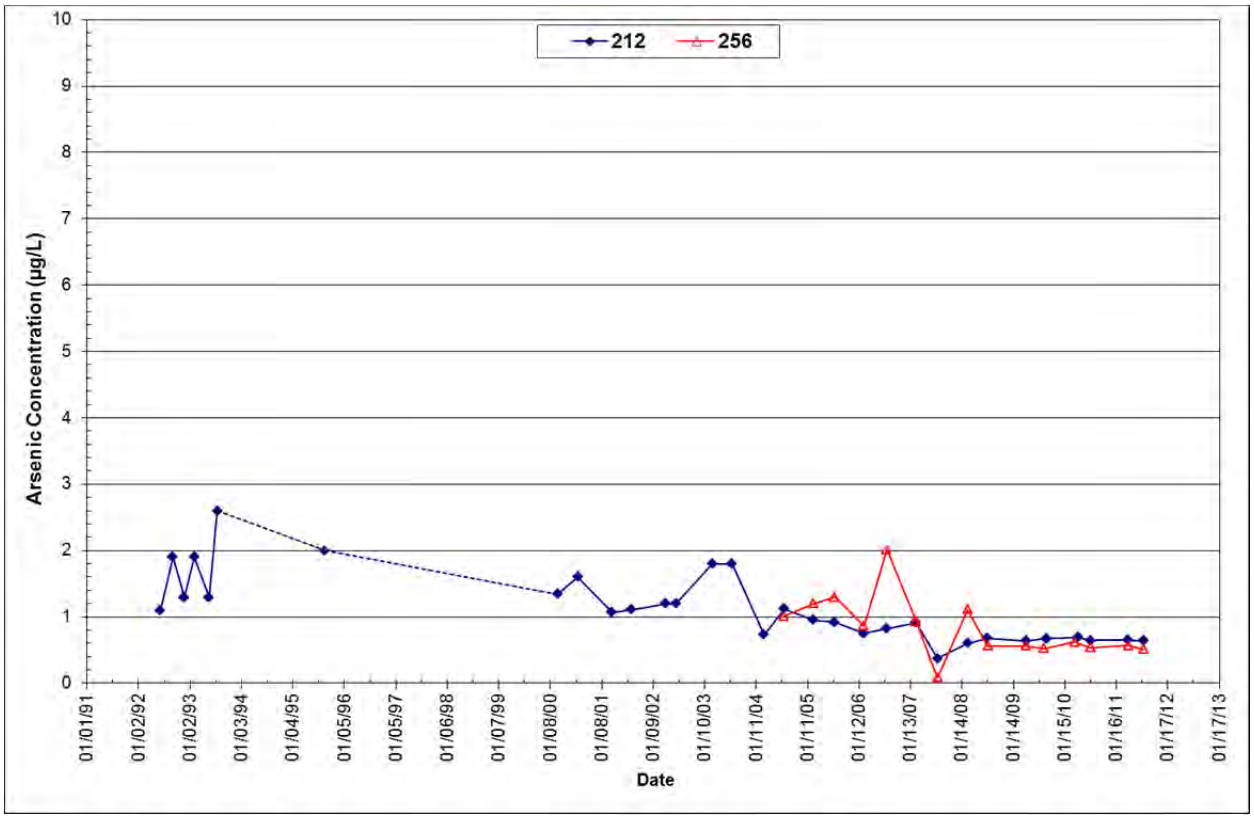

Figure 4.1-2 Arsenic concentrations over time for wells MW-212 and MW-256, located in the Opportunity Ponds.

Well MW-214 is located along the northeast boundary of the Opportunity Ponds WMA at a depth of 15 ft (fig. 4.1-1). Water-quality samples were collected three times each in 1992 and 1993 and semi-annually since 2000. Arsenic and COC concentrations were well below DEQ-7 standards in all samples (fig. 4.1-3).

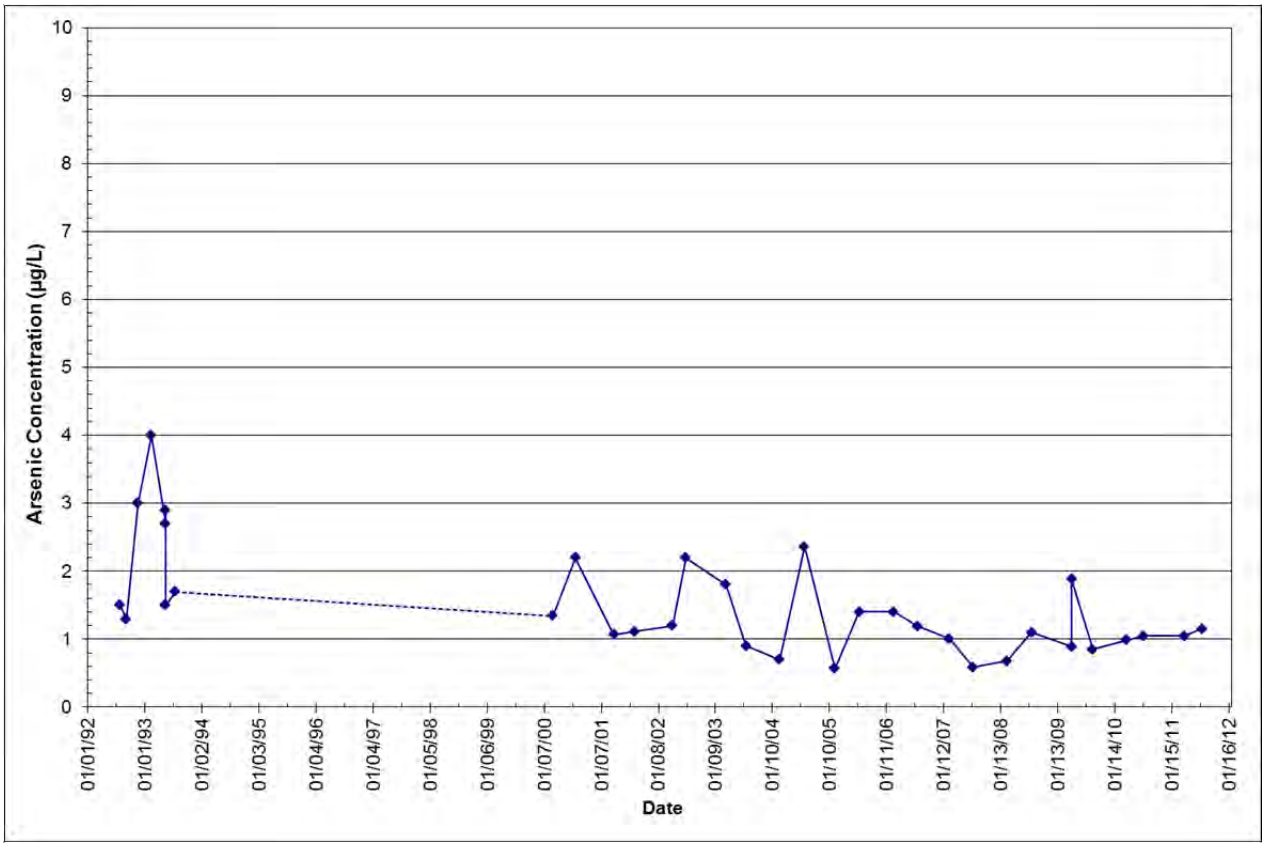

Figure 4.1-3. Arsenic concentrations over time for well MW-214, located in the Opportunity Ponds.

Wells MW-26 and MW-26M are nested wells, located in the far northeast corner of the WMA (fig. 4.1-1). Well MW-26 is a shallow well (screened interval from 5 to 15 ft), while MW-26M was completed moderately deep (screened interval 60–70 ft.; table 4.1-2). Both wells have a similar water type (Ca-SO_4), with arsenic concentrations below DEQ-7 standards (fig. 4.1-4). Groundwater samples were first collected in 1985 (twice) and semi-annually from 2000 to 2011 in well MW-26; the first samples were collected in 1995 (twice) from well MW-26M, followed by semi-annual samples since 2000.

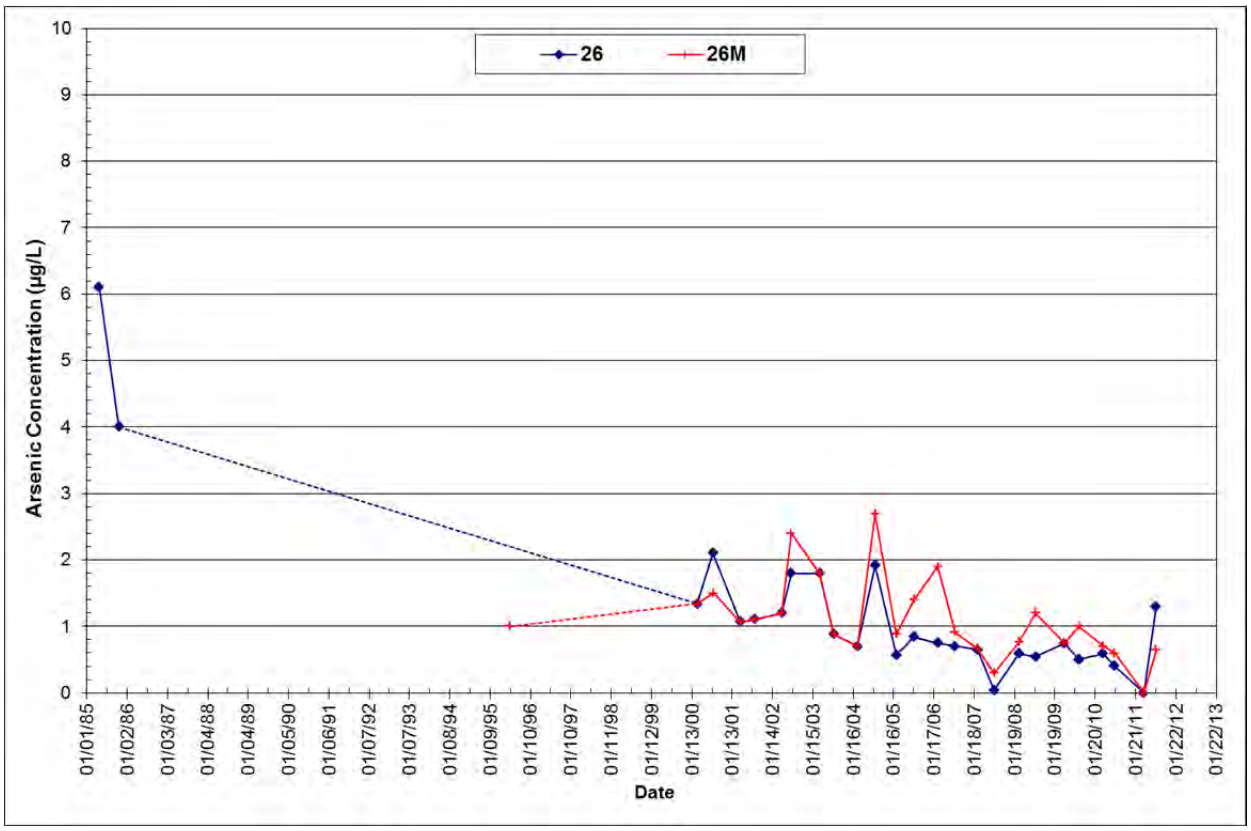

Figure 4.1-4. Arsenic concentrations over time for nested wells MW-26 and MW-26M, located in the Opportunity Ponds.

Wells MW-90 and MW-85 are located in the north-central area of the Opportunity Ponds WMA, at the toe of cells B-2 and C-2, respectively, separating different cells (fig. 4.1-1). Both wells were completed (screened) in the 45–65 ft range and have a similar water type (Ca-SO_4; table 4.1-2). Arsenic concentrations exceeded DEQ-7 standards in the long-term average for both wells.

Well MW-90 had a noticeable downward trend in arsenic concentrations, while there are too few samples from well MW-85 to determine a trend (fig. 4.1-5). Well MW-85 was sampled twice in 1985 and semi-annually since 2009, while well MW-90 was sampled twice in 1985, three times in 1991, four times in 1992, three times in 1993, and semi-annually from 2000 to 2011.

Paired monitoring wells were installed adjacent to wells MW-85 and MW-90 at depths of 155 and 135 ft, respectively, during 2001 field activities.The new wells were identified as MW-85M and MW-90M. Arsenic concentrations in these two wells were less than 1 µg/L in 2011 sample results (table 4.1-2). Well logs for these wells and all monitoring wells installed in 2011 are contained in appendix B.

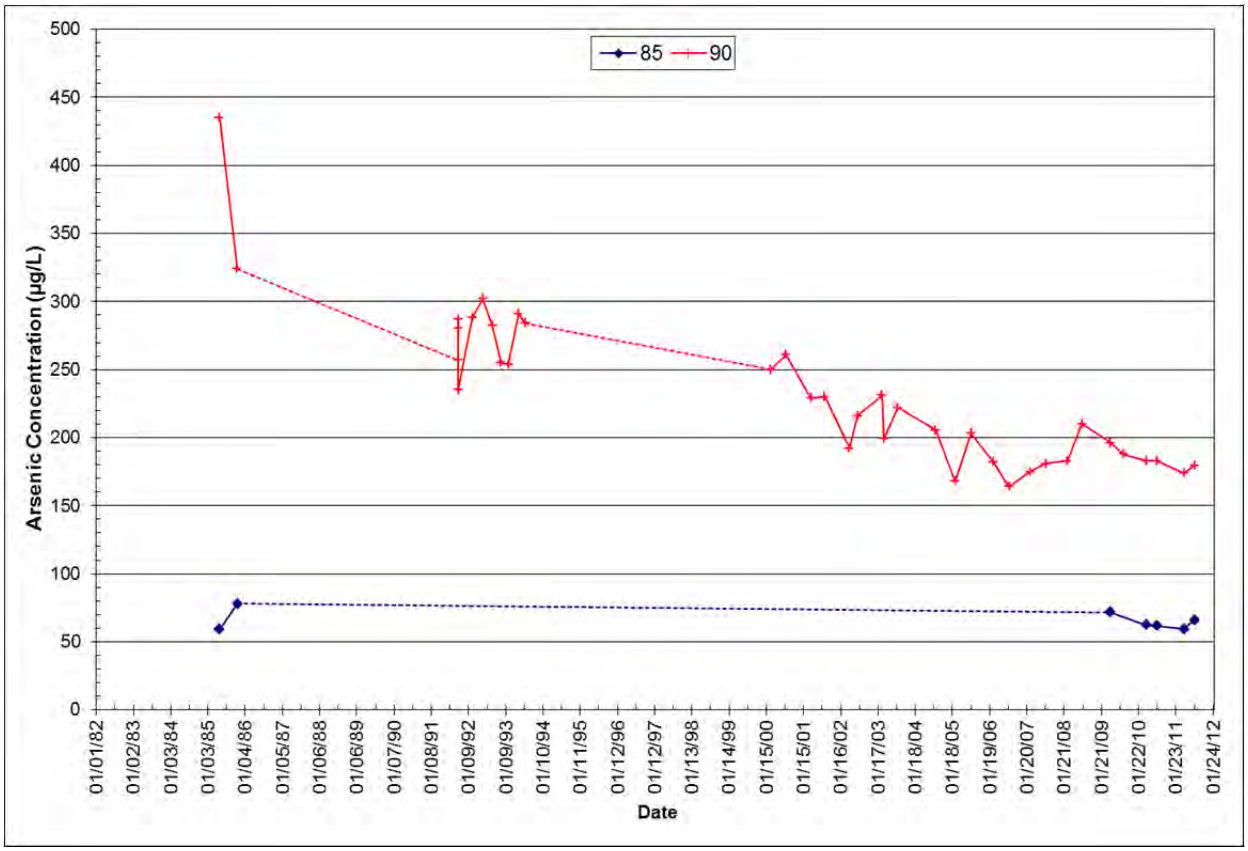

Figure 4.1-5. Arsenic concentrations over time for wells MW-85 and MW-90, located in the Opportunity Ponds.

Wells MW-82, MW-31, MW-31M, and MW-216 are located on the north and northeast end of the ponds at the base of cells D-1 and D-2. Wells MW-31 and MW-216 are shallow-completed wells, with screen intervals between 5 and 15 ft.; wells MW-82 and MW-31M are completed at depths from 40 to 50 ft. and 78 to 88 ft., respectively (table 4.1-2). Wells MW-31 and MW-31M are a nested pair. All four wells have a similar water type, Ca-SO_4. None of the COCs were exceeded in the 2011 samples. Long-term arsenic concentrations are shown in figures 4.1-6 and 4.1-7. Arsenic concentrations since 2000 have been less than 10 µg/L in all four wells, with concentrations holding steady or trending down in three of the wells. Well MW-31 (shallow well) appears to have an increasing arsenic concentration; however, current concentrations are below 5 µg/L. With one exception, groundwater samples have been collected with the same frequency in wells MW-31 and MW-82: two samples in 1985 and semi-annually since 2000. Well MW-31M had semi-annual samples collected in 1995 and from 2000 through 2011, while well MW-216 had three samples collected in 1992, two in 1993, and twice yearly from 2000 to 2011.

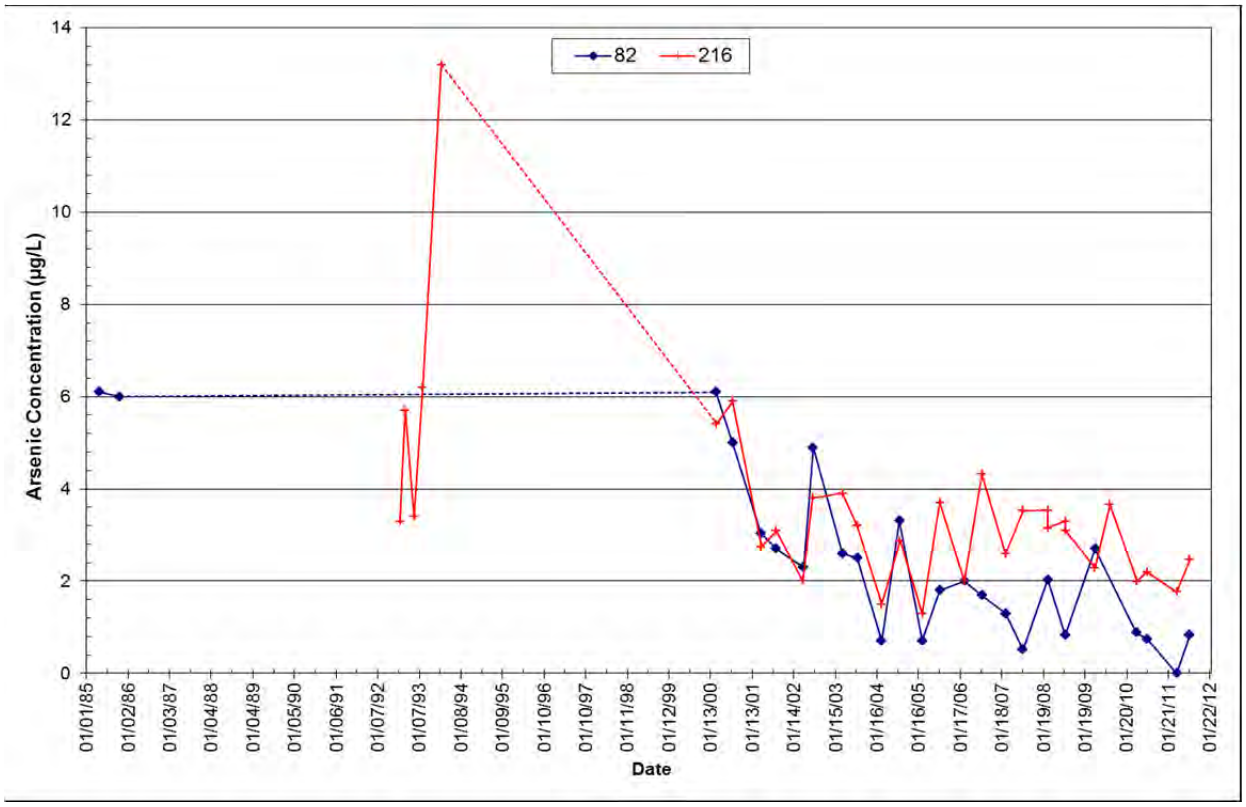

Figure 4.1-6. Arsenic concentrations over time for wells MW-82 and MW-216, located in the Opportunity Ponds.

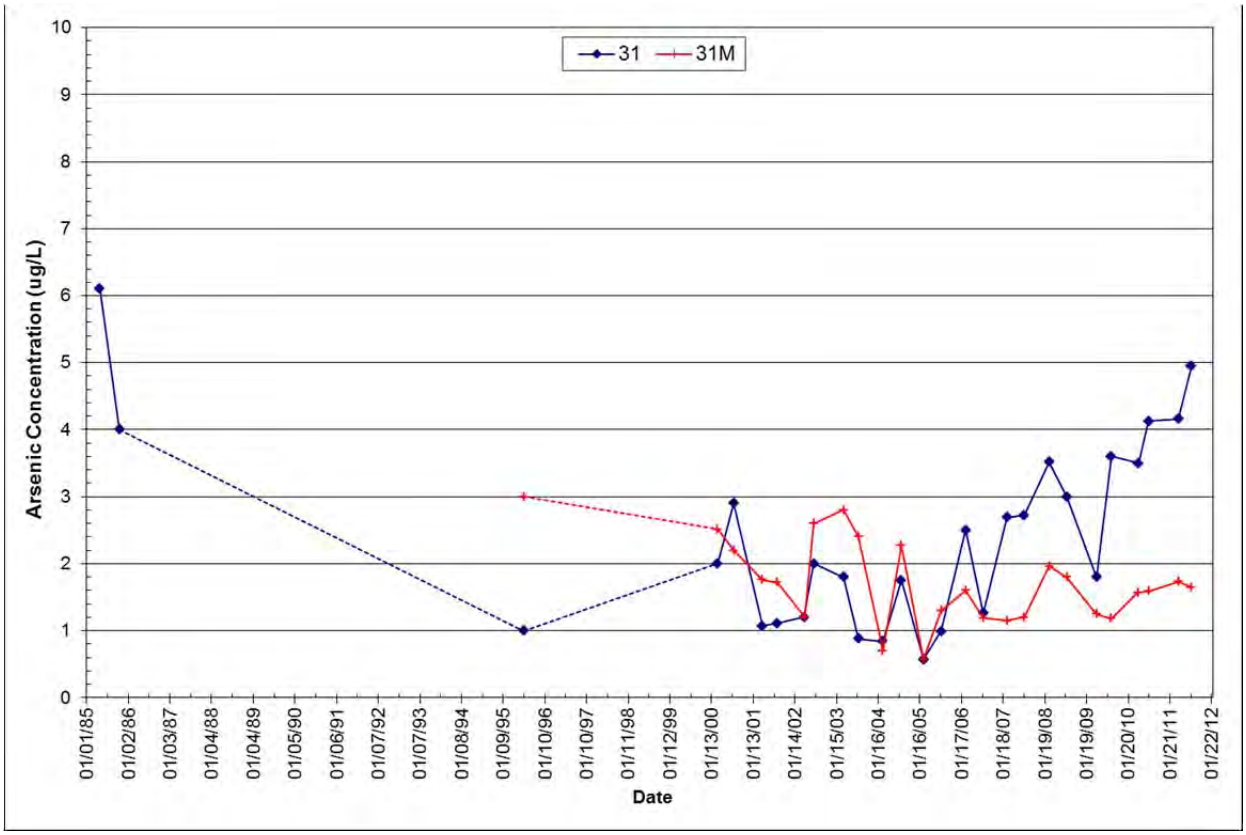

Figure 4.1-7. Arsenic concentrations over time for wells MW-31 and MW-31M, located in the Opportunity Ponds.

Groundwater wells within the Opportunity Ponds portion of the Smelter Hill/Opportunity Ponds WMA exhibit two different water types, Ca-HCO_3 and Ca-SO_4. The wells that would be considered upgradient of the ponds are characterized as Ca-HCO_3 water and have very low concentrations of arsenic and the other COCs. The other 20 wells are Ca-SO_4 type waters, indicating an influence from mining and smelting wastes. Arsenic concentrations exceeded DEQ-7 standards in two wells, both of which are in the interior of the pond system (MW-85 and MW-90). None of the COCs exceeded standards. This WMA contains 16 POC wells whose water-quality concentrations were all below DEQ-7 standards.

4.1.2 Smelter Hill/Opportunity Ponds Groundwater-Level Observations

This site contains the greatest number of monitoring wells, distributed between Smelter Hill to the southwest of Highway 1 and the Opportunity Ponds to the northeast of Highway 1 (fig. 4.1-1). Monitoring activities during 2011 consisted of one site associated with the Smelter Hill portion of the WMA, with the remainder of the sites within the Opportunity Ponds portion of the WMA. Table 4.1-3 shows the net water-level variations for the wells in this WMA. Changes range from a rise of 5.85 ft in the Smelter Hill well (NW-6S, MW-258), to a decline of almost 4.2 ft, to a rise of 26 ft in the Opportunity Ponds wells.

Plates 2 and 3 show the general groundwater flow direction for the spring (low-water) and summer (high-water) sampling events (2009 data). Groundwater flows from the south to the north on the west side of Smelter Hill and from the southwest to the northeast on the east side of Smelter Hill. Once it reaches the valley floor it takes a more west to east and southwest to northeast flow direction, paralleling Warm Springs Creek.

Table 4.1-3. Smelter Hill/Opportunity Ponds WMA 2011 monitoring well summary and net water-level change

Well ID	New ID	Total Depth (ft)	Screen Interval (ft)	Aquifer	Net Water-Level Change (ft)
Smelter Hill Sites					
NW-6S	**MW-258**	98	78–98	Valley-fill coarse	5.85
Opportunity Pond Sites					
MW-212		62	39.3–53.7	Valley-fill coarse	26.51
MW-214		15	5.6–15	Valley-fill coarse	-1.63
MW-216		15	5–14.3	Valley-fill coarse	-1.56
MW-256		95	75–94.7	Valley-fill med-fine	26.64
MW-26		15	5–15	Valley-fill coarse	-4.18
MW-26M		71	60.5–70.5	Valley-fill med-fine	-0.09
MW-31		15	5–15	Valley-fill coarse	-3.32
MW-31M		88.5	78–88	Valley-fill med-fine	-0.53
MW-82		50	40–50	Valley-fill coarse	-3.4
MW-82M		110	100–110	Valley-fill coarse	—
MW-85		56	45–55	Valley-fill coarse	-2.11
MW-85M		155	136–146	Valley-fill coarse	—
MW-90		66	56–66	Valley-fill coarse	-1.21
MW-90M		135	125–135	Valley-fill coarse	—
NW-1-OPs	**MW-266**	20	9–19	Valley-fill coarse	—
NW-1-OPd	**MW-265**	77	67–77	Valley-fill coarse	—
NW-2-OPs	**MW-268**	20	8–18	Valley-fill coarse	—
NW-2-OPd	**MW-267**	74.5	64–74	Valley-fill coarse	—
NW-3-OPs	**MW-270**	25	12–22	Valley-fill med-fine	—
NW-3-OPd	**MW-269**	76	62.5–72.5	Valley-fill medium	—
NW-4-OPs	**MW-272**	21	10.5–20.5	Valley-fill med.-coarse	—
NW-4-OPd	**MW-271**	81.5	71.5–81.5	Valley-fill med.-coarse	—
MW-5s	**MW-273**	18	5–15	Valley-fill coarse	—

Note. Wells in red installed summer–fall 2011.

Well NW-6S (MW-258) was installed in 2009 and therefore has limited water-level data. No trend is reliable based upon such few measurements; however, information contained in the 2009 report (Duaime and Icopini, 2011) showed that water levels begin to rise in March, reaching their peak in late July, before declining through late summer and winter. This trend is harder to depict in wells with semi-annual measurements (fig. 4.1-8).

The Opportunity Ponds are downgradient from the Smelter Hill site, and the regional groundwater flow direction is from the west to the northeast (plate 3). Of the 23 wells in the pond area, 18 are completed in medium–coarse valley-fill material, while the others are completed in medium–fine-grained fill. Wells along the southwest side of the ponds have exhibited the largest net water-level increase (26 ft; fig. 4.1-9). Wells located along the toe of various cells within the pond system have exhibited the greatest water-level decline, ranging from 1 to 4 ft over time (fig. 4.1-10). This may be reflective of ongoing reclamation and capping activities in this portion of the site.

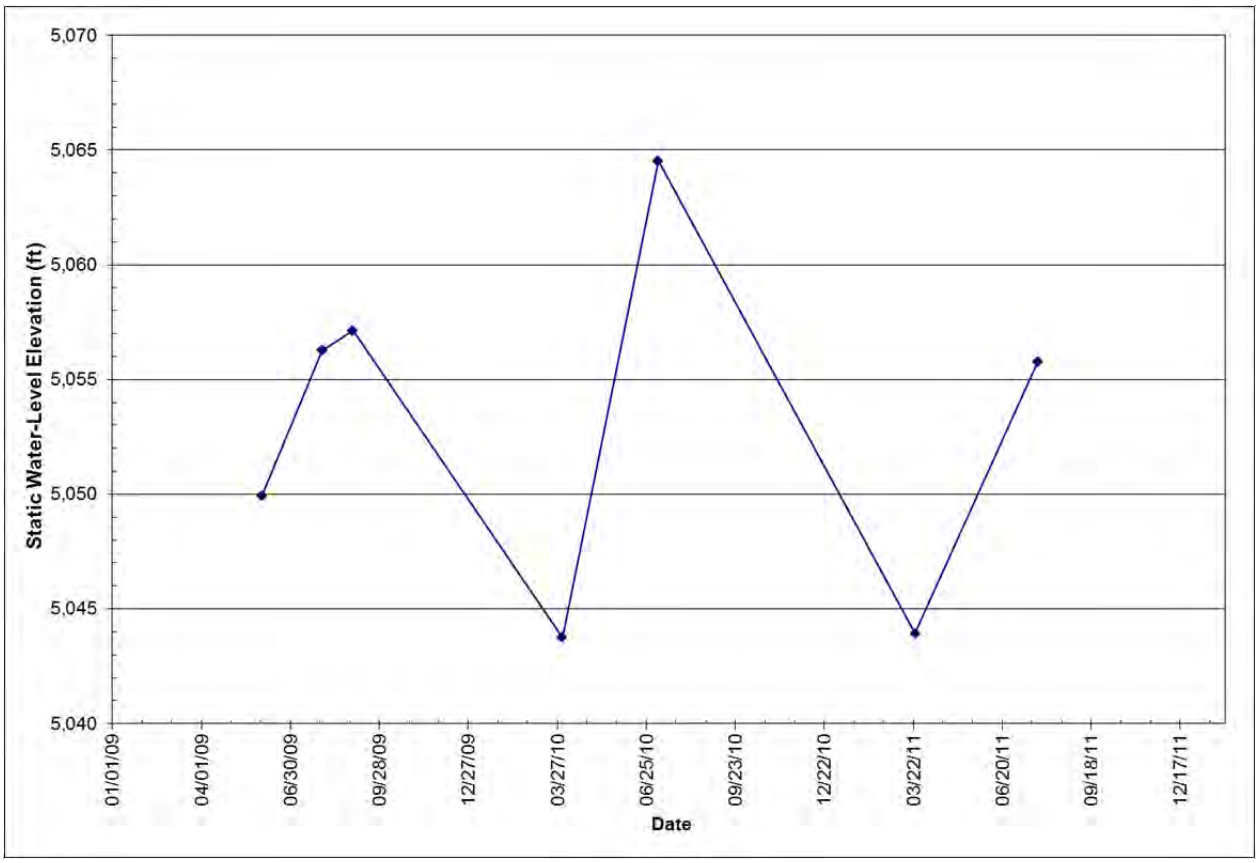

Figure 4.1-8. Water-level hydrograph for well NW-6S (MW-258) based upon semi-annual water-level measurements, 2009–2011.

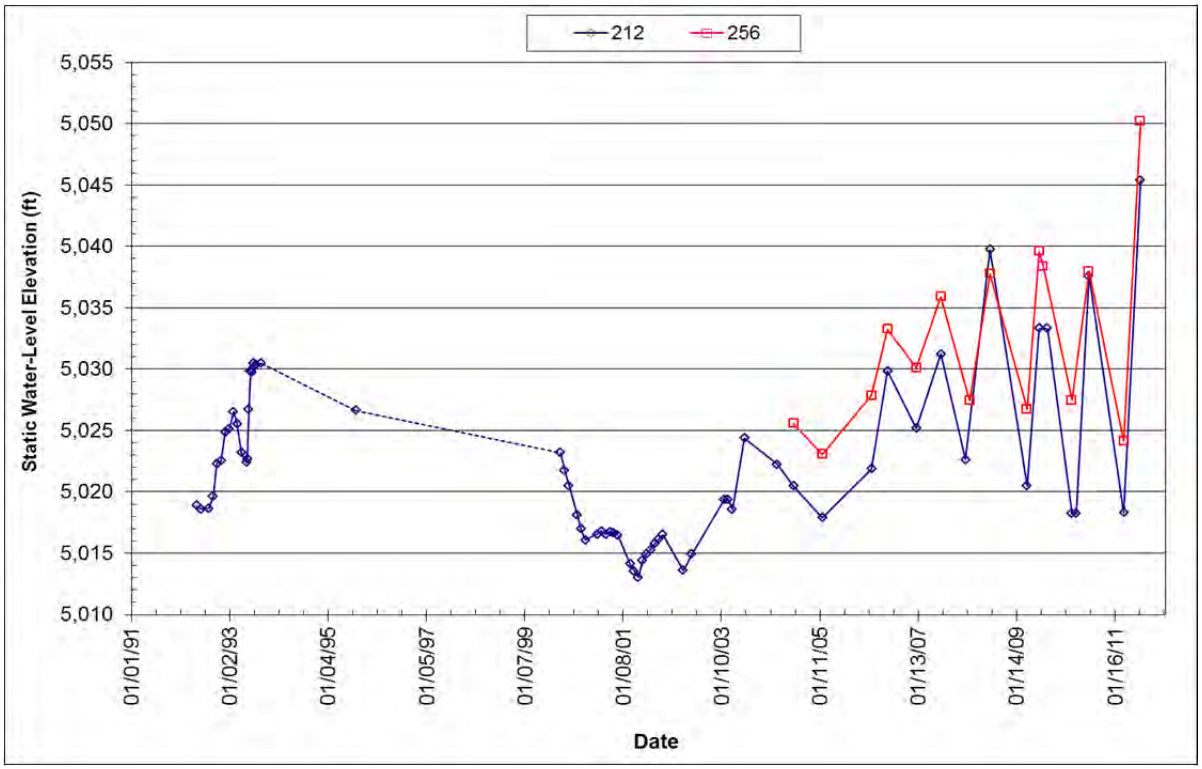

Figure 4.1-9. Water-level hydrographs for wells MW-212 and MW-256, located upgradient of the Opportunity Ponds.

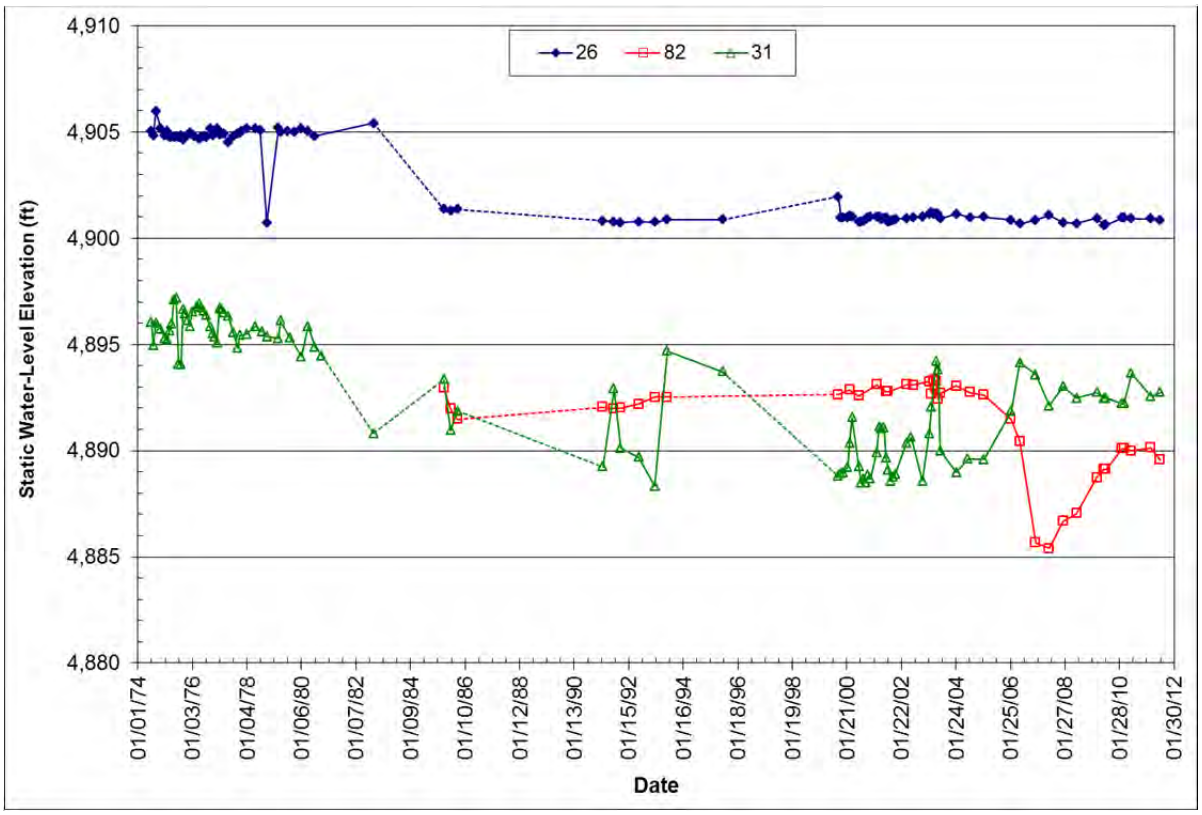

Figure 4.1-10. Water-level hydrographs for wells MW-26, MW-82, and MW-31, located along the northeast toe of the Opportunity Ponds.

4.2 Old Works Waste Management Area

The Old Works WMA contains 20 wells, 14 of which were monitored in 2011 (fig. 4.2-1), all completed in valley-fill. Major features within the WMA are: Old Works Golf Course, former Arbiter Plant, Anaconda–Deer Lodge Landfill, wastewater treatment plant, and Lost Creek Raceway. There is waste from the historic Old Works Smelter within the approximate 2.2 square miles that constitute the WMA.

Table 4.2-1 contains a listing of wells within the WMA monitored in 2011, along with well completion details and a listing of COCs for this group of wells. Four wells (POCs) were monitored during both 2011 sample events, while the other 10 wells were sampled during event-driven monitoring (high water) only. Additional sampling of selected site wells is required when the water level reaches a predetermined elevation in monitoring well MW-213. This is discussed in section 4.2.3.

The COCs for this group of wells is more comprehensive and includes Cd, Cu, Pb, and Zn. Due to the nature of waste and historic processing facilities, Cd levels are a concern during periods of increased water levels. Table 4.2-2 contains a general summary of water-quality conditions for each of the wells within the WMA. Arsenic concentrations for the 2011 sampling are shown, along with the long-term average for each well. COCs that exceeded DEQ-7 water-quality standards are also noted. Appendix C contains 2011 water-quality data for sites in this WMA. The WMA contains one nested pair of wells.

4.2.1 Old Works Wells Water-Quality Results

Arsenic concentrations were below DEQ-7 standards in both 2011 sample events and in the long-term average for all wells in this WMA. However, cadmium concentrations exceeded the standard in the long-term average for five wells and in the 2011 sample results. Copper and zinc concentrations exceeded the standard in one well for both the long-term average and the 2011 sample.

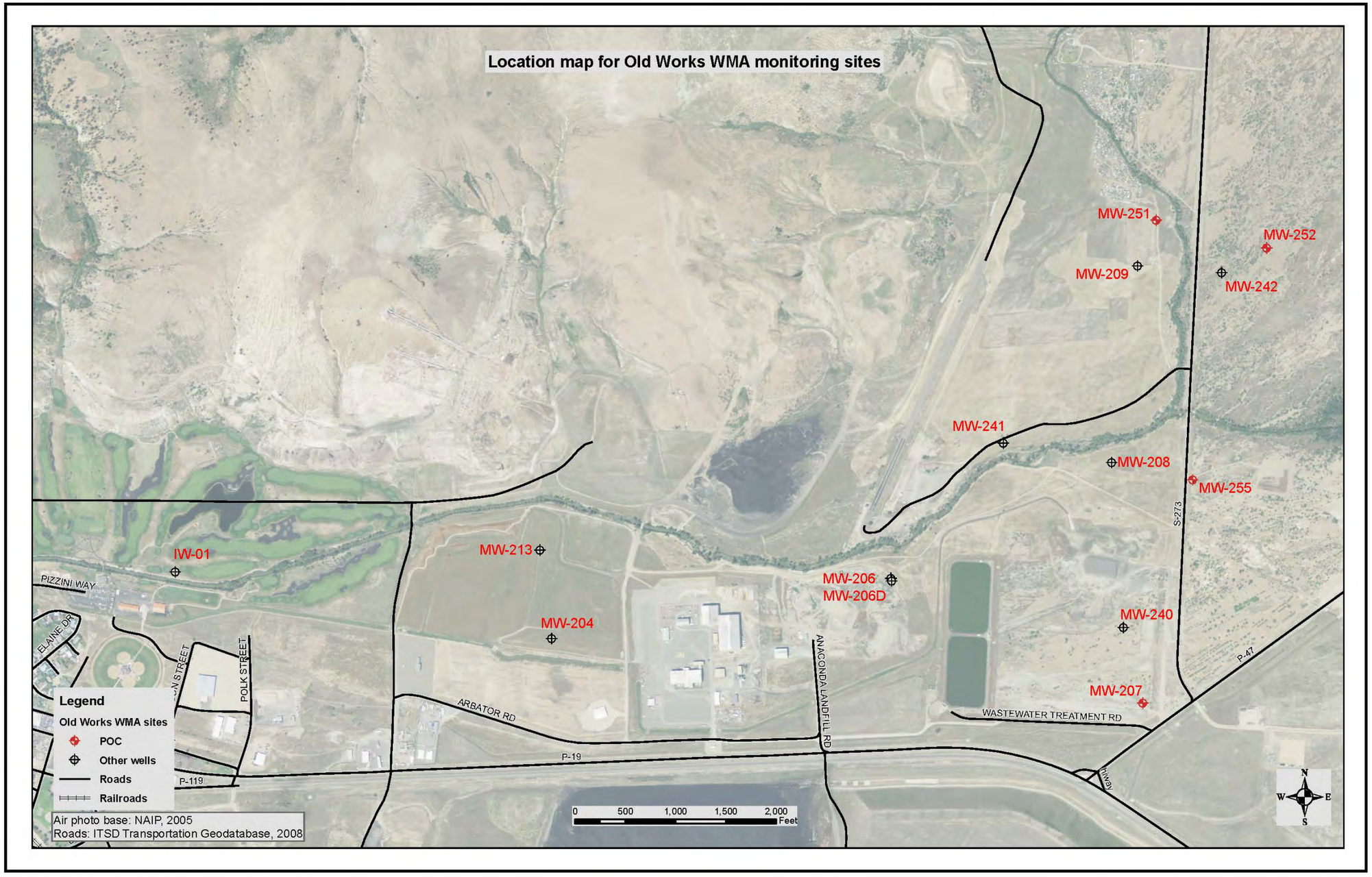

Figure 4.2-1. Location map for Old Works Waste Management Area monitoring sites.

Table 4.2-1. Old Works Waste Management Area monitoring wells, 2011

Well ID	GWIC ID	Total Depth (ft)	Screen Interval (ft)	Water-Quality Analytes
Old Works				
IW-01	250038	46	22–42	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-204	250041	44.5	32–42	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-206	250042	50	28–43	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-206d	254054	76	53–73	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-207	250043	103	77–92	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-208	250044	70	47–67	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-209	250045	70	49–69	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-213	138022	42	31–41	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-240	250047	87	77–87	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-241	250048	60	50–60	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-242	250049	67	57–67	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-251	250014	77	55–75	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-252	249797	76	55–75	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-255	250055	95	75–95	As, Cd, Cu, Pb, Zn, Ca, Mg, Na, K, Fe, Mn, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness

Table 4.2-2. Old Works Waste Management Area water-quality summary

Well ID	GWIC ID	Screen Interval (ft)	Water Type	2011 Low-Water Arsenic (µg/L)	2011 High-Water Arsenic (µg/L)	Long-Term Average Arsenic (µg/L)	Comment
Old Works							
IW-01(EDW)	250038	22–42	Ca-SO_4	—	1.05	1.05	Cd and Cu exceed standard in 2011 sample.
MW-204(EDW)	250041	32–42	Ca-HCO_3	—	0.66	1.23	
MW-206(EDW)	250042	28–43	Ca-HCO_3	—	0.68	1.31	Cd exceeds DEQ-7 standard.
MW-206d(EDW)	254054	53–73	Ca-HCO_3	—	0.59	1.02	Cd exceeds DEQ-7 standard.
MW-207(POC)	250043	77–92	Ca-HCO_3	0.81	0.67	1.18	
MW-208(EDW)	250044	47–67	Ca-HCO_3	—	0.71	1.32	
MW-209(EDW)	250045	49–69	Ca-HCO_3	—	0.35	1.10	Cd exceeds DEQ-7 standard.
MW-213(EDW)	138022	31–41	Ca-SO_4	—	0.23	1.00	Cd 5.04 ppb during event sampling. Cd, Cu, and Zn averages exceed DEQ-7 standards. Zn exceeds standard in 2011 sample.
MW-240(EDW)	250047	77–87	Ca-HCO_3	—	0.64	0.87	
MW-241(EDW)	250048	50–60	Ca-HCO_3	—	0.45	0.82	
MW-242(EDW)	250049	57–67	Ca-HCO_3	—	0.47	0.83	
MW-251(POC)	250014	55–75	Ca-SO_4	0.48	0.45	0.79	
MW-252(POC)	249797	55–75	Ca-HCO_3	0.49	0.40	0.70	
MW-255(POC)	250055	75–95	Ca-HCO_3	0.72	0.73	0.76	

Note. EDW, well sampled when triggered by water-level elevation in MW-213.

Well MW-207 is located in the southeast corner of this WMA and is completed at intermediate depth with screen intervals between 77 and 92 ft. The well has a Ca-HCO_3 water type with no COC exceedances in the 2011 samples or long-term averages. Arsenic concentrations exhibited occasional seasonal variations; since 2008, seasonal variations have not occurred and concentrations have been consistently less than 1 µg/L (fig. 4.2-2). Samples were collected once each in 1991 and1995, with samples collected three times a year in 1992 and 1993. Beginning in 2000 through 2011, samples were collected semi-annually.

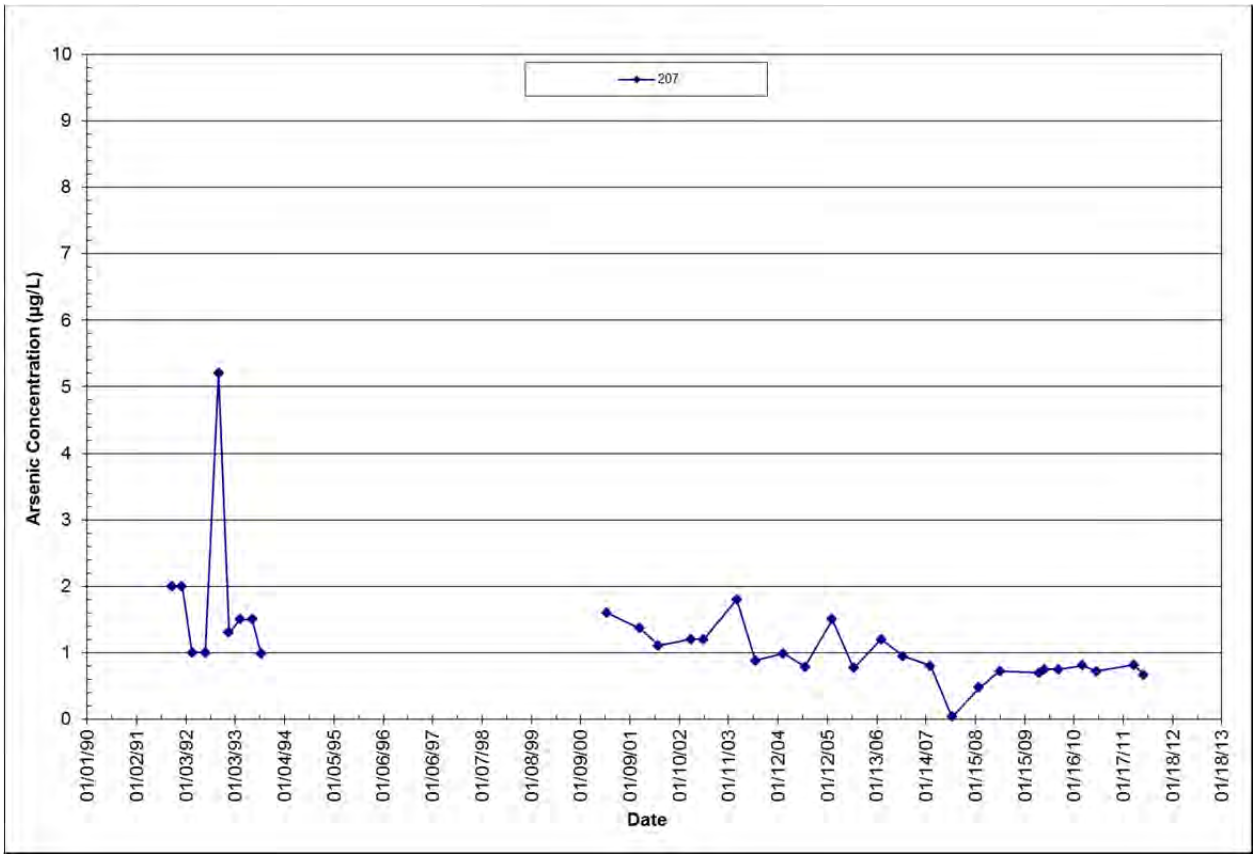

Figure 4.2-2. Arsenic concentrations over time for well MW-207.

Well MW-251 is located in the northeast corner of the Lost Creek Raceway and is completed at a depth of 77 ft, with the screen interval between 55 and 75 ft. The well water has a Ca-SO_4 type water. Figure 4.2-3 shows arsenic concentrations over time. None of the COC concentrations in well MW-251 exceeded DEQ-7 standards.

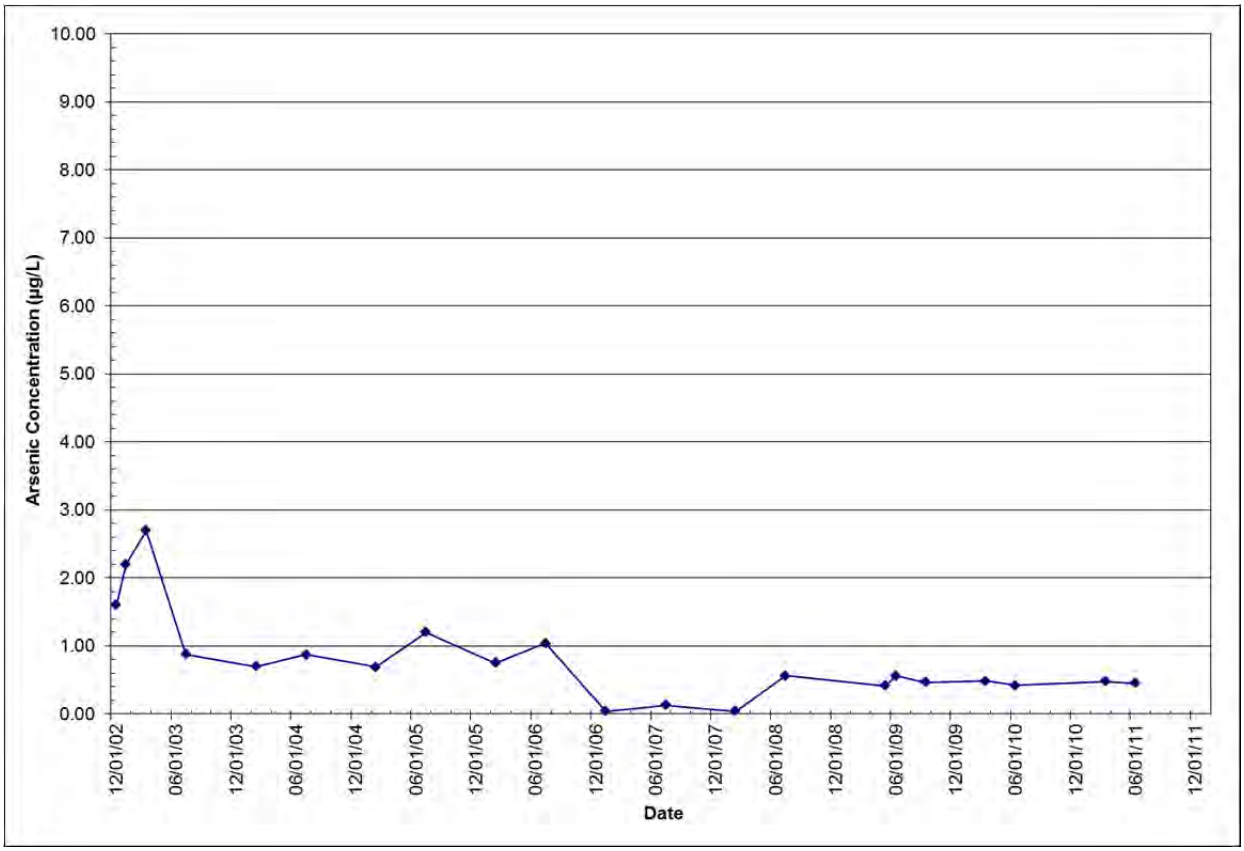

Figure 4.2-3. Arsenic concentrations over time for well MW-251.

Wells MW-252 and MW-255 are located on the far east side of the WMA on the east side of secondary highway 273 (fig. 4.2-1). Well MW-252 is completed at a depth of 76 ft (screen interval 55–75 ft), while well MW-255 is completed at a depth of 95 ft (screen interval 75–95 ft; table 4.2-2). Both wells are Ca-HCO_3 type water and have no COCs above standards. Figure 4.2-4 shows long-term arsenic concentrations for these wells. Well MW-252 was sampled once in 2002 and semi-annually from 2003 to 2011, while well MW-255 has been sampled semi-annually from 2004 to 2011.

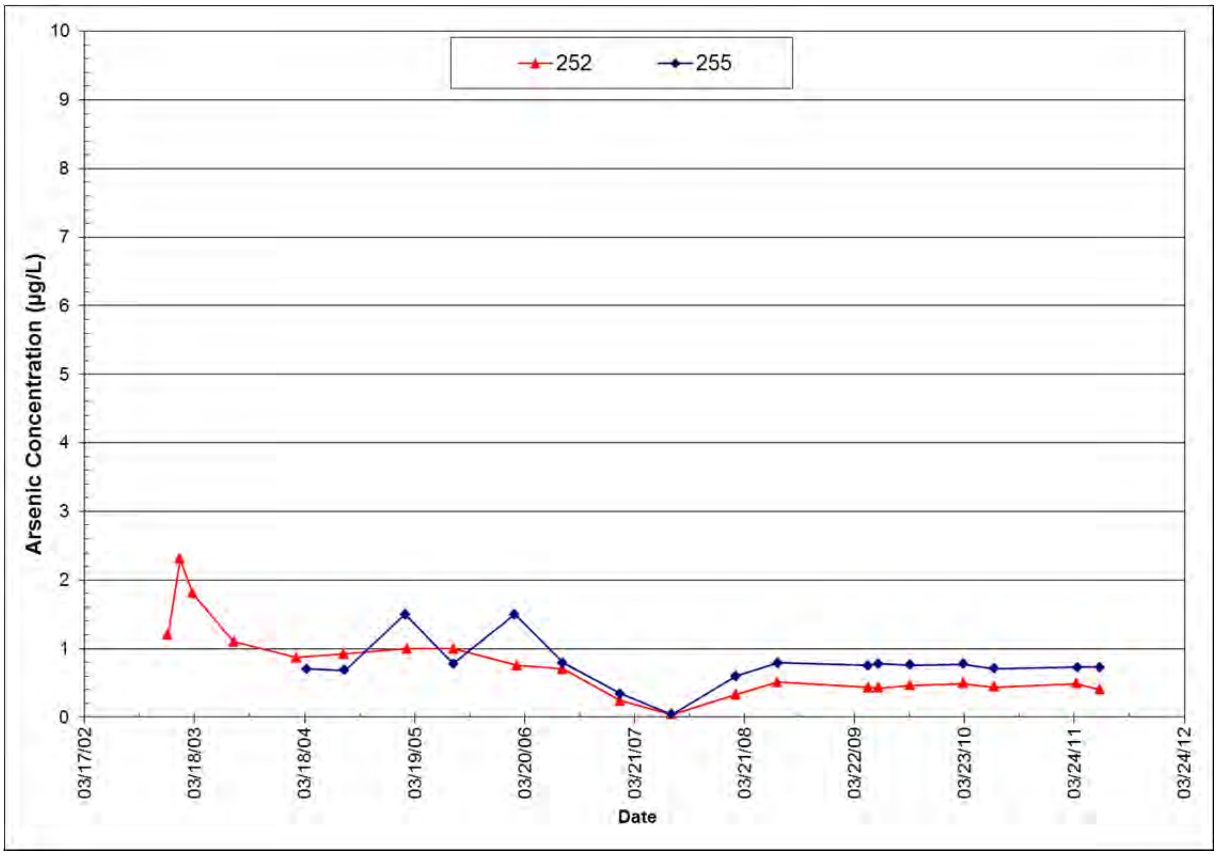

Figure 4.2-4. Arsenic concentrations over time for wells MW-252 and MW-255.

Arsenic concentrations in the Old Works WMA POC wells were well below DEQ-7 standards, with the maximum 2011 concentration being 0.81 µg/L. No COC exceedances were noted in any of the four POC wells.

4.2.2 Old Works Groundwater Levels

Warm Springs Creek crosses this WMA and is the major hydrologic feature. Groundwater flow direction is typically parallel to the creek (west to east) except during periods of high stream flow, when the creek becomes a losing stream from the Red Sands area east (plates 2 and 3).

Water levels have a net increase in three of the four POC wells within this WMA (table 4.2-3). Net water-level increases range from a decrease of 5.48 ft to an increase of more than 36 ft. The largest water-level increases occur in wells on the east and northeast portion of the site.

Figures 4.2-5 and 4.2-6 show long-term water-level fluctuations for wells on the southeast (MW-207 and MW-255) and northeast (MW-251 and MW-252) portions of the site. Water levels show considerable variation between low-water and high-water sample events, with fluctuations ranging from 5 to 40 ft during 2011.

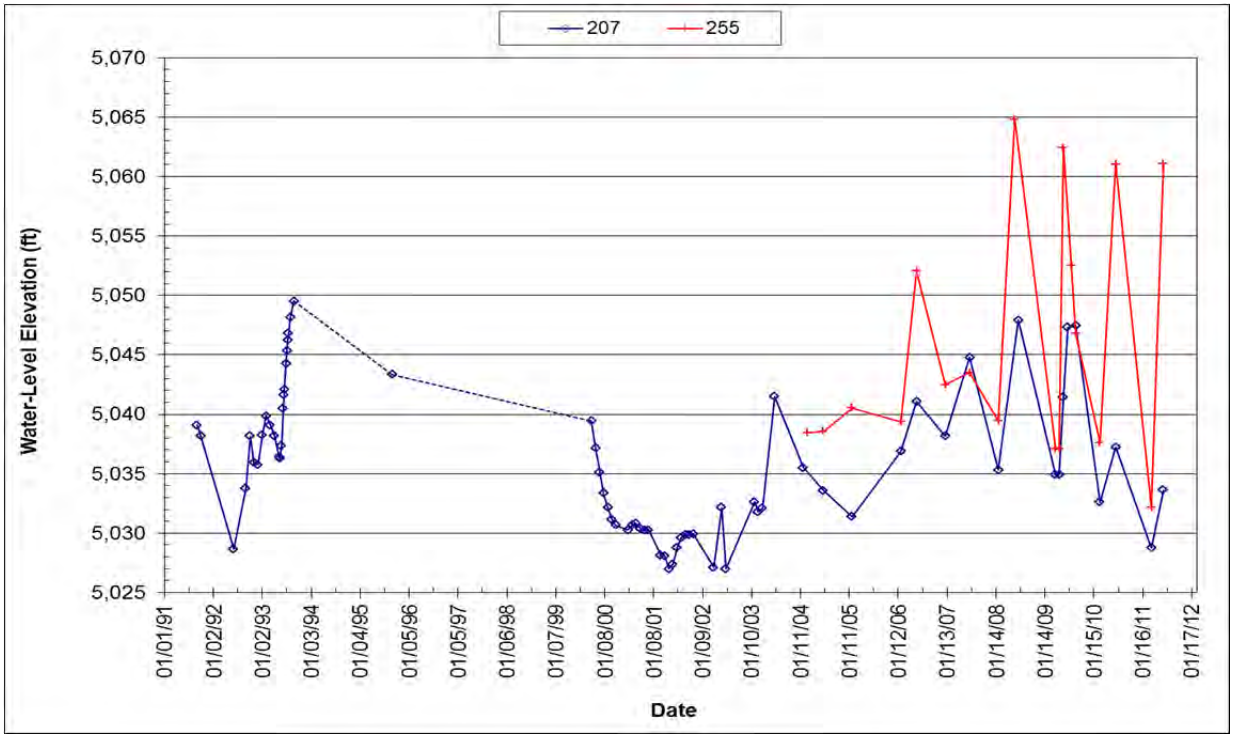

Figure 4.2-5. Water-level hydrographs for wells MW-207 and MW-255, located in the southeast corner of the Old Works WMA.

Figure 4.2-6. Water-level hydrographs for wells MW-251and MW-252, located in the northeast portion of the Old Works WMA.

Table 4.2-3. Net water-level changes for Old Works monitoring wells, 2011

Old Works

Well ID	Total Depth (ft)	Screen Interval (ft)	Aquifer	Net Water-Level Change (ft)
IW-01	46	22–42	Valley-fill med-fine	NA
MW-204	44.5	32–42	Valley-fill coarse	3.62
MW-206	50	28–43	Valley-fill coarse	3.83
MW-206d	76	53–73	Valley-fill med-fine	3.65
MW-207	103	77–92	Valley-fill med-fine	-5.48
MW-208	70	47–67	Valley-fill coarse	17.53
MW-209	70	49–69	Valley-fill med-fine	8.27
MW-213	42	31–41	Valley-fill med-fine	-2.33
MW-240	87	77–87	Valley-fill med-fine	3.72
MW-241	60	50–60	Valley-fill med-fine	11.17
MW-242	67	57–67	Valley-fill coarse	8.50
MW-251	77	55–75	Valley-fill coarse	11.44
MW-252	76	55–75	Valley-fill coarse	36.53
MW-255	95	75–95	Valley-fill coarse	22.64

Note. NA, not available.

4.2.3 Event-Driven Monitoring

The 2009 Monitoring Program had an added provision requiring additional groundwater sampling of wells within the Old Works WMA when water levels reached a predetermined elevation. This provision was continued in the 2011 sampling program. Sampling is specific to cadmium and is based upon the water-level elevation in monitoring well MW-213. EPA and DEQ determined that once the water level reached an elevation of 5,156.50 ft in MW-213, leaching of cadmium from waste left in place might occur. Fourteen monitoring wells (table 4.2-2) were identified for sampling. It was specified that sampling of the monitoring wells would take place within 2 weeks of the water level reaching the trigger elevation.

A pressure transducer was installed in well MW-213 and programmed to record water levels every hour. Following installation of the transducer, a remote monitoring telemetry system was installed at the well site (fig. 4.2-7). The system was programmed to notify MBMG personnel when the water level reached the trigger elevation, which occurred on June 11, 2011. Groundwater samples were collected between June 17 and June 23, which was within the 2-week timeframe specified in the 2009 SAP.

Figure 4.2-8 shows the hydrograph for well MW-213 based upon transducer data from the date of its installation (4/9/2009) through December 2011. Water levels exceeded the trigger

elevation between 6/11/2011 and 9/12/2011, reaching their maximum elevation on June 29, 2011 (5.14 ft above the trigger elevation).

Table 4.2-4 contains cadmium concentrations for the 14 wells during the event monitoring, along with results from low- and high-water sampling for appropriate wells. Any well with cadmium concentrations above 15 µg/L during event monitoring was required to be monitored semi-annually until concentrations were less than 15 µg/L; however, none of the wells sampled in 2011 met this requirement. Event-driven sampling and the high-water sampling event overlapped; therefore, the event-driven samples were also the high-water samples for the four POC wells.

Figure 4.2-7. Telemetry system installed at well MW-213.

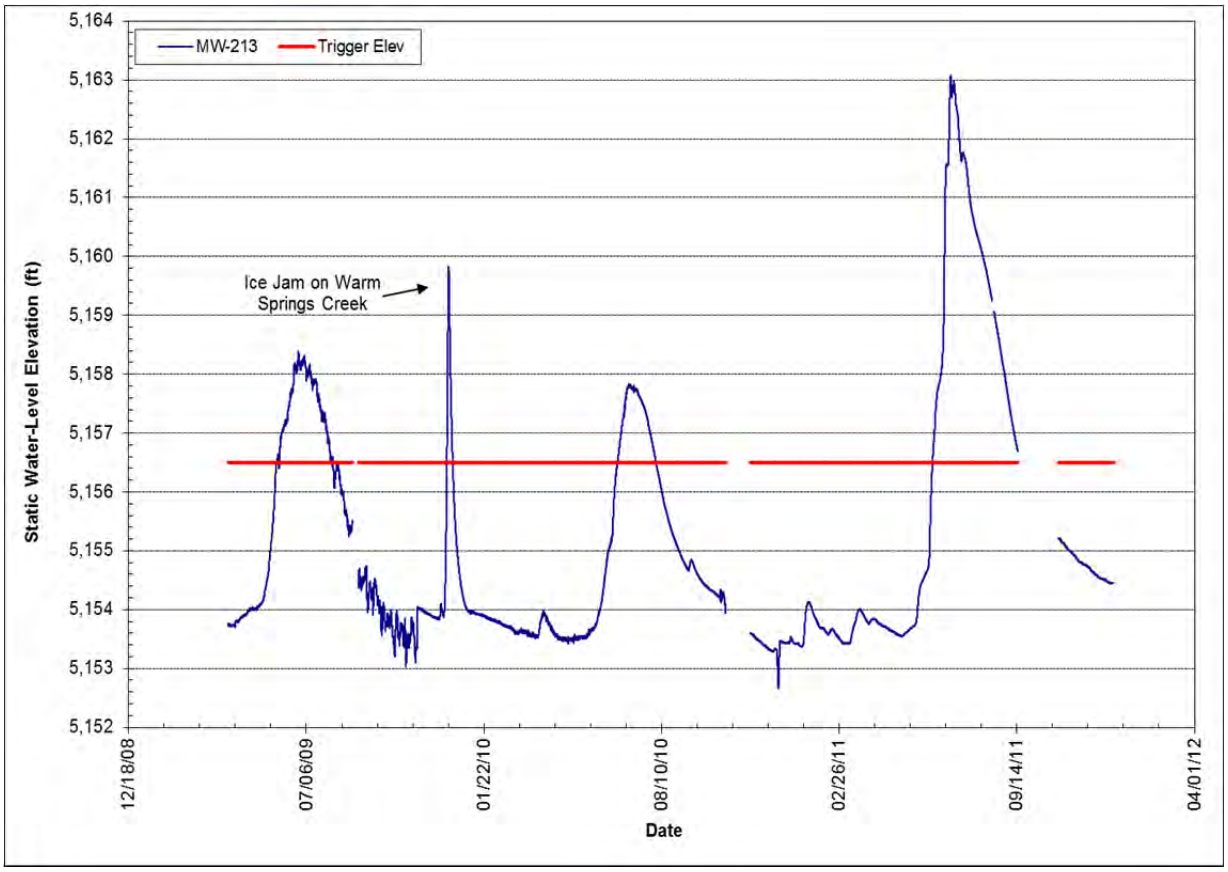

Figure 4.2-8. Water-level hydrograph for MW-213 based upon transducer data.

Table 4.2-4. Cadmium concentrations for event-driven monitoring wells

Old Works

Well ID	Screen Interval (ft)	Water Type	2011 Low-Water Cadmium (µg/L)	2011 Event-Driven Cadmium (µg/L)	2011 High-Water Cadmium (µg/L)	Comment
IW-01(EDW)	22–42	Ca-SO_4	—	6.91		Cd exceeds DEQ-7 standard; event-driven results below 15 µg/L; therefore no additional sampling in 2011.
MW-204(EDW)	32–42	Ca-HCO_3	—	1.36	—	
MW-206(EDW)	28–43	Ca-HCO_3	—	10.82	—	Cd exceeds DEQ-7 standard; event-driven results below 15 µg/L; therefore no additional sampling in 2011.
MW-206d(EDW)	53–73	Ca-HCO_3	—	7.96	—	Cd exceeds DEQ-7 standard; event-driven results below 15 µg/L; therefore no additional sampling in 2011.
MW-207(POC-EDW)	77–92	Ca-HCO_3	<0.20	<0.50	<0.50	Event-driven and high-water samples collected same day.
MW-208(EDW)	47–67	Ca-HCO_3	—	<0.50	—	
MW-209(EDW)	49–69	Ca-HCO_3	—	5.71	—	Cd exceeds DEQ-7 standard; event-driven results below 15 µg/L; therefore no additional sampling in 2011.
MW-213(EDW)	31–41	Ca-SO_4	—	5.04	--	Cd exceeds DEQ-7 standard; event-driven results below 15 µg/L; therefore no additional sampling in 2011.
MW-240(EDW)	77–87	Ca-HCO_3	—	<0.50	—	
MW-241(EDW)	50–60	Ca-HCO_3	—	3.18	—	
MW-242(EDW)	57–67	Ca-HCO_3	—	0.25	—	

Table 4.2-4. Cadmium concentrations for event-driven monitoring wells *(continued)*

Well ID	Screen Interval (ft.)	Water Type	2011 Low-Water Cadmium (µg/L)	2011 Event-Driven Cadmium (µg/L)	2011 High-Water Cadmium (µg/L)	Comment
MW-251(POC-EDW)	55–75	Ca-SO_4	<0.20	0.22	<0.22	Event-driven and high-water samples collected same day.
MW-255(POC-EDW)	75–95	Ca-HCO_3	<0.20	<0.50	<0.50	Event-driven and high-water samples collected same day.
Domestic Wells						
East End Town Pump	55–600	Na-HCO_3	—	<0.50	—	
Mike's Sales and Pawn	—	—	—	<0.50	—	

Note. EDW, well sampled when triggered by water-level elevation in MW-213.

4.3 South Opportunity/Yellow Ditch Area of Concern

The South Opportunity/Yellow Ditch AOC contains seven wells for the 2011 monitoring program (fig. 4.3-1). The wells are all completed in valley-fill material, ranging from coarse to fine sand in the shallower completed wells. All of the wells are located south and southwest of the town of Opportunity. The AOC consists of approximately 25 square miles. Physical parameters and water-quality samples were collected from monitoring wells during both low- and high-water sampling events.

Table 4.3-1 contains a listing of the wells within this AOC, along with completion details and a listing of COCs. The primary COC for this area is arsenic. There are three groups of nested pair wells spread throughout this area, which were installed during 2009. Table 4.3-2 contains a summary of water type and arsenic concentrations for 2011 samples, plus the long-term arsenic average. Appendix D contains water-quality data from 2011 samples.

4.3.1 South Opportunity/Yellow Ditch Area of Concern Water Quality

Arsenic concentrations in the 2011 samples were below DEQ-7 standards in all wells. Similar occurrences were observed in the long-term arsenic averages. All seven wells have a Ca-HCO_3 water type.

Six monitoring wells were installed in 2009 as part of the monitoring program, with wells nested in shallow and deep pairs at three locations (table 4.3-2). These six new wells were sampled during both sampling events; however, water levels were below the bottom of the screen interval in well LTW-4SOS (MW-260) during the low-water sampling, so no sample was obtained. Arsenic concentrations were considerably higher in the shallow wells than in the deeper wells at the LTW-1 and LTW-3 sites (figs. 4.3-2 and 4.3-3). Arsenic concentrations were similar in the shallow and deep wells at the LTW-4 (fig. 4.3-4) site. All six of these wells are located to the south and southwest of Opportunity.

Well MW-9 (55 ft deep) is located between the LTW-1 and LTW-4 group of wells and had very low arsenic concentrations in 2011 samples (fig. 4.3-5). Water-quality data only exists for 2009 and 2011 monitoring events; therefore, the long-term average is based on only four samples.

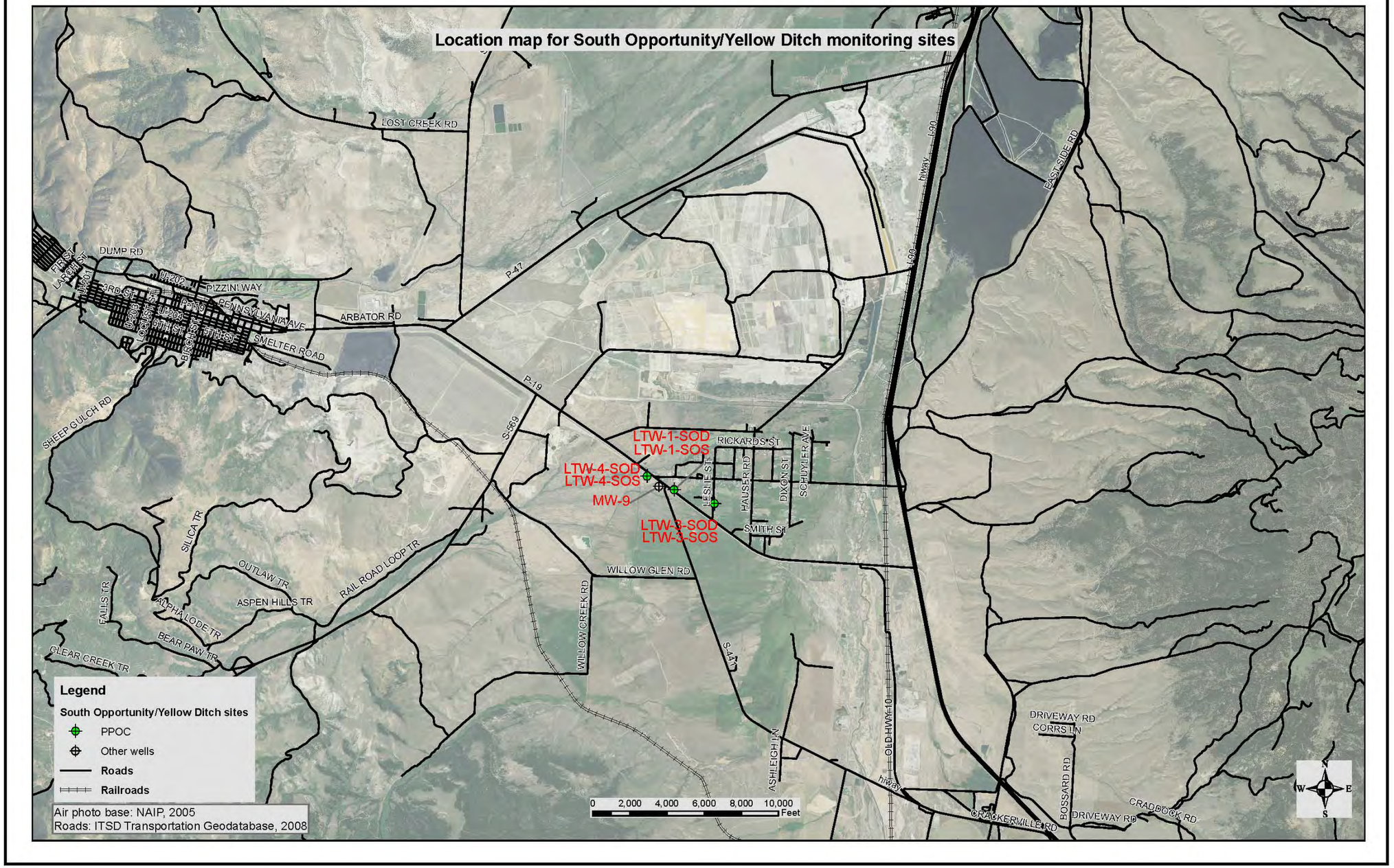

Figure 4.3-1. Location map for South Opportunity/Yellow Ditch Area of Concern monitoring sites.

Table 4.3-1. South Opportunity/Yellow Ditch Area of Concern water-quality COC

South Opportunity/Yellow Ditch AOC				
Well ID	**New ID**	**Total Depth (ft)**	**Screen Interval (ft)**	**Water-Quality Analytes**
LTW-1-SOS	**MW-264**	23	13–23	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
LTW-1-SOD	**MW-263**	40	30–40	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
LTW-3-SOS	**MW-262**	19	9–19	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
LTW-3-SOD	**MW-261**	40	30–40	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
MW-9 (lab)		55	41–46	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
LTW-4-SOS	**MW-260**	22	7.5–17.5	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness
LTW-4-SOD	**MW-259**	38	28–38	As, Fe, Ca, Mg, Na, K, HCO_3, CO3, Cl, SO_4, pH, SC, TDS, Hardness

Table 4.3-2. South Opportunity/Yellow Ditch Area of Concern water-quality summary

	South Opportunity/Yellow Ditch AOC							
Well ID	**New ID**	**GWIC ID**	**Screen Interval (ft)**	**Water Type**	**2011 Low-Water Arsenic (µg/L)**	**2011 High-Water Arsenic (µg/L)**	**Long-Term Arsenic Average (µg/L)**	**Comment**
LTW-1-SOS	**MW-264**	249937	13–23	Ca-HCO_3	1.46	4.57	3.75	Well installed spring 2009; only five samples
LTW-1-SOD	**MW-263**	249936	30–40	Ca-HCO_3	0.44	0.42	0.45	Well installed spring 2009; only five samples
LTW-3-SOS	**MW-262**	249939	9–19	Ca-HCO_3	2.23	2.77	2.41	Well installed spring 2009; only five samples
LTW-3-SOD	**MW-261**	249938	30–40	Ca-HCO_3	0.39	0.38	0.38	Well installed spring 2009; only five samples
MW-9 (lab)		249898	41–46	Ca-HCO_3	0.25	0.25	0.26	
LTW-4-SOS	**MW-260**	249941	7.5–17.5	Ca-HCO_3	—	0.55	0.54	Well installed spring 2009; no low-water sample 2011; well dry, only three samples
LTW-4-SOD	**MW-259**	249940	28–38	Ca-HCO_3	0.52	0.52	0.51	Well installed spring 2009; only five samples

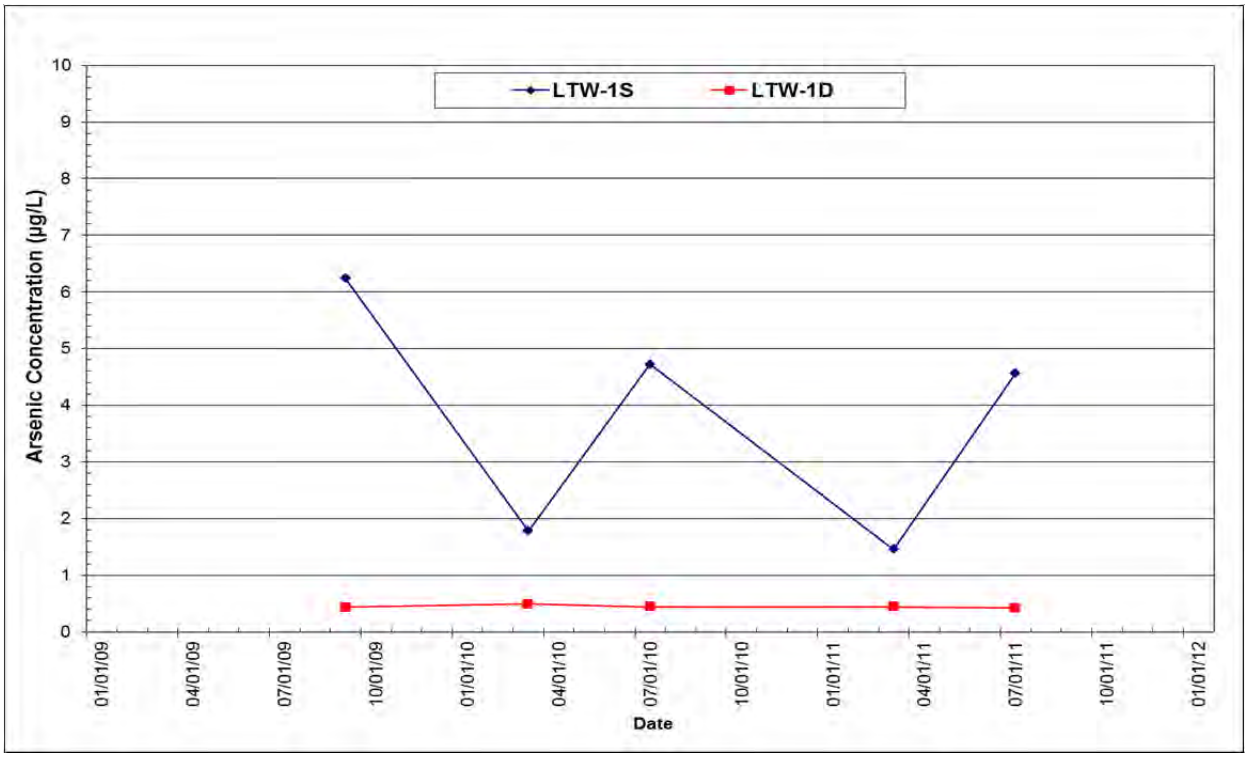

Figure 4.3-2. Arsenic concentrations over time for nested wells LTW-1-SOS (MW-264)and LTW-1-SOD (MW-263).

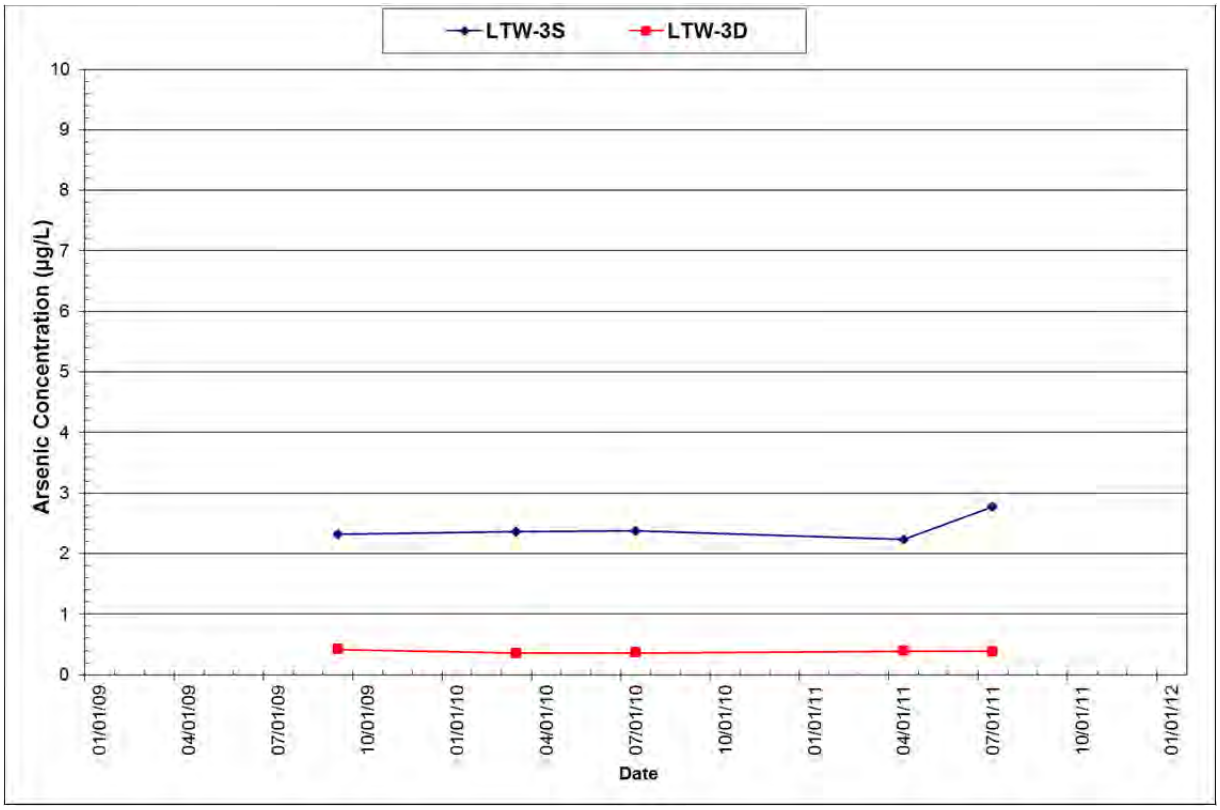

Figure 4.3-3. Arsenic concentrations over time for nested wells LTW-3-SOS (MW-262) and LTW-3-SOD (MW-261).

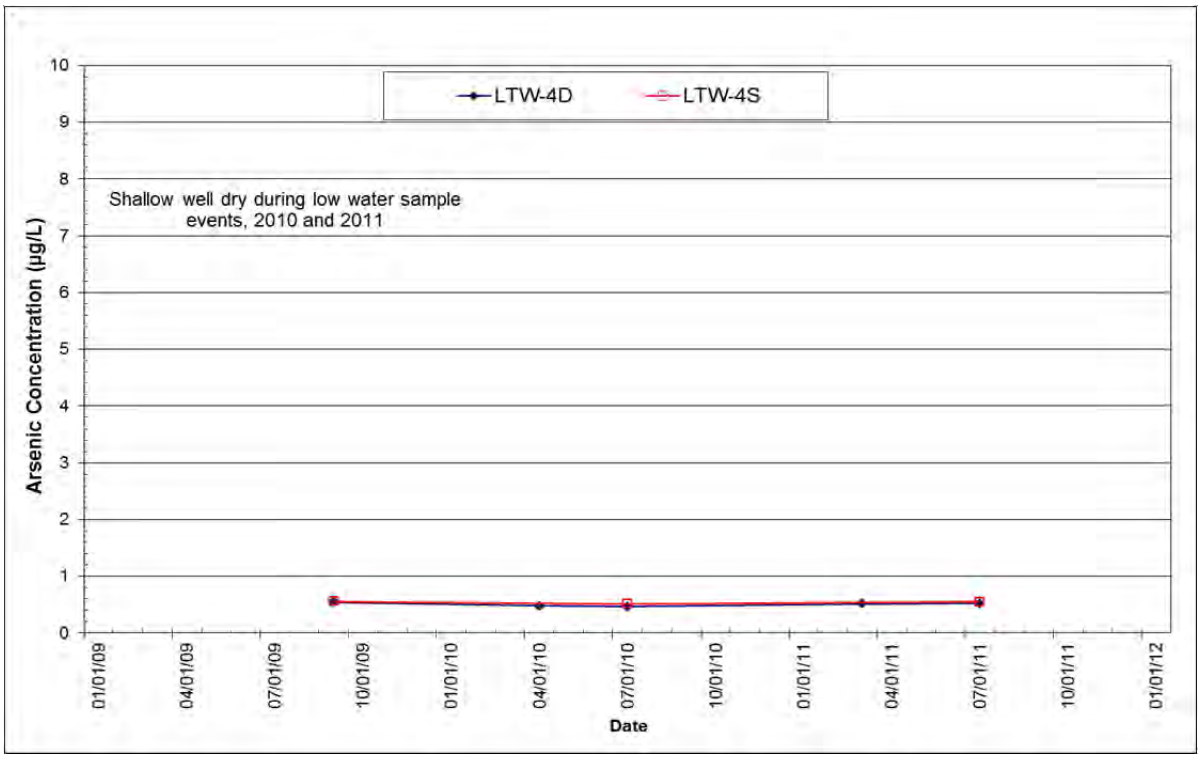

Figure 4.3-4. Arsenic concentrations over time for nested wells LTW-4-SOS (MW260) and LTW-4-SOD (MW-259).

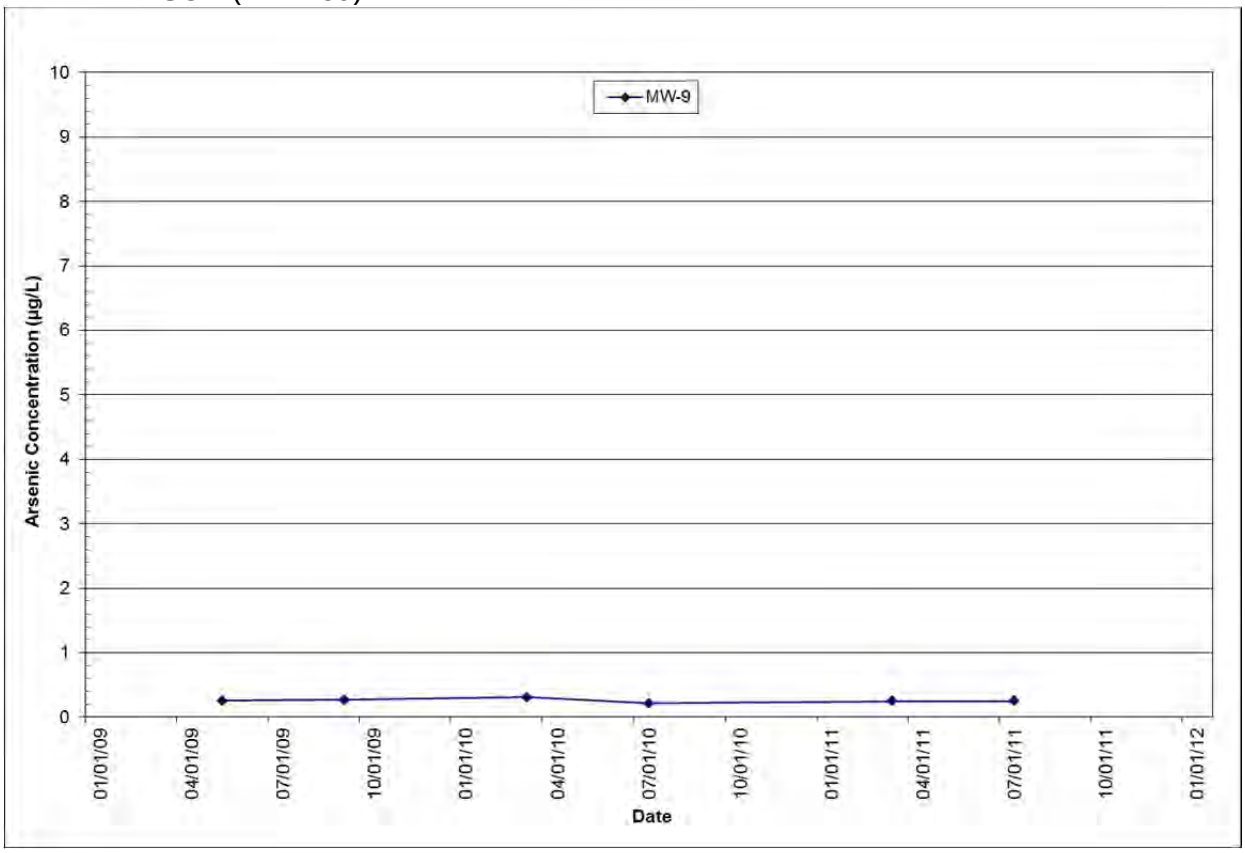

Figure 4.3-5. Arsenic concentrations over time for well MW-9.

4.3.2 South Opportunity/Yellow Ditch Water-Level Observations

Six of the seven monitoring wells in this portion of the ARWWS site were installed in 2009 and have very limited water-level data. Table 4.3-3 shows net water-level change and general aquifer characteristics for each well.

Mill Creek bounds this AOC on the west, while Willow Creek bounds the site on the east. Groundwater flow direction is from the southwest to the northeast (plates 2 and 3). The shallow aquifer is composed of coarse sand valley-fill, while the deeper aquifer contains some medium- to fine-grained sand valley-fill material.

Large water-level fluctuations can occur in wells adjacent to streams or stream tributaries. Figures 4.3-6, 4.3-7, and 4.3-8 show water-level hydrographs for the three nested well pairs located in the south and southwest portion of the AOC. Figure 4.3-9 shows the water-level hydrograph for well MW-9. Water levels can vary seasonally between 3 and 25 ft in these wells.

Table 4.3-3. Net water-level changes for wells in the South Opportunity/ Yellow Ditch AOC

Well ID	New ID	GWIC ID	Total Depth (ft)	Screen Interval (ft)	Aquifer	Net Water-Level Change (ft)
LTW-1-SOS	MW-264	249937	23	13–23	Valley-fill coarse	1.23
LTW-1-SOD	MW-263	249936	40	30–40	Valley-fill coarse	0.26
LTW-3-SOS	MW-262	249939	19	9–19	Valley-fill coarse	-0.22
LTW-3-SOD	MW-261	249938	40	30–40	Valley-fill coarse	-0.31
MW-9 (lab)		249898	55	41–46	NR	15.42
LTW-4-SOS	MW-260	249941	22	7.5–17.5	Valley-fill coarse	0.61
LTW-4-SOD	MW-259	249940	38	28–38	Valley-fill coarse	0.00

Note.
NR, not reported.

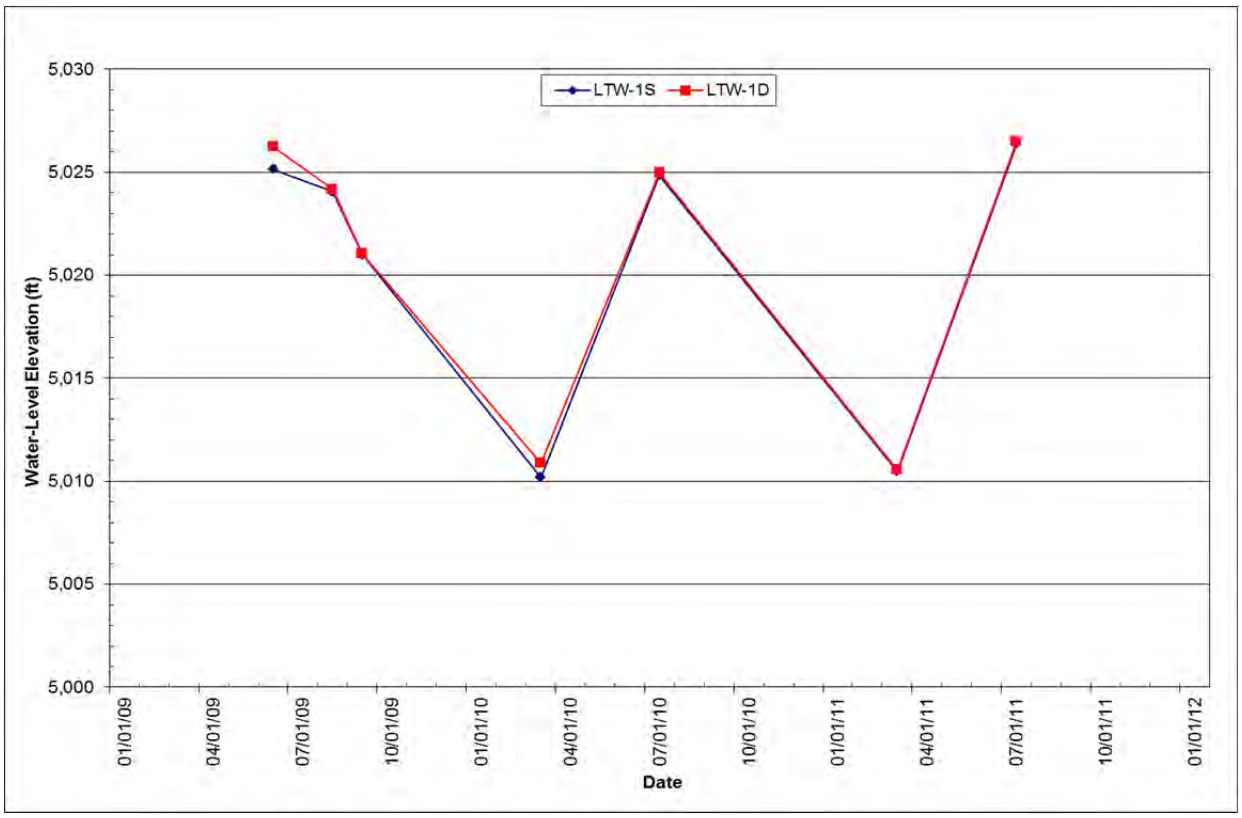

Figure 4.3-6. Water-level hydrograph for nested wells LTW-1-SOS (MW-264) and LTW-1-SOD (MW-263).

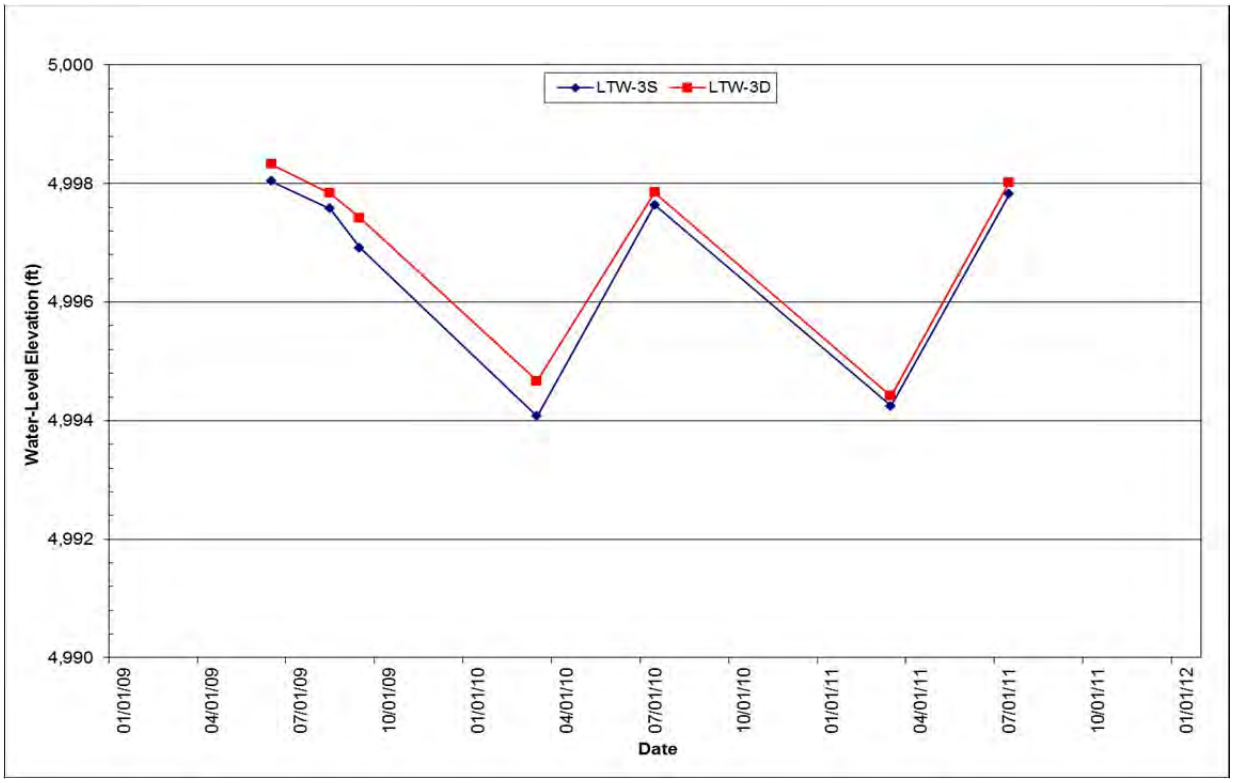

Figure 4.3-7. Water-level hydrograph for nested wells LTW-3-SOS (MW-MW-262) and LTW-3-SOD (MW-261).

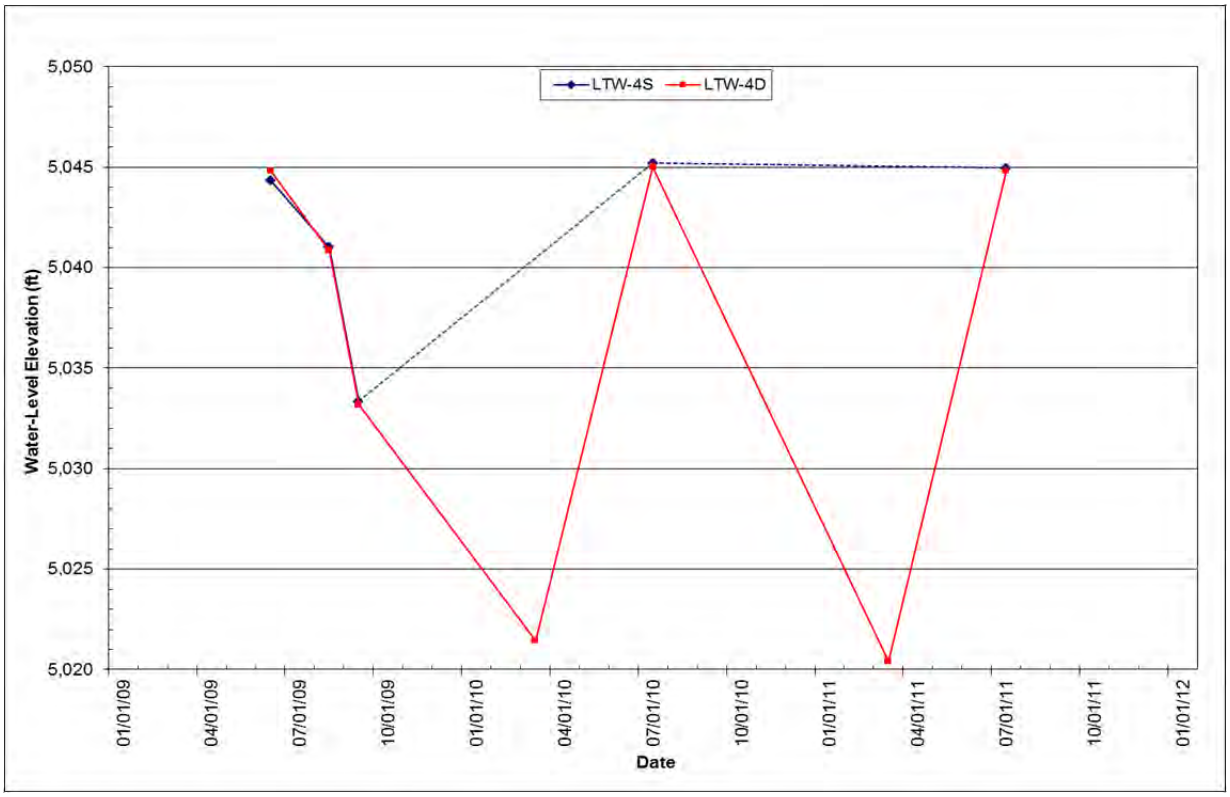

Figure 4.3-8. Water-level hydrograph for nested wells LTW-4-SOS (MW-260) and LTW-4-SOD (MW-259).

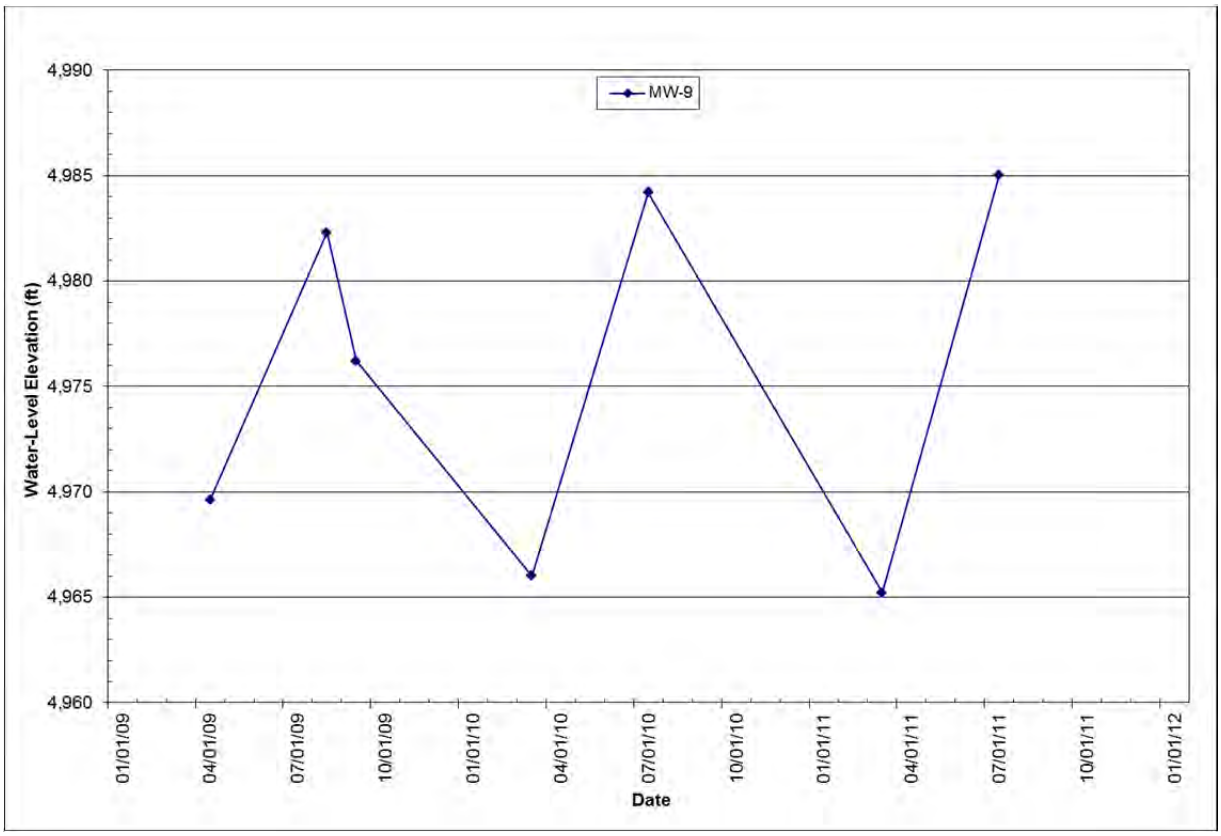

Figure 4.3-9. Water-level hydrograph for well MW-9.

5.0 Domestic Well Monitoring Program

5.1 Description of the Sampling Area

The goal of the domestic well sampling effort was to sample 20% of the wells not previously sampled within the EPA-proposed Domestic-Well Monitoring Area (fig. 5.1-1). The boundary was reduced early in 2011 to one of the 2009 boundaries and the resulting 2011 boundary reduced the total number of domestic wells in the sampling area. A goal of sampling 120 new wells in 2011 was determined based on a previous estimate of the total number of domestic wells using GWIC records. A new list of potential wells was also generated using the Montana Cadastral Database, which includes tax-related data such as information on utilities and construction. All the cadastral parcels in the sampling area were downloaded and filtered to remove parcels served by community water and sewer. The remaining parcels with dwellings were used to estimate the number of wells in the sampling area. There were 763 properties identified as potentially having a domestic well. Postcards requesting permission to sample were sent to approximately 191 property owners.

5.2 New Domestic Well Sampling

The goal of sampling 120 new domestic wells was achieved in 2011. Arsenic concentrations were less than 5 µg/L in 110 of these samples. Arsenic concentrations were greater than 5 µg/L and less than 10 µg/L in six of the new wells sampled, but two of these wells were outside the final 2011 boundary (fig. 5.1-1; table 5.2-1). Two of the other wells with arsenic concentrations greater than 5 µg/L were in the Powell Vista area. One well was in the Mount Hagen region in the southernmost part of the domestic well monitoring area. Finally, one well was in the Crackerville area, which is technically outside the current monitoring well sampling boundary. The Crackerville area has been sampled as part of the ARWWS domestic well program since before the MBMG started collecting these samples. As a result, there are a number of domestic well resampling sites (greater than 5 µg/L) in the Crackerville area that we have been sampling since 2009. We have requested clarification on sampling in this area and will continue to consider it as part of the ARWWS domestic well sampling area until we get clarification.

Table 5.2-1. New sites with arsenic concentrations greater than 5 µg/L and less 10 µg/L

Owner	GWIC ID	As (µg/L)	Area
Mitchell, Harold	260549	5.23	Powell Vista
Flachmeyer, Dan	241972	8.83	Powell Vista
Rankin, Keith & Jean	198928	5.38	Mount Hagen (south)
Whitaker, Ray	181457	9.33	Crackerville
Peterson, Henry	223085	5.14	Outside area to the south
Farrell, Larry & Michelle	126679	8.25	Outside area to the southwest

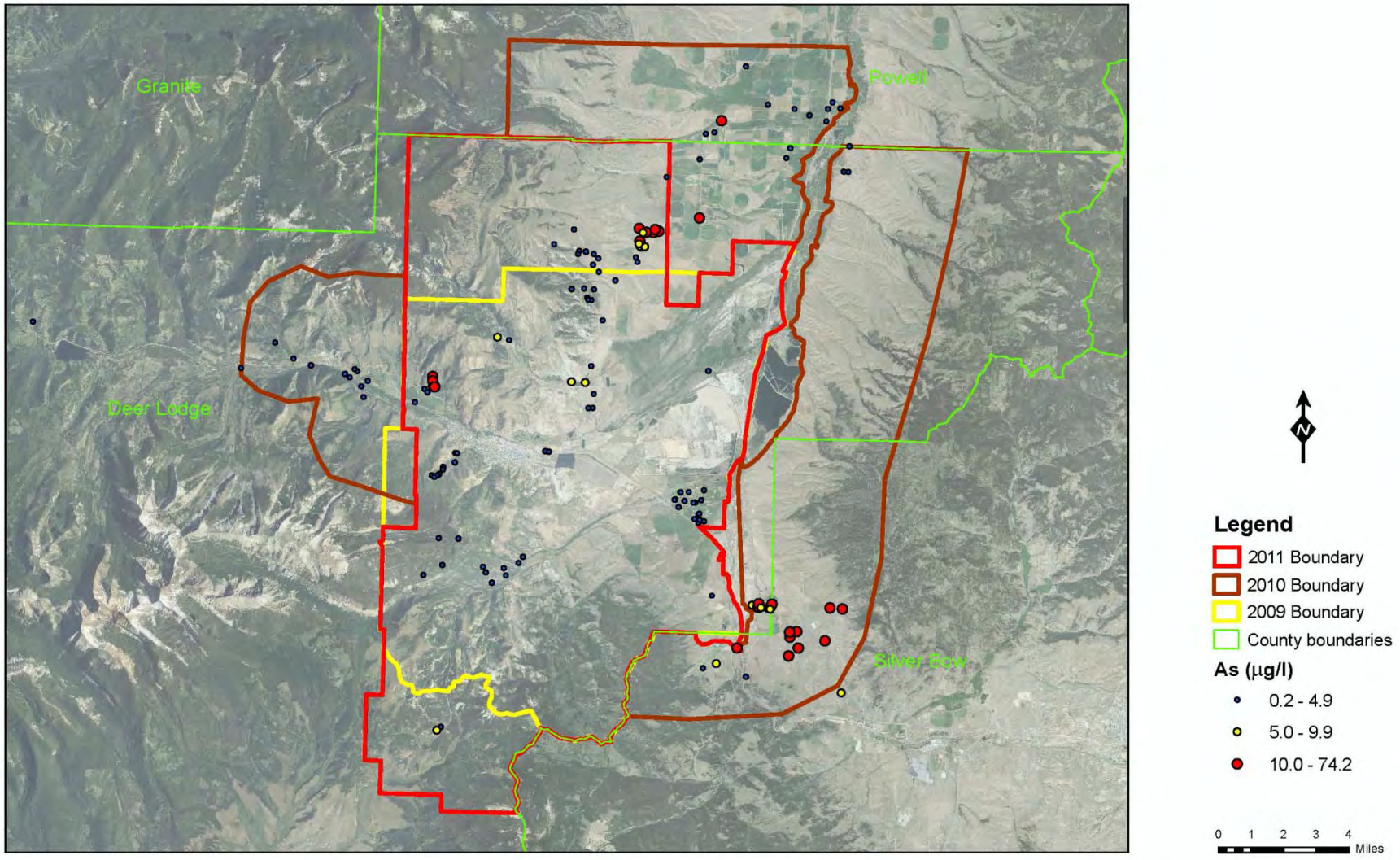

Figure 5.1-1. Domestic well sampling boundary for 2011 activities with the 2009 and 2010 boundaries for reference. All wells sampled in 2011 are shown as dots, with the color indicating arsenic concentrations.

Arsenic concentrations were greater than 10 µg/L in 11 new domestic wells, but 5 of these wells were outside the final 2011 boundary. Also, an unused shallow well in the English Gulch area (GWIC ID 261937) was sampled as a possible replacement for a well with arsenic concentration greater than 10 µg/L; however, the unused well had a dissolved arsenic concentration of 24.59 µg/L. The highest arsenic concentration was from an unused well (257557) in a new English Gulch subdivision. Water delivery was initiated to all homes with arsenic concentrations above 10 µg/L.

Confirmation samples (dissolved) were collected from 10 wells with initial arsenic concentrations greater than 10 µg/L collected in 2010 or 2011. Arsenic concentrations greater than 10 µg/L were confirmed in all 10 wells, including 5 wells within the final boundary. Confirmation samples on wells outside the final 2011 boundary were not collected after the boundary change, and it was assumed arsenic concentrations would exceed 10 µg/L in the confirmation samples. Homeowners outside the final 2011 boundary with arsenic concentrations greater than 10 µg/L received reverse osmosis (RO) units with the understanding that the homeowner would be responsible for further upkeep on the units.

Table 5.2-2. New sites with arsenic concentrations greater than 10 µg/L and dissolved confirmation samples

Owner	GWIC ID	Initial Total Recoverable As (µg/L)	Dissolved As (µg/L)	Area
Jamison, Sherri Well #4	257557	54.05	53.75	English Gulch
Walters, Richard	261937		24.59	English Gulch
Waymire, Edward	156249	12.3	13.6	Powell Vista
McQueary, Cam	250294	10.4	10.2	Powell Vista
Gessele, Edwin	259949	12.4	13.1	Powell Vista
Arentz, Ivan	153593	13.3	11.34**	Powell Vista
Dennis, Kevin	122350	11.21		Outside area
Thompson, Dan	163204	30.9		Outside area
Graves, Russel	196975	10.147		Outside area
Ankelman, Patrick	226131	18.42		Outside area
Upright, Kelly	260551	16.5		Outside area
Choquette, Walter	122351	13.6*	15	Outside area
Boitnott, Steve	158784	10.5*	12.2	Outside area
Baker, Linda	219266	11.1*	10.2	Outside area
Jette, Joe	259577	10.6*	10.09	Outside area
Jones, Brent	259580	10.1*	11.643	Outside area

*Initial sample collected in 2010.
**Confirmation sample collected in 2012.

5.3 Previous Sampling Activities

In addition to the new well and confirmation samples, 22 wells were resampled based on previous samples greater than 5 or 10 µg/L arsenic (table 5.3-1). Thirteen wells with prior concentrations between 5 and 10 µg/L were resampled (table 5.3-1), and two of these samples (Keele—221430; Connors—246960) had arsenic concentrations greater than 10 µg/L in 2011. Arsenic concentrations in one well (Andreozzi—51861) fell below 5 µg/L in both the 2010 and 2011 samples, and therefore this site was removed from the annual sampling schedule. The

other 10 sites continued to have arsenic concentrations (total recoverable or dissolved) between 5 and 10 µg/L.

Eight wells with previous arsenic concentrations greater than 10 µg/L were resampled in 2011. All of these wells continued to have arsenic concentrations greater than 10 µg/L. Dissolved and total recoverable samples were not collected from one well (Fresh—51333) due to a sampling oversight. However, the Fresh well was sampled four times in 2010 with the last sample on December 17, and the RO unit installed in 2010 was sampled in 2011 (data below).

Arsenic concentrations greater than 10 µg/L are concentrated in three areas: Crackerville, English Gulch, and Powell Vista (table 5.3-1). There are five wells in the Crackerville area with arsenic concentrations greater than 10 µg/L. Most of the Crackerville wells are between 90 and 250 ft deep, with the higher arsenic concentrations often occurring in the deeper wells. A deep (525 ft) replacement well (Fresh) drilled in 2009 had higher arsenic concentrations than the original shallow well (98 ft). There are five domestic wells in the English Gulch area that exceed 10 µg/L, but two of those wells are not in use (tables 5.2-2 and 5.3-1). The deeper wells (>300 ft) in English Gulch also have higher arsenic concentrations than the shallower wells. Shallow wells (<150 ft) in the English Gulch area have arsenic concentrations less than 10 µg/L. The Powell Vista area, including Obsidian Lane, has six wells that exceed 10 µg/L. Wells in the Powell Vista area range from about 180 to 400 ft deep; however, there does not appear to be a clear relationship between depth and arsenic concentration in this area. One well (100 ft deep) near Fairmont Hotsprings also exceeds 10 µg/L.

5.4 Reverse Osmosis Units

To date 13 RO units have been installed in 12 homes (one home had a rental space). The RO units typically are installed under the kitchen sink with a spigot that dispenses into the sink. The cost for the RO unit and installation is approximately $650. The home receiving two RO units was the only location within the current boundary. Two homes receiving RO units were in the Crackerville area, which is outside the current boundary area, but this area has been historically sampled by the MBMG and others as part of the domestic well sampling program. The remaining 9 homes were outside the final 2011 boundary, and RO units were installed at those homes with the understanding that the homeowner would be responsible for further upkeep on the units. An evaluation of the arsenic source was not conducted for wells outside the current boundary and the Crackerville area, because they were no longer within the scope of the monitoring program. However, the homeowners had expectations on how we would proceed if concentrations exceeded the driking-water standard based on our initial contact with them and therefore we felt obligated to provide them with a clean drinking-water source. The groundwater source of arsenic in the area to the southeast of the current boundary is included in an arsenic source investigate we are currently (2013) conducting in the area (see section 5.6). In 2011 9 RO units were resampled for dissolved arsenic; the RO samples all had arsenic concentrations less than 0.8 µg/L. The RO unit in the Fresh home was sampled both in 2010 and 2011, with arsenic concentrations of 0.436 and 0.61 µg/L, respectively.

Table 5.3-1. Summary of previous sampling activities with confirmation concentrations from the recent sampling

Owner	GWIC ID	2009 Arsenic (µg/L)	2010 Total Arsenic (µg/L)	2011 Total Arsenic (µg/L)	2011 Dissolved Arsenic (µg/L)	Notes
Andreozzi, Bob	51861	5.95	4.70	3.40	3.01	English Gulch
Galle, Tyke	51790		6.49	4.45	5.02	Lost Creek
Stewart, John & Phyllis	256622		6.48	5.62	6.17	Powell Vista
Galle, Cliff Jr.	5377		5.43	6.51	5.72	Lost Creek
Galle, Jeff & Angela	230299	6.68	2.55	7.15	6.21	Lost Creek
Faught, Stanley	51327	6.26	6.85	7.50	7.51	Crackerville
Swanson, Mark	5330	5.54	8.28	7.79	8.18	Crackerville
Stock-Jones, Charlene	153592	7.35	8.22	8.04	8.18	Powell Vista
Salle, Ron	258964	10.60	8.45	8.30	8.35	English Gulch
Jenrich, Troy & Tracy	252926	6.64	9.31	8.74	8.34	Crackerville
Bailey, Don	254433	2.26	10.10*	8.37	9.83	Crackerville
Keele, Don	221430	6.74	7.97	12.00	10.13	Crackerville
Connors, Ken	246960		6.68	12.90	14.49	English Gulch
Ruegamer, Anthony	53591		13.20	11.40	14.30	Powell Vista
Scherman, Russ, Rental	51328	7.22	14.50	12.52	14.74	Crackerville
Maccioli, Joe & Patti	252623	12.30	14.20	13.22	12.99	Crackerville
Lussy, Jerry	244470	9.38	13.30	15.58	14.90	English Gulch
Smith, Monty & Julie	256447	18.6	19.9		19.20	Powell Vista
Scherman, Russ	226130	23.90	30.40	28.73	26.88	Crackerville
Shyba, Lori	256874		28.30	30.61	37.65	Fairmont
Fresh, Elden & Jean**	51333	11.80	11.60			Crackerville
Walter, Richard	51874	5.73	13.20	32.38	11.20	English Gulch

*Confirmation sample was below 10 µg/L in 2009.
**Well replacement failed to provide clean water, so a point-of-use reverse osmosis (RO) unit was installed.

5.5 Confirmation Arsenic Sampling and Domestic Well Replacement

Five wells in the study area had been previously identified as having arsenic concentrations above 10 µg/L. Confirmation water samples were collected from these wells (Smith, Walter, Scherman Rental, Scherman, and Choquette) and analyzed for a comprehensive analyte list to verify the elevated arsenic concentration and to determine the source of the arsenic. An evaluation of water-quality conditions and comparison to geothermal sources in the area determined that none of the water chemistries were similar to geothermal sites; the arsenic could not definitely be related to geothermal waters or other naturally occurring sources. Therefore, it was determined that these five wells would be replaced under the ARWWS program. Figure 5.5-1 shows the locations of the wells, while table 5.5-1 lists information about the wells. Appendix F contains the confirmation sample data and evaluation reports. Well logs are contained in Appendix G.

Table 5.5-1. Replacement domestic well summary, 2011

Well Owner	GWIC ID (new well)	Old Well Arsenic (µg/L)	Confirmation Arsenic (µg/L)	Replacement Well Arsenic (µg/L)	Total Depth (ft)
Smith	NA	18.6	19.9	Dry (P&A)	325
Walter (Diss./TR)	262859	13.2	12.2	2.1/10.8	98
Scherman, rental	263138	15.5	14.5	6.9	99
Scherman	264405	23.2	25.6	9.2	99
Choquette	263447	13.6	15.0	15.6	110

Replacement domestic wells were successfully installed at two (Scherman sites) of the five sites identified in Table 5.5-1. During 2012 sampling activities water-quality samples will be collected from the two successfully installed replacement wells to verify arsenic concentrations are below site action levels. However, attempts to replace the Smith and Choquette wells failed. Additional testing of the Walter well is necessary to see if the new well will produce sufficient quantity and quality of water after further development.

The target zone for the Smith replacement well was a sand and gravel zone just above the existing well as reported on the well log. Drilling deeper at this site did not appear to be a good option as other wells in the area completed deeper in the tertiary material appeared to have elevated arsenic concentrations. A well nearby Smith's had an arsenic concentration less than 10 µg/L, which was the target zone for the replacement well. Unfortunately, the target zone did not produce enough water (<1 gpm) for potable use and the borehole was plugged and abandoned.

Figure 5.5-1. Location map for domestic replacement well drilling during 2011.

The original Choquette well was 77 ft deep and appeared to have surface casing integrity problems, making it a candidate for replacement at a deeper depth. Red/brown volcanic rock was encountered at a depth of 31 ft, extending to 60 ft; sand and gravel with clay stringers were encountered from 60 ft to 100 ft. The new well was completed with the screen interval from 90 to 110 ft. This zone was very productive, at 50 gpm; however, the arsenic concentration was similar to the existing well. Since the existing well had surface casing problems and the new well produced more water, the old well was disconnected and the new well was connected to the house. A point-of-use reverse osmosis treatment unit was installed in the kitchen to provide potable drinking and cooking water.

Further investigation is needed to better understand the mineralogy of the valley sediments and underlying igneous rocks in the Crackerville–Fairmont area to determine if the arsenic in groundwater at depths greater than 100 ft is the result of dissolution of naturally occurring minerals or the result of aerial deposition from smelter emissions. Additional study in the English Gulch and Powell Vista areas is necessary to determine if shallower and alternate zones are available for groundwater development. Several wells in the English Gulch area are completed in a deeper limestone formation due to its artesian nature; however, these wells show seasonal elevated arsenic concentrations and high iron concentrations. The MBMG has initiated a study to examine the sources of As in these areas, which will examine the mineralogy and elemental composition of the sediments and rocks in these areas. Additionally, the water chemistry of samples from sites suspected to contain anthropomorphically derived As and naturally occurring As will be examined in detail, including the determination of sulfur isotopes, oxygen isotopes, hydrogen isotopes, and arsenic speciation along with the typical water-quality analysis performed by the MBMG. We started providing clean drinking water to all of these sites when initial exceedance was reported, and will continue until a replacement well is completed, an RO unit is installed, or it is determined that the arsenic is naturally occurring. The current project plan calls for annual monitoring of these wells as long as they are used for domestic water supply.

5.6 2012 Sampling Plans

The domestic well sampling area was reduced for the 2011 sampling year to correspond with changes made in the 2011 ROD amendment. As a result of the reduction in sampling area, the total number of wells has decreased to between 700 and 765 wells. Another subset of the cadastral database has been created and screened to include only properties with domestic groundwater usage. The use of postcards to gain permission to sample properties, begun in 2010, will continue.

The MBMG has initiated a study to examine the sources of arsenic in three areas (Powell Vista, English Gulch, and Crackerville) that appear to have naturally occurring arsenic. We are examining the mineralogy and elemental composition of the sediments and rocks in these areas. Additionally, the water chemistry of samples from sites suspected to contain anthropomorphically derived As and naturally occurring As are being examined in detail, including the determination of sulfur isotopes, oxygen isotopes, hydrogen isotopes, and arsenic speciation along with the typical water-quality analysis performed by the MBMG.

ACKNOWLEDGMENTS

Many parties have been involved with the collection of data throughout the ARWWS since the mid-1980s; these data were instrumental in the original site characterization and development of the monitoring program used during the 2009 5-year sampling and monitoring program and subsequent years. The efforts of those parties are greatly appreciated. Pioneer Technical Services provided assistance with the location of monitoring points, site access, and, most importantly, an electronic database of historical physical and chemical data.

Special appreciation is given to the property owners who allowed access for monitoring and sampling activities. We thank all the property owners who gave permission to sample their wells as part of the domestic well program.

A special thank you is given to the MBMG employees who assisted with sampling and monitoring activities and provided technical support, specifically: Nick Tucci, Jamie Veis, Matt Berzel, Garrett Smith, Ken Sandau, Paul Thale, and Peggy Delaney. Report edited by Susan Barth. Errors and omissions remain the responsibility of the authors.

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APPENDICES

Appendix A: Smelter Hill/Opportunity Ponds WMA, Water-Quality Data

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Smelter Hill/Opportunity Ponds
Non 5-Yr Samples

						PHYSICAL PARAMETERS								
							FIELD					LAB		
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	TIME (HRS)	SWL (FT)	FLOW (GPM)	pH	SC (UMHOS)	TEMP (C)	REDOX (mv)	pH	SC (UMHOS)	HARDNESS (MG/L)	ALKALINITY (MG/L)
NW 65	249909	DISSOLVED	09/11/09	14:45	68.83	8.0	7.43	276	9.68	308	7.60	288	134	76
		DISSOLVED	04/15/10	15:45	82.21	2.5	6.56	244	10.24	299	7.56	332	110	74
		DISSOLVED	07/14/10	12:40		2.5	6.59	355	9.63	339	7.91	349	153	62
		DISSOLVED	04/13/11	15:18	82.02	1.0	7.85	230	8.68	439	7.54	255	113	69
		DISSOLVED	07/27/11	11:57	70.20	1.5	6.78	205	9.09	422	7.55	200	93	71
MW-212	138007	DISSOLVED	04/14/09	11:18	43.82	5.0	7.47	214	7.35	411	7.33	289	128	114
		DISSOLVED	09/08/09	15:30	31.08	3.5	7.61	212	7.46	287	7.70	219	114	107
		DISSOLVED	04/20/10	10:31	46.18	2.5	6.34	250	9.13	318	8.03	320	117	111
		DISSOLVED	07/15/10	11:51		2.5	6.51	260	8.36	343	7.97	278	135	111
		DISSOLVED	04/06/11	13:12	46.12	2.0	7.71	220	7.10	413	7.66	260	109	103
		DISSOLVED	07/27/11	12:10	19.01	2.0	6.36	350	8.47	376	7.59	335	171	109
MW-214	138065	DISSOLVED	04/13/09	14:50	9.74	3.5	6.94	772	6.13	364	7.28	850	498	236
DUP		DISSOLVED	04/13/09	14:55	9.74	3.5	6.95	772	6.13	364	6.99	774	503	223
		DISSOLVED	08/24/09	15:20	10.41	3.0	6.93	1,082	11.56	274	7.23	1,048	634	220
		DISSOLVED	03/30/10	12:59	10.35	2.5	6.73	1,160	6.35	387	7.92	1,195	676	281
		DISSOLVED	07/16/10	12:28	9.90	2.5	6.68	703	10.91	358	7.77	720	332	208
		DISSOLVED	04/06/11	14:00	10.82	2.5	7.31	645	5.87	470	7.34	715	342	201
		DISSOLVED	07/26/11	11:20	10.94	2.0	7.51	940	11.01	356	7.05	870	508	249
MW-216	137957	DISSOLVED	04/14/09	14:59	3.15	3.5	7.21	629	3.53	406	7.52	671	376	135
		DISSOLVED	08/24/09	15:45	3.62	3.0	6.85	697	14.60	197	7.22	685	361	118
		DISSOLVED	04/20/10	12:24	3.25	2.5	6.57	375	5.46	232	7.86	654	345	129
		DISSOLVED	07/19/10	10:27	4.57	2.5	6.40	805	8.38	177	8.20	802	425	199
		DISSOLVED	04/07/11	12:16	4.23	2.5	7.38	910	4.69	218	7.35	885	512	167
		DISSOLVED	07/29/11	15:50	4.85	2.0	5.79	920	8.67	266	7.28	795	490	154
MW-256	249851	DISSOLVED	04/17/09	17:10	64.93	4.5	7.13	552	9.75	343	7.20	845	329	176
		DISSOLVED	08/20/09	14:00	53.26	3.0	6.86	590	9.85	338	7.34	597	290	179
		DISSOLVED	03/23/10	14:17	64.20	2.5	6.67	655	9.74	392	7.42	678	324	172
		DISSOLVED	07/16/10	10:56	53.67	2.5	6.46	625	10.77	373	8.09	626	302	173
		DISSOLVED	04/13/11	14:22	67.55	1.5	7.34	575	9.28	425	7.24	637	314	172
		DISSOLVED	07/27/11	14:17	41.44	2.0	4.93	461	10.16	383	7.13	426	223	147
MW-26	249793	DISSOLVED	04/13/09	17:20	9.31	3.5	6.64	1,736	5.46		6.80	1,841	1,301	318
		DISSOLVED	08/25/09	13:44	9.54	2.7	6.31	1,953	9.89	176	7.34	1,883	1,250	372
		DISSOLVED	08/25/09	13:49	9.54	2.7	6.31	1,953	9.89	176	7.44	1,944	1,365	372
		DISSOLVED	04/01/10	14:22	9.21	2.5	6.57	2,000	6.10	197	7.12	1,834	1,171	266
		DISSOLVED	07/16/10	13:02	9.32	2.5	6.47	1,960	9.96	199	7.22	2,070	1,207	331
		DISSOLVED	04/06/11	14:51	9.25	2.5	6.74	1,860	5.95	66	6.73	1,668	1,287	309
		DISSOLVED	07/26/11	13:50	9.31	2.0	5.85	2,074	9.12	231	6.61	1,667	1,272	323

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Smelter Hill/Opportunity Ponds
Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Fe (mg/L)	Mn (mg/L)	SiO_2 (mg/L)	HCO_3 (mg/L)	CO_2 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)	F (mg/L)
NW 65	249909	DISSOLVED	09/11/09	40.4	8.0	5.37	0.94	0.004	0.001	14.9	93	0.0	0.78	65	0.55	0.47
		DISSOLVED	04/15/10	32.6	7.0	5.01	0.77	0.006	0.001	14.1	90	0.0	0.56	50	0.25	0.44
		DISSOLVED	07/14/10	51.7	9.9	5.66	0.92	0.002	<0.001	14.5	76	0.0	0.80	115	0.57	0.43
		DISSOLVED	04/13/11	33.6	7.1	5.58	0.83	<0.002	<0.001	14.4	84	0.0	1.46	43	0.26	0.35
		DISSOLVED	07/27/11	27.3	6.1	4.80	0.81	<0.003	<0.003	13.9	87	0.0	1.27	29	0.22	0.33
MW-212	138007	DISSOLVED	04/14/09	38.8	7.5	2.55	1.24	<0.004	0.001	11.7	139	0.0	1.11	13	0.11	0.58
		DISSOLVED	09/08/09	35.0	6.4	2.14	1.13	0.004	0.001	11.2	131	0.0	0.81	13	0.06	0.58
		DISSOLVED	04/20/10	35.5	7.0	2.43	1.14	0.002	<0.001	10.7	135	0.0	1.52	11	0.16	0.51
		DISSOLVED	07/15/10	41.1	8.0	2.73	1.19	<0.002	<0.001	10.6	135	0.0	1.13	19	0.17	0.52
		DISSOLVED	04/06/11	33.1	6.4	2.32	0.99	<0.002	<0.001	10.2	126	0.0	1.13	14	0.12	0.43
		DISSOLVED	07/27/11	52.0	9.9	2.72	1.21	<0.002	<0.001	10.4	133	0.0	6.45	54	0.89	0.43
MW-214	138065	DISSOLVED	04/13/09	159.0	24.5	9.24	2.59	0.004	<0.001	22.8	288	0.0	<5.0	267	0.73	<0.50
DUP		DISSOLVED	04/13/09	161.0	24.5	9.05	2.49	0.004	<0.003	22.5	272	0.0	<5.0	262	0.79	<0.50
		DISSOLVED	08/24/09	205.0	29.7	10.80	3.07	<0.01	0.001	23.1	268	0.0	6.32	372	<0.50	<0.50
		DISSOLVED	03/30/10	217.0	32.7	10.40	2.66	<0.001	<0.001	20.1	342	0.0	4.99	424	0.18	0.16
		DISSOLVED	07/16/10	107.0	15.8	7.03	2.09	<0.002	<0.001	19.2	253	0.0	3.32	185	0.65	0.24
		DISSOLVED	04/06/11	111.0	15.7	7.42	1.87	<0.002	<0.001	18.4	245	0.0	3.24	165	0.20	0.15
		DISSOLVED	07/26/11	165.5	23.1	8.79	2.64	<0.002	<0.01	20.9	303	0.0	3.80	281	0.36	0.19
MW-216	137957	DISSOLVED	04/14/09	116.0	20.9	8.93	3.07	0.032	0.010	15.3	165	0.0	5.02	261	<0.50	1.94
		DISSOLVED	08/24/09	113.0	19.1	10.30	4.08	0.048	0.008	19.8	144	0.0	9.60	253	<0.50	1.86
		DISSOLVED	04/20/10	109.0	17.8	7.67	2.79	0.035	0.009	13.2	157	0.0	4.12	227	0.12	1.09
		DISSOLVED	07/19/10	134.0	22.0	9.24	3.48	0.111	0.046	16.3	243	0.0	4.93	302	<0.05	1.28
		DISSOLVED	04/07/11	174.0	26.3	10.30	3.36	0.147	0.096	16.9	204	0.0	5.63	360	0.08	1.16
		DISSOLVED	07/29/11	155.8	24.6	9.78	3.67	0.178	0.059	18.3	188	0.0	5.20	344	0.01	1.32
MW-256	249851	DISSOLVED	04/17/09	102.0	18.1	7.48	2.50	0.005	<0.001	18.0	215	0.0	11.90	116	5.12	<0.50
		DISSOLVED	08/20/09	90.3	15.7	6.92	2.17	<0.004	<0.001	16.4	218	0.0	21.12	94	8.66	<0.50
		DISSOLVED	03/23/10	100.0	18.1	7.14	2.23	0.005	<0.001	15.7	210	0.0	13.85	142	6.00	0.32
		DISSOLVED	07/16/10	93.5	16.6	6.58	2.18	0.003	<0.001	15.9	211	0.0	17.58	121	5.95	0.33
		DISSOLVED	04/13/11	97.5	17.2	7.57	2.26	<0.002	<0.001	15.5	210	0.0	12.94	109	5.22	0.26
		DISSOLVED	07/27/11	69.0	12.4	6.02	1.94	<0.000	<0.001	15.2	179	0.0	7.18	66	3.72	0.33
MW-26	249793	DISSOLVED	04/13/09	449.0	43.6	9.62	6.38	4.08	15.5	22.0	388	0.0	<5.0	964	<0.50	1.29
		DISSOLVED	08/25/09	429.0	43.4	10.10	6.96	2.72	15.3	21.5	454	0.0	6.50	1,011	<0.50	1.40
		DISSOLVED	08/25/09	474.0	44.1	9.81	6.88	2.65	14.0	22.9	454	0.0	6.50	986	<0.50	1.39
		DISSOLVED	04/01/10	396.0	44.2	9.34	5.93	1.93	13.6	19.4	324	0.0	5.39	987	<0.05	1.55
		DISSOLVED	07/16/10	407.0	46.3	9.22	6.50	1.97	14.1	19.8	404	0.0	4.93	934	<0.05	1.70
		DISSOLVED	04/06/11	436.0	48.1	10.50	3.18	3.51	11.9	19.6	377	0.0	4.43	946	<0.05	1.37
		DISSOLVED	07/26/11	431.4	47.3	9.67	6.58	1.51	14.3	20.1	394	0.0	4.60	984	0.06	1.58

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
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Smelter Hills/Opportunity Ponds WMA
Appendix A

Smelter Hill/Opportunity Ponds
Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Al (µg/L)	Ag (µg/L)	As (µg/L)	B (µg/L)	Ba (µg/L)	Be (µg/L)	Cd (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	Hg (µg/L)	Li (µg/L)	Mo (µg/L)	Ni (µg/L)	Pb (µg/L)	Se (µg/L)	Sr (µg/L)	U (µg/L)	Zn (µg/L)
NW 65	249909	DISSOLVED	09/11/09	<17.80	<0.10	0.64	7.11	44.10	<0.10	<0.20	<0.10	0.19	<0.80		1.16	3.32	<0.10	<0.10	<0.30	278	3.18	<1.90
		DISSOLVED	04/15/10	<1.00	<0.10	0.69	6.59	35.90	<0.20	<0.10	0.10	0.18	<0.40		8.77	3.52	0.26	<2.00	0.14	254	2.26	<1.00
		DISSOLVED	07/14/10	<2.0	<0.20	0.69	7.83	58.40	<0.20	<0.20	<0.20	<0.20	<0.50		<2.0	3.48	<0.20	<0.20	0.26	388	7.15	<1.00
		DISSOLVED	04/13/11	5.25	<0.20	0.69	6.13	35.60	<0.20	<0.20	<0.20	<0.20	<0.50		<2.0	3.16	<0.20	<0.20	<0.20	240	1.81	<0.50
		DISSOLVED	07/27/11	9.94	<0.50	0.63	6.35	31.04	<0.50	<0.50	<0.50	<0.50	<0.50		<2.0	3.22	<0.50	<2.00	<0.50	179	<2.00	0.43
MW-212	138007	DISSOLVED	04/14/09	<6.26	<0.07	0.64	4.15	19.50	<0.20	<0.05	0.05	<0.09	<0.42		2.39	3.61	<0.09	<0.20	<0.21	80	0.52	1.84
		DISSOLVED	09/08/09	<7.60	<0.04	0.67	4.14	19.70	<0.20	<0.05	<0.10	0.12	<0.40		2.43	4.33	<0.10	<0.16	0.12	71	0.52	<0.90
		DISSOLVED	04/20/10	<1.00	<0.10	0.69	2.94	22.30	<0.20	<0.10	<0.10	0.17	<0.40		10.20	3.89	0.16	<2.00	0.12	85	0.55	<1.00
		DISSOLVED	07/15/10	<2.0	<0.20	0.65	5.98	23.30	<0.20	<0.20	<0.20	<0.20	<0.50		<2.00	3.98	<0.20	<0.20	<0.20	81	0.78	<1.00
		DISSOLVED	04/06/11	2.10	<0.20	0.65	3.43	15.50	<0.20	<0.20	<0.20	<0.20	<0.50		<2.00	3.37	<0.20	<0.20	<0.20	62	0.39	<0.50
		DISSOLVED	07/27/11	15.32	<0.10	0.64	3.75	29.44	<0.10	<0.10	<0.10	0.21	0.36		0.51	3.64	0.12	<0.04	0.43	103	1.18	0.50
MW-214	138065	DISSOLVED	04/13/09	<30.41	<0.35	0.89	14.70	15.90	<0.96	<0.24	<0.21	<0.43	<2.05		5.35	0.55	<0.41	<0.99	<1.02	134	1.56	<6.52
DUP		DISSOLVED	04/13/09	<60.82	<0.70	1.88	30.50	32.10	<1.93	<0.48	<0.42	<0.86	<4.11		12.10	1.09	<0.83	<1.97	<2.03	269	3.11	<13.04
		DISSOLVED	08/24/09	<38.00	<0.20	0.85	25.70	23.00	<1.00	<0.25	<0.50	<0.20	<2.00		7.50	0.64	<0.50	<0.76	<0.50	159	2.68	<4.50
		DISSOLVED	03/30/10	<4.04	<0.51	0.99	15.50	24.70	<0.51	<0.50	<0.50	<0.50	<0.50		5.28	0.57	<0.50	<0.50	<1.01	187	3.43	<4.04
		DISSOLVED	07/16/10	<2.0	<0.20	1.05	12.00	19.60	<0.20	<0.20	<0.20	<0.20	<0.50		3.80	1.02	<0.20	<0.20	0.56	119	1.15	<1.00
		DISSOLVED	04/06/11	<2.0	<0.20	1.05	9.72	16.20	<0.20	<0.20	<0.20	<0.20	<0.50		2.02	0.60	<0.20	<0.20	0.25	109	0.89	<0.50
		DISSOLVED	07/26/11	43.51	<0.10	1.15	14.44	34.98	<0.10	<0.10	0.18	0.17	0.45		4.84	0.36	<0.10	<0.04	0.49	174	1.81	<0.20
MW-216	137957	DISSOLVED	04/14/09	<30.41	<0.35	2.29	12.40	23.60	<0.96	<0.24	<0.21	<0.43	<2.05		15.00	4.29	<0.41	<0.99	1.81	439	5.39	<6.52
		DISSOLVED	08/24/09	<17.80	<0.10	3.66	18.20	32.20	<0.10	<0.20	0.35	0.13	1.18		16.40	6.55	<1.90	<0.10	0.34	467	3.61	<1.90
		DISSOLVED	04/20/10	<1.00	<0.10	1.99	7.19	26.70	<0.20	<0.10	0.18	0.10	0.70		20.10	3.78	<0.10	<0.20	1.36	429	6.44	<1.00
		DISSOLVED	07/19/10	<2.0	<0.20	2.20	9.60	33.60	<0.20	<0.20	<0.20	<0.20	<0.50		11.50	3.45	<0.20	<0.20	<0.20	589	6.52	<1.00
		DISSOLVED	04/07/11	12.90	<0.20	1.76	8.41	35.50	<0.20	<0.20	0.21	<0.20	1.20		10.30	3.15	<0.20	<0.20	0.67	659	5.42	<0.50
		DISSOLVED	07/29/11	42.20	<0.10	2.46	11.52	36.23	<0.10	<0.10	0.26	0.15	0.60		18.12	3.27	0.23	<0.04	0.13	624	6.17	<0.20
MW-256	249851	DISSOLVED	04/17/09	<6.08	<0.07	0.56	17.30	51.30	<0.19	<0.05	0.23	<0.09	0.98		4.25	2.36	<0.08	<0.20	1.01	229	1.50	<1.30
		DISSOLVED	08/20/09	<15.10	<0.13	0.52	17.00	55.80	<0.14	<0.16	0.12	<0.10	7.82		4.31	2.44	<0.24	<0.104	0.74	220	1.54	<0.89
		DISSOLVED	03/23/10	1.67	<0.10	0.62	15.50	61.20	<0.10	<0.10	<0.10	0.31	0.46		3.15	2.40	<0.10	0.16	1.42	232	1.90	1.61
		DISSOLVED	07/16/10	<2.0	<0.20	0.54	17.00	59.30	<0.20	<0.20	<0.20	<0.20	0.53		3.78	2.10	<0.20	<0.20	1.06	223	1.43	<1.00
		DISSOLVED	04/13/11	<2.0	<0.20	0.57	14.60	52.00	<0.20	<0.20	<0.20	<0.20	<0.50		<2.0	2.37	<0.20	<0.20	1.13	224	1.45	<0.50
		DISSOLVED	07/27/11	23.76	<1.00	0.51	17.57	41.92	<0.10	<0.10	0.11	0.16	0.24		4.29	2.24	<0.10	<0.04	0.57	165	0.84	<0.20
MW-26	249793	DISSOLVED	04/13/09	<60.82	<0.70	<0.74	15.00	11.90	<1.93	<0.48	3.29	<0.86	<4.11		11.70	2.33	6.24	<1.97	<2.03	451	24.00	<13.04
		DISSOLVED	08/25/09	<38.00	<0.20	<0.50	16.10	13.10	<1.00	<0.25	1.46	<0.20	<2.00		11.50	2.44	<0.50	<0.76	<0.50	444	33.00	<4.50
		DISSOLVED	08/25/09	<38.00	<0.20	<0.50	13.70	13.10	<1.00	<0.25	1.50	<0.20	<2.00		11.30	2.46	<0.50	<0.76	<0.50	449	33.10	<4.50
		DISSOLVED	04/01/10	2.84	<0.10	0.59	9.23	13.60	<0.10	<0.10	1.79	<0.10	0.65		7.07	2.96	0.31	<0.10	0.26	474	48.70	<0.50
		DISSOLVED	07/16/10	3.05	<0.20	0.40	10.80	15.10	<0.20	<0.20	1.80	<0.20	0.60		9.04	3.01	0.43	<0.20	<0.20	574	59.00	<1.00
		DISSOLVED	04/06/11	<10.0	<1.00	<0.90	21.80	12.90	<1.00	<1.00	1.62	<1.00	<2.50		<10.0	2.41	2.33	<1.00	<0.90	488	43.50	<2.50
		DISSOLVED	07/26/11	182.72	<0.50	1.30	15.12	15.43	1.93	1.02	2.45	0.56	3.07		12.01	3.40	2.77	1.08	<0.50	526	52.09	8.53

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Smelter Hill/Opportunity Ponds
Non 5-Yr Samples

				Additional Trace Metals													
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Cerium Ce (µg/L)	Cesium Cs (µg/L)	Gallium Ga (µg/L)	Lanthanum La (µg/L)	Niobium Nb (µg/L)	Neodymium Nd (µg/L)	Palladium Pd (µg/L)	Praseodymium Pr (µg/L)	Rubidium Rb (µg/L)	Thallium Tl (µg/L)	Thorium Th (µg/L)	Tin Sn (µg/L)	Titanium Ti (µg/L)	Tungsten W (µg/L)
NW 65	249909	DISSOLVED	09/11/09	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.77	0.27
		DISSOLVED	04/15/10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.30	<0.10	0.04	<0.10	<0.10	<0.10	0.51	0.29
		DISSOLVED	07/14/10	<0.02	<0.50	<0.02	<0.02	<0.02	<0.02	<0.50	<0.02	<0.50	<0.02	<0.02	<0.02	0.97	0.24
		DISSOLVED	04/13/11	<0.02	<0.50	<0.02	<0.02	<0.50	<0.02	<0.50	<0.02	<0.50	<0.02	<0.02	<0.50	0.74	0.21
		DISSOLVED	07/27/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.16	0.21
MW-212	138007	DISSOLVED	04/14/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	1.19	<0.03	<0.02	<0.05	0.15	0.12
		DISSOLVED	09/08/09	<0.02	<0.04	<0.05	<0.02	<0.04	<0.05	<0.10	<0.02	1.04	<0.03	<0.02	<0.04	0.23	<0.04
		DISSOLVED	04/20/10	<0.10	<0.10	<0.10	<0.10	0.07	<0.10	0.25	<0.10	1.37	<0.10	<0.10	<0.10	<0.20	0.22
		DISSOLVED	07/15/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	1.19	<0.20	<0.20	<0.20	<0.20	<0.20
		DISSOLVED	04/06/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	0.96	<0.20	<0.20	<0.50	0.26	<0.20
		DISSOLVED	07/27/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.21	<0.10	<0.10	<0.10	0.62	0.12
MW-214	138065	DISSOLVED	04/13/09	<0.21	<0.18	<0.19	<0.25	<0.16	<0.20	<0.36	<0.16	0.65	<0.16	<0.09	<0.24	2.77	<0.15
DUP		DISSOLVED	04/13/09	<0.42	<0.36	<0.38	<0.49	<0.31	<0.39	<0.72	<0.32	1.33	<0.33	<0.18	<0.47	5.75	<0.29
		DISSOLVED	08/24/09	0.21	<0.21	<0.25	0.21	<0.20	<0.26	<0.50	0.23	0.91	<0.17	<0.12	<0.21	3.16	<0.25
		DISSOLVED	03/30/10	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50	<0.50	0.85	<0.50	<0.50	<0.50	3.99	<0.50
		DISSOLVED	07/16/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	0.77	<0.20	<0.20	<0.20	1.46	<0.20
		DISSOLVED	04/06/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	0.56	<0.20	<0.20	<0.50	2.24	<0.20
		DISSOLVED	07/26/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.83	<0.10	<0.10	<0.10	3.09	<0.10
MW-216	137957	DISSOLVED	04/14/09	<0.21	<0.18	<0.19	<0.25	<0.16	<0.20	<0.36	<0.16	0.49	<0.16	<0.09	<0.24	2.63	0.74
		DISSOLVED	08/24/09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.14	<0.10	0.82	<0.10	<0.10	<0.10	2.50	<0.10
		DISSOLVED	04/20/10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.38	<0.10	0.58	<0.10	<0.10	<0.10	2.29	0.93
		DISSOLVED	07/19/10	0.21	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	0.66	<0.20	<0.20	<0.20	2.58	0.80
		DISSOLVED	04/07/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	0.62	<0.20	<0.20	<0.50	4.64	0.61
		DISSOLVED	07/29/11	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.30	<1.00	0.67	<1.00	<1.00	<1.00	3.69	0.70
MW-256	249851	DISSOLVED	04/17/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	2.63	<0.03	<0.02	<0.05	1.22	0.12
		DISSOLVED	08/20/09	<0.10	<0.12	<0.10	<0.10	<0.34	<0.13	<0.12	<0.10	2.74	<0.14	<0.18	<0.16	0.99	<0.13
		DISSOLVED	03/23/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	2.90	<0.10	0.16	<0.10	1.34	<0.10
		DISSOLVED	07/16/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.86	<0.20	<0.20	<0.20	1.01	<0.20
		DISSOLVED	04/13/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	2.64	<0.20	<0.20	<0.20	1.45	<0.20
		DISSOLVED	07/27/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.10	<0.10	<0.10	<0.10	0.39	<0.10
MW-26	249793	DISSOLVED	04/13/09	<0.42	<0.36	<0.38	<0.49	<0.31	<0.39	<0.72	<0.32	1.12	<0.33	<0.18	<0.47	9.94	<0.29
		DISSOLVED	08/25/09	0.27	<0.21	<0.25	0.16	<0.20	<0.26	<0.50	<0.11	1.26	<0.17	<0.12	<0.21	8.23	<0.25
		DISSOLVED	08/25/09	0.27	<0.21	<0.25	0.17	<0.20	<0.26	<0.50	<0.11	1.30	<0.17	<0.12	<0.21	8.52	<0.25
		DISSOLVED	04/01/10	0.29	<0.10	<0.10	0.18	<0.20	<0.10	0.17	<0.10	1.31	<0.10	<0.10	<0.10	7.78	0.11
		DISSOLVED	07/16/10	0.54	<0.50	<0.20	0.32	<0.20	<0.20	<0.50	<0.20	1.50	<0.20	<0.20	<0.20	7.45	<0.20
		DISSOLVED	04/06/11	<1.00	<2.50	<0.90	<1.00	<2.50	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00	<2.50	14.90	<1.00
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.00	<0.50	1.24	0.80	<0.50	<0.50	12.20	<0.50

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

						PHYSICAL PARAMETERS								
						FIELD					LAB			
Site ID	GWIC ID	Sample Type	DATE	TIME	SWL	FLOW	pH	SC	TEMP	REDOX	pH	SC	HARDNESS	ALKALINITY
			(MM/DD/YR)	(HRS)	(FT)	(GPM)		(UMHOS)	(C)	(mv)		(UMHOS)	(MG/L)	(MG/L)
MW 26M	249790	DISSOLVED	04/14/09	10:15	12.05	2.0	6.51	1,543	6.98		6.86	1,571	1,099	290
		DISSOLVED	08/25/09	13:50	14.48	3.0	6.64	1,680	8.06	321	7.14	1,685	1,031	258
		DISSOLVED	04/01/10	13:41	13.65	2.5	6.60	1,830	7.95	381	7.90	1,817	1,031	278
		DISSOLVED	07/16/10	13:47	13.81	2.5	6.65	1,790	9.34	283	7.07	1,818	1,014	282
		DISSOLVED	04/06/11	15:47	13.07	2.5	6.74	1,760	7.62	290	6.80	1,626	1,080	300
		DISSOLVED	07/26/11	15:21	14.12	2.0	6.37	1,966	8.60	305	6.64	1,590	1,886	307
MW-31	249794	DISSOLVED	04/20/09	15:30	6.81	3.5	7.21	1,305	9.86	379	7.73	1,419	944	152
		DISSOLVED	08/24/09	14:23	7.07	3.0	6.79	1,710	16.17	226	7.39	1,724	1,084	112
		DISSOLVED	04/20/10	11:36	7.34	2.5	6.71	1,140	5.15	227	7.79	1,112	629	119
		DISSOLVED	07/19/10	10:55	6.05	2.5	6.54	935	12.13	204	7.84	980	507	116
		DISSOLVED	04/07/11	14:21	7.00	2.5	7.77	769	2.97	266	7.65	754	449	118
		DISSOLVED	07/29/11	14:57	6.82	2.0	5.73	804	12.76	311	7.45	691	410	114
MW-31M	249785	DISSOLVED	04/20/09	15:40	18.88	2.5	7.48	129	7.48	366	7.55	692	377	213
		DISSOLVED	08/24/09	13:45	19.55	1.5	7.07	803	11.51	241	7.51	806	416	211
		DISSOLVED	04/15/10	13:54	19.47	2.5	7.17	790	11.11	283	7.86	759	398	194
		DISSOLVED	07/19/10	12:04	19.50	2.5	7.13	690	10.63	315	8.07	654	334	210
		DISSOLVED	04/07/11	13:38	19.37	2.5	7.53	681	9.22	404	7.41	744	374	202
		DISSOLVED	07/29/11	13:49	19.38	2.0	7.09	728	10.58	393	7.37	641	359	211
MW-82	249840	DISSOLVED	04/20/09	13:00	42.38	1.5	6.33	1,610	12.41	210	6.68	1,670	1,151	263
		DISSOLVED	04/15/10	12:23	41.17	2.5	6.42	1,780	10.30	218	6.56	1,796	1,086	268
		DISSOLVED	07/21/10	9:46	41.39	2.5	6.31	1,750	9.59	227	7.65	1,819	1,160	254
		DISSOLVED	04/07/11	14:56	41.13	2.0	6.87	1,660	8.96	243	6.77	1,544	1,089	235
		DISSOLVED	07/28/11	15:03	41.69	2.0	5.04	1,778	10.32	263	6.69	1,430	969	247
MW-82M	249896	DISSOLVED	09/27/11	15:43	35.88	2.0	5.98	2,461	10.69	339	7.12	2,500	1,470	276
MW-85	249843	DISSOLVED	04/20/09	12:10	38.21	8.0	6.69	1,626	9.37	195	6.58	1,632	1,067	206
		DISSOLVED	04/06/10	15:20	38.18	2.5	6.57	1,730	8.38	150	6.65	1,696	1,020	213
		DISSOLVED	07/21/10	10:22	38.31	2.5	6.40	1,690	9.62	160	7.94	1,625	1,020	199
		DISSOLVED	04/13/11	12:49	38.08	2.0	7.00	1,620	8.97	170	6.78	1,524	979	209
		DISSOLVED	07/28/11	13:40	38.20	2.0	5.76	1,731	10.22	187	6.69	1,398	380	227
MW-85M	249897	DISSOLVED	09/27/11	14:23	63.51	2.0	6.17	778	10.96	374	7.42	803	364	203

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE	Ca	Mg	Na	K	Fe	Mn	SiO_2	HCO_3	CO_3	Cl	SO_4	NO_3-N	F
			(MM/DD/YR)	(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)
MW 26M	249790	DISSOLVED	04/14/09	377.0	38.4	9.31	5.87	0.025	11.7	21.2	353	0.0	<5.0	841	<0.50	1.13
		DISSOLVED	08/25/09	351.0	37.6	9.71	6.04	<0.012	10.0	20.4	314	0.0	6.01	745	<0.50	1.15
		DISSOLVED	04/01/10	347.0	39.9	8.86	5.37	<0.001	11.3	19.0	339	0.0	4.87	895	0.07	1.38
		DISSOLVED	07/16/10	340.0	40.0	8.99	5.99	0.012	11.7	19.4	344	0.0	4.84	835	0.23	1.46
		DISSOLVED	04/06/11	364.0	41.5	9.45	5.14	<0.01	10.5	18.3	366	0.0	4.40	859	0.06	1.22
		DISSOLVED	07/26/11	398.7	46.2	10.11	6.13	<0.002	11.0	20.2	374	0.0	4.65	913	0.19	1.34
MW-31	249794	DISSOLVED	04/20/09	291.0	52.8	12.80	7.23	0.222	0.005	15.6	185	0.0	5.05	840	<0.50	2.30
		DISSOLVED	08/24/09	333.0	61.3	18.00	11.00	0.385	0.010	18.4	137	0.0	10.22	967	<0.50	2.59
		DISSOLVED	04/20/10	186.0	39.9	11.40	5.46	0.090	0.005	11.4	145	0.0	5.02	520	0.16	2.13
		DISSOLVED	07/19/10	152.0	31.0	10.20	6.08	0.067	0.003	15.2	141	0.0	5.32	409	0.12	2.55
		DISSOLVED	04/07/11	136.0	26.7	8.90	4.17	0.026	0.002	10.5	144	0.0	4.12	316	0.30	1.72
		DISSOLVED	07/29/11	124.8	24.0	9.72	9.72	0.049	0.003	16.0	139	0.0	6.04	301	0.11	2.04
MW-31M	249785	DISSOLVED	04/20/09	110.0	24.8	18.10	3.41	0.030	0.002	31.5	260	0.0	3.08	186	0.06	0.67
		DISSOLVED	08/24/09	123.0	26.4	18.50	3.19	0.071	0.027	30.5	257	0.0	5.14	221	<0.50	0.55
		DISSOLVED	04/15/10	116.0	26.4	17.60	3.40	<0.002	<0.001	28.2	236	0.0	3.89	232	0.08	0.69
		DISSOLVED	07/19/10	97.8	21.9	16.40	2.80	<0.002	<0.001	27.3	256	0.0	3.37	168	0.09	0.61
		DISSOLVED	04/07/11	110.0	24.1	18.50	2.88	<0.002	<0.001	29.5	249	0.0	3.53	190	0.09	0.48
		DISSOLVED	07/29/11	105.0	23.6	17.73	2.90	0.005	0.001	29.1	257	0.0	3.26	176	0.08	0.51
MW-82	249840	DISSOLVED	04/20/09	404.0	34.5	16.60	10.60	1.15	11.7	21.9	321	0.0	5.75	916	<0.50	3.42
		DISSOLVED	04/15/10	379.0	33.9	16.60	10.30	1.16	11.3	20.2	327	0.0	6.29	883	<0.05	3.16
		DISSOLVED	07/21/10	408.0	34.2	16.80	9.89	1.69	11.5	20.3	310	0.0	6.17	872	0.06	3.84
		DISSOLVED	04/07/11	380.0	34.0	17.00	9.50	1.86	10.3	20.1	287	0.0	6.03	859	0.05	3.14
		DISSOLVED	07/28/11	357.0	33.6	16.36	9.47	1.72	10.3	19.8	301	0.0	5.90	828	<0.01	3.56
MW-82M	249896	DISSOLVED	09/27/11	417.6	103.9	18.04	4.93	0.07	0.119	21.4	336	0.0	6.51	1,333	<0.01	0.50
MW-85	249843	DISSOLVED	04/20/09	366.0	37.1	18.20	8.63	16.20	10.4	22.7	251	0.0	5.34	939	<0.50	3.10
		DISSOLVED	04/06/10	350.0	35.6	17.90	8.16	15.10	9.3	20.3	260	0.0	5.61	863	<0.05	3.41
		DISSOLVED	07/21/10	351.0	34.9	18.00	7.74	14.20	9.3	19.7	243	0.0	5.67	859	0.13	3.51
		DISSOLVED	04/13/11	340.0	31.7	17.00	6.95	12.60	8.1	19.1	255	0.0	5.60	835	<0.05	2.70
		DISSOLVED	07/28/11	336.8	33.9	17.55	7.76	14.99	8.8	19.6	277	0.0	5.52	814	<0.01	3.11
MW-85M	249897	DISSOLVED	09/27/11	104.4	25.0	14.23	2.22	0.0	0.786	22.6	247	0.0	2.59	223	0.07	0.40

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE	Al	Ag	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Li	Mo	Ni	Pb	Se	Sr	U	Zn
			(MM/DD/YR)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW 26M	249790	DISSOLVED	04/14/09	<60.82	<0.70	<0.74	12.50	6.22	<1.93	<0.48	0.51	<0.86	<4.11		10.80	2.30	3.49	<1.97 U	<2.03	429	17.20	13.04
		DISSOLVED	08/25/09	<89.00	<0.50	<1.00	15.60	8.56	<0.50	<1.00	0.56	0.55	<4.00		11.80	3.12	2.12	<0.50	<1.50	496	24.50	<9.50
		DISSOLVED	04/01/10	1.82	<0.10	0.70	8.23	8.51	<0.10	0.14	0.69	<0.10	0.91		6.40	2.95	1.57	<0.10	0.23	447	30.00	<0.81
		DISSOLVED	07/16/10	2.22	<0.20	0.60	10.20	9.92	<0.20	<0.20	0.81	<0.20	0.82		8.22	3.04	2.01	<0.20	<0.20	478	35.60	<1.00
		DISSOLVED	04/06/11	<10.0	<1.00	<0.90	11.70	9.04	<1.00	<1.00	<0.90	<1.00	<2.50		<10.0	2.63	3.80	<1.00	<0.90	477	29.70	<2.50
		DISSOLVED	07/26/11	90.52	<0.50	0.64	14.20	11.17	<0.50	<0.50	1.00	<0.50	5.56		9.75	2.75	3.42	<0.20	<0.50	523	35.99	2.56
MW-31	249794	DISSOLVED	04/20/09	<62.62	<0.72	1.80	17.60	8.06	<1.99	<0.50	<0.43	<0.89	<4.23		20.80	1.68	<0.85	<2.03	<2.09	714	6.78	<13.43
		DISSOLVED	08/24/09	<89.00	<0.50	3.60	39.30	17.00	<0.50	<1.00	<0.50	0.56	<4.00		31.70	2.59	<0.50	<0.50	<1.50	974	4.49	14.50
		DISSOLVED	04/20/10	<1.00	<0.10	3.50	12.00	9.06	<0.20	<0.10	0.23	0.21	0.72	<0.10	22.90	2.43	<0.10	<0.20	0.97	564	6.65	7.93
		DISSOLVED	07/19/10	<2.0	<0.20	4.13	18.60	13.20	<0.20	<0.20	<0.20	<0.20	0.54		13.50	3.19	<0.2	<0.20	1.21	515	4.40	4.35
		DISSOLVED	04/07/11	<2.0	<0.20	4.16	6.74	11.40	<0.20	<0.20	<0.20	<0.20	<0.50		8.85	2.60	<0.2	<0.20	1.01	439	4.14	4.15
		DISSOLVED	07/29/11	32.31	<0.10	4.95	23.07	14.95	<0.10	<0.10	0.13	0.16	0.65		17.38	3.63	<0.10	<0.04	1.03	434	3.23	3.38
MW-31M	249785	DISSOLVED	04/20/09	17.60	<0.07	1.25	7.06	15.60	<0.20	<0.05	0.28	0.26	<0.42		12.40	3.11	0.41	<0.20	<0.21	459	19.90	2.54
		DISSOLVED	08/24/09	68.30	<0.10	1.18	7.35	21.30	<0.10	<0.20	0.53	0.44	5.32		12.80	4.54	6.21	<0.10	0.34	467	3.61	<1.90
		DISSOLVED	04/15/10	<1.00	<0.10	1.57	6.09	21.50	<0.20	<0.10	0.11	0.32	<0.40		20.00	3.23	<0.10	<0.20	0.26	504	24.40	1.76
		DISSOLVED	07/19/10	<2.0	<0.20	1.59	6.85	19.20	<0.20	<0.20	<0.20	<0.20	<0.50		9.48	3.35	<0.20	<0.20	0.21	442	23.50	<1.00
		DISSOLVED	04/07/11	<2.0	<0.20	1.73	5.60	21.70	<0.20	<0.20	<0.20	<0.20	<0.50		6.22	3.15	<0.20	<0.20	0.22	503	21.80	<0.50
		DISSOLVED	07/29/11	26.35	<0.10	1.65	9.72	20.88	<0.10	<0.10	0.13	0.21	0.22		14.89	3.27	<0.10	<0.04	0.32	482	21.49	<0.20
MW-82	249840	DISSOLVED	04/20/09	<62.62	<0.72	2.70	22.50	17.50	<1.99	0.66	6.00	<0.89	11.80		16.50	2.19	1.95	<2.03	<2.09	623	8.10	34.70
		DISSOLVED	04/15/10	<36.0	0.25	0.88	20.10	19.90	<1.01	<1.00	6.06	0.27	<2.00		56.60	2.74	0.61	<0.77	0.57	612	9.72	10.80
		DISSOLVED	07/21/10	4.73	<0.20	0.73	16.40	19.70	<0.20	<0.20	5.43	<0.20	<0.20		8.75	2.76	<0.20	<0.20	0.23	598	12.20	3.37
		DISSOLVED	04/07/11	<10.0	<1.00	<0.90	18.80	18.60	<1.00	<1.00	4.29	<1.00	<2.50		<10.0	2.48	<0.90	<1.00	<0.90	557	8.74	4.34
		DISSOLVED	07/28/11	93.26	<0.50	0.83	22.31	18.40	<0.50	<0.50	4.19	<0.50	0.97		15.65	2.77	<0.50	<0.20	<0.50	582	9.62	4.21
MW-82M	249896	DISSOLVED	09/27/11	103.20	<0.25	1.00	6.86	29.82	<0.25	<0.25	0.98	0.36	1.18		7.79	3.71	2.00	<0.10	0.59	1,269	74.15	4.04
MW-85	249843	DISSOLVED	04/20/09	<60.82	<0.70	71.80	19.90	16.70	<1.93	<0.48	5.95	<0.86	<4.11		15.10	3.54	1.06	<1.97	<2.03	636	11.70	53.50
		DISSOLVED	04/06/10	<7.68	<0.04	62.40	12.10	17.90	<0.20	0.12	5.32	0.05	0.52		18.80	3.97	0.50	0.15	0.26	604	15.00	32.90
		DISSOLVED	07/21/10	3.45	<0.20	61.60	13.70	18.60	<0.20	<0.20	5.47	<0.20	<0.50		9.72	4.10	<0.20	<0.20	0.20	579	16.40	32.60
		DISSOLVED	04/13/11	<10.0	<1.00	59.30	17.10	15.10	<1.00	<1.00	4.40	<1.00	<2.50		<10.0	3.80	1.68	<1.00	<0.90	543	10.80	38.00
		DISSOLVED	07/28/11	111.97	<0.50	66.88	21.30	<0.50	<0.50	<0.50	4.72	<0.50	1.05		16.85	4.17	1.13	0.41	<0.50	581	12.78	41.78
MW-85M	249897	DISSOLVED	09/27/11	38.44	<0.10	0.58	6.03	87.51	<0.10	<0.10	0.48	0.18	0.52		0.84	5.27	3.85	<0.040	0.24	549	26.65	1.69

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE	Additional Trace Metals: Cerium Ce	Cesium Cs	Gallium Ga	Lanthanum La	Niobium Nb	Neodymium Nd	Palladium Pd	Praseodymium Pr	Rubidium Rb	Thallium Tl	Thorium Th	Tin Sn	Titanium Ti	Tungsten W
			(MM/DD/YR)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW 26M	249790	DISSOLVED	04/14/09	<0.42	<0.36	<0.38	<0.49	<0.31	<0.39	<0.72	<0.32	1.03	<0.33	<0.18	<0.47	8.51	<0.29
		DISSOLVED	08/25/09	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50	<0.50	1.37	<0.50	<0.50	<0.50	9.41	<0.50
		DISSOLVED	04/01/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	0.12	<0.10	1.19	<0.10	<0.10	<0.10	7.17	<0.10
		DISSOLVED	07/16/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	1.38	<0.20	<0.20	<0.20	6.75	<0.20
		DISSOLVED	04/06/11	<1.00	<2.50	<0.90	<1.00	<2.50	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00	<2.50	15.50	<1.00
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.12	<0.50	<0.50	<0.50	11.42	<0.50
MW-31	249794	DISSOLVED	04/20/09	<0.43	<0.37	<0.39	<0.50	<0.32	<0.40	<0.74	<0.32	2.26	<0.34	<0.18	<0.49	8.05	<0.30
		DISSOLVED	08/24/09	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50	<0.50	4.62	<0.50	<0.50	<0.50	12.60	<0.50
		DISSOLVED	04/20/10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.43	<0.10	2.00	<0.10	<0.10	<0.10	5.25	0.13
		DISSOLVED	07/19/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.50	<0.20	<0.20	<0.20	3.48	<0.20
		DISSOLVED	04/07/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	1.32	<0.20	<0.20	<0.50	4.14	<0.20
		DISSOLVED	07/29/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	2.05	<0.10	<0.10	0.10	3.16	0.18
MW-31M	249785	DISSOLVED	04/20/09	0.07	<0.04	<0.04	<0.05	<0.03	<0.04	0.12	<0.03	1.13	<0.03	0.02	<0.05	2.55	1.06
		DISSOLVED	08/24/09	0.29	<0.10	<0.10	0.14	<0.10	<0.10	0.14	<0.10	0.82	<0.10	<0.10	<0.10	2.50	1.35
		DISSOLVED	04/15/10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.41	<0.10	1.24	<0.10	<0.10	<0.10	2.01	1.20
		DISSOLVED	07/19/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.2	1.16	<0.20	<0.20	<0.20	1.25	1.16
		DISSOLVED	04/07/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	1.14	<0.20	<0.20	<0.50	2.35	1.09
		DISSOLVED	07/29/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	1.16	<0.10	<0.10	<0.10	2.04	1.21
MW-82	249840	DISSOLVED	04/20/09	<0.43	<0.37	<0.39	<0.50	<0.32	<0.40	<0.74	<0.32	0.73	<0.34	<0.18	<0.49	9.13	<0.30
		DISSOLVED	04/15/10	0.89	<0.26	<0.25	0.30	0.37	<0.26	1.34	<0.11	0.84	0.25	<0.12	<0.21	8.67	<0.25
		DISSOLVED	07/21/10	0.96	<0.50	<0.20	0.40	<0.20	<0.20	<0.50	<0.20	0.76	<0.20	<0.20	<0.20	6.22	<0.20
		DISSOLVED	04/07/11	<1.00	<2.50	<0.90	<1.00	<2.50	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00	<2.50	12.90	<1.00
		DISSOLVED	07/28/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.62	<0.50	<0.50	<0.50	10.29	<0.50
MW-82M	249896	DISSOLVED	09/27/11	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.80	<0.25	<0.25	<0.25	14.64	2.21
MW-85	249843	DISSOLVED	04/20/09	<0.42	<0.36	<0.38	<0.49	<0.31	<0.39	<0.72	<0.32	0.78	<0.33	<0.18	<0.47	9.23	<0.29
		DISSOLVED	04/06/10	1.00	<0.04	<0.05	0.40	0.06	0.20	0.46	0.08	0.93	0.07	0.06	<0.04	6.99	0.20
		DISSOLVED	07/21/10	1.09	<0.50	<0.20	0.45	<0.20	0.22	<0.50	<0.20	0.93	<0.20	<0.20	<0.20	6.70	<0.20
		DISSOLVED	04/13/11	<1.00	<2.50	<0.90	<1.00	<2.50	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00	<2.50	12.20	<1.00
		DISSOLVED	07/28/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.77	<0.50	<0.50	<0.50	9.88	<0.50
MW-85M	249897	DISSOLVED	09/27/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	<0.10	0.71	<0.10	<0.10	<0.10	2.42	3.94

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

						PHYSICAL PARAMETERS								
							FIELD				LAB			
Site ID	GWIC ID	Sample Type	DATE	TIME	SWL	FLOW	pH	SC	TEMP	REDOX	pH	SC	HARDNESS	ALKALINITY
			(MM/DD/YR)	(HRS)	(FT)	(GPM)		(UMHOS)	(C)	(mv)		(UMHOS)	(MG/L)	(MG/L)
MW-90	249844	DISSOLVED	04/23/09	11:05	55.01	3.5	6.86	1,046	9.05	169	6.95	1,058	617	221
		DISSOLVED	08/24/09	16:10	53.62	3.0	6.84	1,148	9.90	144	7.71	1,148	620	217
		DISSOLVED	04/06/10	14:09	55.05	2.5	6.56	1,160	9.13	136	7.22	1,065	595	218
		DISSOLVED	07/21/10	11:11	54.70	2.5	6.60	1,135	11.37	131	0.00	1,132	600	226
		DISSOLVED	04/13/11	13:30	55.34	2.0	7.11	1,086	9.71	146	6.90	947	544	218
		DISSOLVED	07/27/11	15:50	54.39	2.0	5.47	1,137	11.33	169	6.83	946	564	233
MW-90M	249899	DISSOLVED	09/27/11	12:52	55.06	2.0	5.46	1,229	11.70	376	6.43	1,262	570	183
NW-5S	249942	DISSOLVED	10/25/11	15:28	9.13	0.5	7.62	311	15.14	344	6.68	363	132	80
NW-1S-OP	249901	DISSOLVED	09/28/11	13:26	4.69	1.0	6.33	2,058	14.47	334	6.62	2,130	1,141	304
NW-1D-OP	249900	DISSOLVED	No sample											
NW-2S-OP	249904	DISSOLVED	09/28/11	16:11	8.02	1.0	5.31	2,182	16.75	603	7.12	2,250	1,221	116
NW-2D-OP	249903	DISSOLVED	09/28/11	15:05	15.22	1.5	4.99	944	10.04	549	7.32	976	461	231
NW-3S-OP	249906	DISSOLVED	09/29/11	14:24	7.23	1.0	5.52	2,334	10.52	576	6.92	2,430	1,499	221
NW-3D-OP	249905	DISSOLVED	09/29/11	13:31	13.19	1.5	6.92	950	10.10	401	7.38	936	477	191
NW-4S-OP	249908	DISSOLVED	09/29/11	2:36	5.58	1.0	4.38	2,252	14.12	610	6.98	2,110	1,337	172
NW-4D-OP	249907	DISSOLVED	09/29/11	15:45	12.88	1.5	4.29	728	11.34	560	7.46	751	348	217

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE	Ca	Mg	Na	K	Fe	Mn	SiO_2	HCO_3	CO_3	Cl	SO_4	NO_3-N	F
			(MM/DD/YR)	(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)
MW-90	249844	DISSOLVED	04/23/09	212.0	21.4	16.00	8.26	10.40	3.6	23.8	270	0.0	6.31	443	<0.50	5.18
		DISSOLVED	08/24/09	214.0	20.8	15.30	7.70	9.86	3.5	21.7	264	0.0	6.92	426	<0.50	4.92
		DISSOLVED	04/06/10	204.0	20.9	20.90	7.47	9.49	3.4	21.3	266	0.0	6.67	393	<0.05	4.64
		DISSOLVED	07/21/10	206.0	20.9	20.90	7.31	9.08	3.2	20.8	276	0.0	6.78	410	<0.05	4.89
		DISSOLVED	04/13/11	187.0	18.8	13.40	6.36	8.01	2.8	17.5	266	0.0	7.40	409	<0.05	4.52
		DISSOLVED	07/27/11	191.7	20.7	14.41	7.18	9.73	3.1	20.3	284	0.0	7.09	343	<0.01	4.75
MW-90M	249899	DISSOLVED	09/27/11	203.0	15.5	17.53	6.16	0.08	12.3	17.8	223	0.0	6.41	508	<0.01	0.99
NW-5S	249942	DISSOLVED	10/25/11	37.5	9.4	7.91	1.59	0.025	0.012	19.4	97	0.0	3.00	72	0.20	0.34
NW-1S-OP	249901	DISSOLVED	09/28/11	384.5	43.9	12.28	9.65	0.343	14.1	25.5	371	0.0	5.98	992	<0.01	1.43
NW-1D-OP	249900	DISSOLVED	No sample													
NW-2S-OP	249904	DISSOLVED	09/28/11	376.8	68.1	16.97	12.79	0.011	0.004	15.8	141	0.0	7.68	1,239	0.11	3.48
NW-2D-OP	249903	DISSOLVED	09/28/11	132.8	31.3	12.40	2.38	0.070	0.044	22.9	282	0.0	3.59	309	0.06	0.41
NW-3S-OP	249906	DISSOLVED	09/29/11	432.1	102.0	18.50	9.51	3.93	0.373	46.0	269	0.0	7.26	1,316	0.20	0.34
NW-3D-OP	249905	DISSOLVED	09/29/11	139.9	31.1	20.95	2.56	0.045	0.013	21.5	233	0.0	4.63	329	0.08	0.37
NW-4S-OP	249908	DISSOLVED	09/29/11	392.9	86.4	19.61	8.50	0.114	0.012	28.2	210	0.0	9.29	1,210	0.14	0.55
NW-4D-OP	249907	DISSOLVED	09/29/11	101.7	22.9	19.58	2.83	0.049	0.049	21.8	265	0.0	3.54	171	0.10	0.54

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE	Al	Ag	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Li	Mo	Ni	Pb	Se	Sr	U	Zn
			(MM/DD/YR)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-90	249844	DISSOLVED	04/23/09	<30.41	<0.35	196.00	21.10	17.00	<0.96	<0.24	3.01	<0.43	<2.50		12.80	10.70	0.83	<0.99	<1.00	311	6.47	11.90
		DISSOLVED	08/24/09	<89.00	<0.50	188.00	23.30	19.80	<0.50	<1.00	3.30	<0.50	<4.00		13.70	12.20	<0.50	<0.50	<1.50	323	8.19	10.60
		DISSOLVED	04/06/10	<5.0	<0.50	183.00	15.40	18.80	<1.00	<0.50	3.42	<0.50	<0.20		54.50	11.70	0.70	<1.00	<0.50	304	8.48	11.60
		DISSOLVED	07/21/10	10.90	<1.00	183.00	20.30	18.00	<1.00	<1.00	3.24	<1.00	<2.50		<10.0	11.70	<1.00	<1.00	<1.00	317	9.00	8.22
		DISSOLVED	04/13/11	<10.0	<1.00	174.00	18.00	16.40	<1.00	<1.00	2.45	<1.00	<2.50		<10.0	11.40	<0.90	<1.00	<0.90	293	7.63	8.58
		DISSOLVED	07/27/11	76.90	<0.50	179.57	23.03	1.58	<0.50	<0.50	2.70	<0.50	1.07		13.44	12.53	1.15	0.59	<0.50	283	8.87	11.20
MW-90M	249899	DISSOLVED	09/27/11	46.52	<0.25	0.34	22.12	14.31	<0.25	0.97	2.11	0.33	1.93		10.27	0.27	4.09	0.19	<0.25	447	4.24	7.33
NW-5S	249942	DISSOLVED	10/25/11	14.00	<0.10	0.57	8.62	50.85	<0.10	<0.10	<0.10	0.16	1.42		3.07	2.04	0.48	<0.040	<0.10	174	2.01	2.15
NW-1S-OP	249901	DISSOLVED	09/28/11	124.88	<0.25	2.24	21.78	26.21	<0.25	0.26	3.69	0.30	2.23		8.47	3.52	4.29	<0.10	0.52	661	11.90	9.55
NW-1D-OP	249900	DISSOLVED	No sample																			
NW-2S-OP	249904	DISSOLVED	09/28/11	85.90	<0.25	0.53	23.98	22.95	<0.25	<0.25	0.69	0.28	1.69		18.50	2.20	1.57	<0.10	0.84	848	5.86	4.23
NW-2D-OP	249903	DISSOLVED	09/28/11	36.94	<0.10	0.87	5.77	44.10	<0.10	<0.10	0.48	0.18	0.44		5.25	2.96	1.15	0.05	0.41	553	35.12	2.12
NW-3S-OP	249906	DISSOLVED	09/29/11	5,048	<0.25	2.22	17.64	81.14	0.42	<0.25	2.99	2.95	35.97		19.44	1.89	3.80	6.51	0.60	1,238	26.26	21.58
NW-3D-OP	249905	DISSOLVED	09/29/11	49.27	<0.10	1.16	10.25	40.31	<0.10	<0.10	0.33	0.18	0.39		10.83	5.22	0.22	<0.040	0.66	594	23.64	2.77
NW-4S-OP	249908	DISSOLVED	09/29/11	153.30	<0.25	0.74	26.96	18.58	<0.25	<0.25	0.43	0.34	4.34		25.65	2.55	0.72	<0.10	0.81	1,447	11.46	2.84
NW-4D-OP	249907	DISSOLVED	09/29/11	39.36	<0.10	1.52	8.34	32.79	<0.10	<0.10	0.36	0.20	0.28		16.62	5.01	0.44	<0.040	0.36	500	18.01	1.54

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Smelter Hills/Opportunity Ponds WMA
Appendix A

Non 5-Yr Samples

Site ID	GWIC ID	Sample Type	DATE	Additional Trace Metals: Cerium Ce	Cesium Cs	Gallium Ga	Lanthanum La	Niobium Nb	Neodymium Nd	Palladium Pd	Praseodymium Pr	Rubidium Rb	Thallium Tl	Thorium Th	Tin Sn	Titanium Ti	Tungsten W
			(MM/DD/YR)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-90	249844	DISSOLVED	04/23/09	<0.21	<0.18	<0.19	<0.25	<0.16	<0.20	<0.36	<0.16	1.13	<0.16	<0.09	<0.24	5.17	<0.15
		DISSOLVED	08/24/09	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50	<0.50	1.23	<0.50	<0.50	<0.50	4.71	<0.50
		DISSOLVED	04/06/10	0.19	<0.50	<0.50	<0.10	0.26	<0.25	1.25	<0.10	1.24	<0.50	0.15	<0.50	4.42	<0.50
		DISSOLVED	07/21/10	<1.00	<2.50	<1.00	<1.00	<1.00	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00	<1.00	3.74	<1.00
		DISSOLVED	04/13/11	<1.00	<2.50	<0.90	<1.00	<2.50	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00	<2.50	5.62	<1.00
		DISSOLVED	07/27/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.99	<0.50	<0.50	<0.50	4.67	<0.50
MW-90M	249899	DISSOLVED	09/27/11	0.35	<0.25	<0.25	0.27	<0.25	<0.25	<0.25	<0.25	2.11	<0.25	<0.25	<0.25	5.47	<0.25
NW 5S	249942	DISSOLVED	10/25/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.24	<0.10	<0.10	<0.10	0.87	0.13
NW 1S OP	249901	DISSOLVED	09/28/11	0.62	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.48	<0.25	<0.25	<0.25	10.70	0.33
NW 1D OP	249900	DISSOLVED	No sample														
NW-2S-OP	249904	DISSOLVED	09/28/11	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.47	<0.2050	<0.25	<0.25	13.96	<0.25
NW-2D-OP	249903	DISSOLVED	09/28/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	<0.10	0.78	<0.10	<0.10	<0.10	3.20	7.25
NW-3S-OP	249906	DISSOLVED	09/29/11	22.15	1.25	1.66	14.12	<0.25	9.34	<0.25	2.39	11.15	<0.25	6.29	<0.25	83.26	2.08
NW-3D-OP	249905	DISSOLVED	09/29/11	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.98	<0.10	<0.10	<0.10	3.73	0.88
NW 4S OP	249908	DISSOLVED	09/29/11	0.32	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.92	<0.25	<0.25	<0.25	13.87	1.10
NW 4D OP	249907	DISSOLVED	09/29/11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.95	<0.10	<0.10	<0.10	1.95	3.11

NA-not applicable
NR-not reported

Appendix B: Well Logs for 2011 Installed Monitoring Wells

Site Name: RDU8 GW/SW MONITORING WELL * NW-05S
GWIC Id: 249942

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
04N	10W	9	NE¼ NW¼ NE¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.121099	112.847	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
5002.833	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
5004.973	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Sunday, August 07, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	18	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2.14	15.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
5	15	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

Section 7: Well Test Data

Total Depth: 18
Static Water Level: 6
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

112SNGR - SAND AND GRAVEL (PLEISTOCENE)

From	To	Description
0	8	FINE TO MEDIUM GRAVEL WITH SOME SAND, MOIST AT 8'
8	16	SITLY SAND WITH GRAVEL WET MAKING 3-5 GPM
16	18	SANDY GRAVEL MAKING 5GPM EST.

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 8/7/2011

From	To	Description	Cont. Fed?
0	0	GEL EX GROUT	
0	4	3/8 BENTONITE CHIPS	
4	18	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * MW-82M
GWIC Id: 249896

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	26	NE¼ SE¼ SE¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.15366	112.809	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4928.853	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4929.813	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Sunday, July 24, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	110	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-0.96	110	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
100	110	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 110
Static Water Level: 34
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	5	FILL, SANDY GRAVEL DRY
5	25	TAILINGS, GRAY TO DARK GRAY, DRY LOOSE
25	30	TAILINGS AND GRAVEL
30	48	COLOR CHANGE TO RED BROWN AT 36' MEDIUM GRAVEL WITH SOME COARSE GRAVEL OR COBBLES
48	49	SAND
49	56	MEDIUM GRAVEL NOT MAKING ANY WATER
56	59	NO RETURNS
59	70	SAND AND GRAVEL WITH SOME SILT SP-GP
70	76	SAND, GRAVEL, SOME SILT HOLE PRODUCING WATER
76	90	FINE SAND SP PRODUCING LITTLE OR NO WATER
90	92	FINE TO MEDIUM GRAVEL GP
92	95	SILT, COHESIVE MH
95	102	SILT AND CLAY MH-CH LIGHT BROWN
102	110	MEDIUM SAND AND FINE TO MEDIUM GRAVEL HOLE MAKING WATER DARK BROWN

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/24/2011

			Fed?
93	96	#70 SAND	
96	99.5	10-20 SAND	
99.5	110	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * MW-85M
GWIC Id: 249897

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	35	SW¼ NE¼ NW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.14771	112.819	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4958.453	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4961.053	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Friday, August 05, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	155	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2.6	146	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
136	146	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 155
Static Water Level:
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	2	FILL, COVER SOIL
2	45	TAILINGS, VERY LOOSE DRY DARK GRAY ADD WATER TO CONTROL DUST
45	60	SANDY GRAVEL WITH NUMEROUS BROKEN MEDIUM SIZE GRAVEL FRAGMENTS
60	85	SILT OR CLAY COHESIVE MINOR AMOUNTS FINE SAND
85	102	SAND AND FINE GRAVEL WITH SILT COLOR CHANGE TO DARK BORNW AT 85-90 MAKING 5 GPM AT 95'
102	108	GRAVEL MAKING SOME WATER
108	129	SILT AND CLAY COHESIVE WITH INTERBEDS OF FINE GRAVEL AND SAND NOT PRODUCING WATER
129	134	SAND AND FINE GRAVEL PRODUCING WATER
134	135	FINE SAND, ABUNDANT MICA
135	140	CLAY
140	153	FINE TO COARSE SAND WITH SOME GRAVEL SW
153	155	SILTY SAND

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 8/5/2011

			Fed?
127	129	#70 SAND	
129	135.5	10-20 SAND AND CAVE	
135.5	155	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * MW-90M
GWIC Id: 249899

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	34	SW¼ NW¼ SE¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.14042	112.838	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
5020.523	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
5022.043	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Sunday, August 07, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	135	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.52	135	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
125	135	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 135
Static Water Level: 56
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	8	FILL SAND AND GRAVEL, DRY
8	50	TAILINGS, DRY, LOOSE DARK GRAY ADD DRILL WATER FOR DUST CONTROL
50	55	TAILINGS WITH A TRACE OF FINE SAND AND GRAVEL
55	70	GRAVEL, MEDIUM SIZE WELL ROUNDED WITH BROKEN FRAGMENTS SOME SAND
70	75	GRAVEL MAKING WATER 20+ GPM
75	98	GRAVEL WELL SORTED BROKEN GRAVEL FRAGMENTS PRODUCING WATER, WATER DECREASES IN 85'-88' INTERVALS
98	100	GRAVEL WITH FINE SAND
100	115	GRAVEL, SOME SAND PRODUCING WATER
115	135	GRAVEL WITH COARSE SAND, WATER BECOMES LIGHT ORANGE TO BROWN AT APPROX 125', DRILLER ESTIMATES 50-60 GPM

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 8/7/2011

			Fed?
119	121	#70 SAND	
121	124.5	10-20 SAND	
124.5	135	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-01S
GWIC Id: 249901

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	26	SW¼ SE¼ NE¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.15794	112.811	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4889.293	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4889.553	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Wednesday, July 13, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	20	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-0.26	19.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
9	19	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 20
Static Water Level:
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	8	GRAVEL SUBROUNDED TO WELL ROUNDED DRY GP
8	12	GRAVEL, WET GP
12	13	SAND, FINE TO MEDIUM
13	20	GRAVEL, SANDY GP MAKING 10+ GPM

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/13/2011

			Fed?
0	6.5	GEL EX	
6.5	20	SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-01D
GWIC Id: 249900

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	26	SE¼ SE¼ NE¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.15798	112.81	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4888.763	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4891.453	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Sunday, July 31, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	77	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2.69	77	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
67	77	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 77
Static Water Level: -4
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	8	MEDIUM TO COARSE GRAVEL SUBROUNDED TO WELL ROUNDED, GW
8	15	GRAVEL, FINE TO MEDIUM WITH SAND, WET GP
15	20	MEDIUM GRAVEL BROKEN FRAGMENTS 5+ GPM
20	22	CLAY
22	35	FINE GRAVEL AND COARSE SAND WITH SILT AND CLAY INTERBEDS, NOT MAKING WATER
35	37	COARSE GRAVEL OR COBBLES
37	48	GRAVEL WITH SAND AND SOME SILT GP
48	54	FINE TO MEDIUM SAND WITH SOME GRAVEL, 5+ GPM, HOLE HEAVED
54	59	FINE TO MEDIUM SAND
59	66	CLAY, SANDY CL
66	77	SAND AND MEDIUM GRAVEL, MAKING 50 GPM

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/31/2011

			Fed?
0.8	62	GEL EX	
62	64	SAND	
64	66.5	10-20 SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-02S
GWIC Id: 249904

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	25	SW¼ SW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.15334	112.805	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4888.173	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4890.053	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Saturday, July 16, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	20	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.88	18.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
8	18	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 20
Static Water Level: 6
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	9	SAND, SILTY, SOME GRAVEL, SUBROUNDED SM
9	15	GRAVEL, SANDY SUBROUNDED, WET GP
15	20	GRAVEL AND COARSE SAND GP-SP, WET, HOLE HEAVING

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/16/2011

			Fed?
0	5	BENTONITE	
5	20	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-02D
GWIC Id: 249903

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	25	SW¼ SW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.15341	112.805	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4887.093	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4886.653	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Saturday, July 16, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	74.5	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	74.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
64	74	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 74.5
Static Water Level: 14.8
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	13	SAND AND GRAVEL, SP-GP, SUBANGULAR TO SUBROUNDED
13	18	SILTY SAND SM WET
18	35	SILT AND CLAY SOME ZONES ARE COHESIVE LIGHT BROWN TO TAN
35	50	SAND, FINE WITH SOME SILT SP
50	53	CLAY, COHESIVE, MH LIGHT BROWN
53	60	SAND, SILTY; SOME FINE GRAVEL
60	62	CLAY, COHESIVE MH
62	76	GRAVEL AND SAND GP-SP SUBROUNDED TO SUBANGULAR MAKING 50+ GPM

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/16/2011

			Fed?
59.5	61.5	#70 SAND	
61.5	64	10-20 SAND	
64	76	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-03S
GWIC Id: 249906

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	36	SW¼ NE¼ NW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.14786	112.802	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4890.193	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4891.623	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Friday, July 22, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	25	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.43	22	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
12	22	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 25
Static Water Level:
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	15	SAND AND GRAVEL SP-GP
15	25	SILTY, SANDY, SLIGHTLY COHESIVE SILT ML

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/22/2011

			Fed?
10	23.5	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-03D
GWIC Id: 249905

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	36	SW¼ NE¼ NW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.14794	112.802	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4890.133	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4892.003	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Friday, July 22, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	76	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.87	72.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
62.5	72.5	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 76
Static Water Level: 11
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	14	SAND AND SILT WITH SOME FINE GRAVEL SP-ML WET AT 12'
14	20	NO CUTTING RETURNS
20	30	SILTY SAND
30	34	MEDIUM TO COARSE SAND SW PRODUCING SOME WATER
34	70	SILT, AND VERY FINE SAND COHESIVE ML-MH; DID NOT PRODUCE WATER AFTER 15 MIN. SHUT DOWN
70	76	SAND, FINE TO MEDIUM GRAINED, WITH SOME SILT SP

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/22/2011

			Fed?
55	76	COLORADO SILICA SAND	
57.17	59.17	#70 SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-04S
GWIC Id: 249908

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	36	NE¼ SE¼ SW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.13883	112.799	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4888.033	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4889.393	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Saturday, July 23, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	21	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.36	20.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
10.5	20.5	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 21
Static Water Level:
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	10	SANDY GRAVEL, SUBROUNDED, DAMP GP
10	12	SAND AND GRAVEL MOIST TO WET SP-GP
12	14	SAND AND GRAVEL WET SP-GP
14	15	NO RETURNS ADD DRILL WATER
15	17.5	SAND AND GRAVEL WITH SOME SILT WET SP-GP
17.5	21	SILT, SANDY SLIGHTLY COHESIVE ML

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/23/2011

			Fed?
8	21	COLORADO SILICA SAND	

Site Name: RDU8 GW/SW MONITORING WELL * NW-04D
GWIC Id: 249907

Section 1: Well Owner

Owner Name
N/A

Section 2: Location

Township	Range	Section	Quarter Sections
05N	10W	36	NE¼ SE¼ SW¼

County	Geocode
DEER LODGE	

Latitude	Longitude	Geomethod	Datum
46.1389	112.799	SUR-GPS	NAD83

Ground Surface Altitude	Method	Datum	Date
4888.223	SUR-GPS	NAVD88	8/22/2011

Measuring Point Altitude	Method	Datum	Date Applies
4889.733	SUR-GPS	NAVD88	8/22/2011

Addition	Block	Lot

Section 3: Proposed Use of Water
MONITORING (1)

Section 4: Type of Work
Drilling Method: AIR ROTARY

Section 5: Well Completion Date
Date well completed: Saturday, July 23, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	81.5	2

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.51	81.5	2				PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
71.5	81.5	2	20		SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont.

Section 7: Well Test Data

Total Depth: 81.5
Static Water Level:
Water Temperature:

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	8	SAND AND GRAVEL, SUBROUNDED GP
8	10	SILTY SAND SM
10	14	SAND FINE TO MEDIUM WITH SOME SILT AND FINE GRAVEL WET
14	15	SILT COHESIVE ML-MH
15	20	SILTY SAND-SANDY SILT SM-ML WET
20	44	SANDY SILT ML SOME COHESIVE INTERVALS
44	57	SAND, FINE TO MEDIUM SW VERY LOOSE SOME GRAVEL MAKING WATER AT 55'
57	69.5	SANDY SILT AND CLAY
69.5	75	MEDIUM TO COARSE SAND WITH SOME FINE GRAVEL SW WET
75	81.5	FINE TO MEDIUM SAND SW

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: CLAY PARSONS
Company: PARSONS DRILLING
License No: MWC-362
Date Completed: 7/23/2011

			Fed?
68	69	#70 SAND	
69	71	10-20 SAND	
71	81.5	COLORADO SILICA SAND	

Appendix C: Anaconda Regional Water, Waste, and Soils Old Works WMA, Old Works WMA Water-Quality Data

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Old Works WMA
Appendix C

						PHYSICAL PARAMETERS								
							FIELD				LAB			
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	TIME (HRS)	SWL (FT)	FLOW (GPM)	pH	SC (UMHOS)	TEMP (C)	REDOX (mv)	pH	SC (UMHOS)	HARDNESS (MG/L)	ALKALINITY (MG/L)
IW-01	250038	DISSOLVED	06/10/09	10:05	NR	NR	6.91	475	7.40	455	7.02	452	244	118
		DISSOLVED	10/13/10	14:03	NR	NR	5.87	320	8.92	461	7.74	320	149	105
		DISSOLVED	06/23/11	11:30	NR	NR	3.52	508	9.02	504	6.71	532	251	73
MW-204	250041	DISSOLVED	06/08/09	14:45	31.13	2.50	7.39	415	8.30	372	7.36	425	191	157
		DISSOLVED	07/01/10	10:30	30.76	2.50	6.54	440	9.01	402	7.72	450	214	193
		Total Rec	07/01/10	10:30	30.76	2.50	6.54	440	9.01	402			248	
		DISSOLVED	06/17/11	10:47	30.78	2.00	7.32	477	8.33	437	7.32	457	234	154
		Total Rec	06/17/11	10:47	30.78	2.00	6.81	477	8.33	437			221	
MW-206	250042	DISSOLVED	06/08/09	17:15	31.22	2.50	7.28	535	8.50	381	7.39	531	242	198
		DISSOLVED	07/01/10	12:26	30.66	2.50	6.81	515	9.99	378	7.81	525	243	237
		Total Rec	07/01/10	12:26	30.66	2.50	6.81	515	9.99	378			291	
		DISSOLVED	06/17/11	15:12	30.46	2.00	6.81	634	8.58	467	7.31	655	316	195
		Total Rec	06/17/11	15:12	30.46	2.00	6.81	634	8.58	467			283	
MW-206D	250054	DISSOLVED	06/08/09	17:50	37.58	2.50	7.29	495	8.60	374	7.58	501	221	175
		DISSOLVED	07/01/10	12:02	36.25	2.50	6.58	475	9.62	383	7.64	460	207	245
		Total Rec	07/01/10	13:02	36.25	2.50	6.58	475	9.62	383			279	
		DISSOLVED	06/17/11	15:42	36.56	0.75	6.90	559	9.18	492	7.30	586	262	185
		Total Rec	06/17/11	15:42	36.56	0.75	6.90	559	9.18	492			259	
MW-207	250043	DISSOLVED	05/05/09	12:00	85.03	2.00	7.11	526	12.42	431	8.07	537	283	172
		DISSOLVED	06/11/09	0:00	78.52	3.00	7.41	620	9.51	324	7.39	581	299	173
		DISSOLVED	09/21/09	10:55	72.47	7.50	6.65	825	10.42	335	7.63	710	341	178
		DISSOLVED	03/23/10	13:12	84.27	3.00	6.70	565	9.81	392	7.57	510	279	163
		DISSOLVED	07/01/10	13:45	79.61	3.00	6.63	600	10.78	351	7.75	545	266	176
		Total Rec	07/01/10	13:45	79.61	3.00	6.63	600	10.78	351			343	
		DISSOLVED	04/04/11	13:14	88.11	2.00	6.75	571	9.54	346	7.20	586	288	172
		Total Rec	04/04/11	13:14	88.11	2.00	6.75	571	9.54	346			302	
		DISSOLVED	06/17/11	9:20	83.25	1.50	6.62	565	9.38	397	7.06	615	282	178
		Total Rec	06/17/11	9:20	83.25	1.50	6.62	565	9.38	397			296	
MW-208	250044	DISSOLVED	06/10/09	13:45	45.94	2.50	7.60	270	76.00	372	7.64	292	136	117
		DISSOLVED	06/30/10	14:34	45.49	2.50	6.62	245	8.99	344	8.11	240	119	160
		Total Rec	06/30/10	14:34	45.49	2.50	6.62	245	8.99	344			130	
		DISSOLVED	06/21/11	10:50	43.31	2.40	7.81	245	7.91	329	7.63	264	125	115
		Total Rec	06/21/11	10:50	43.31	2.40	7.81	245	7.91	329			115	
MW-209	250045	DISSOLVED	06/12/09	11:00	52.70	1.00	7.57	573	8.16	333	7.67	561	279	157
		DISSOLVED	06/29/10	15:18	52.79	1.00	6.94	470	10.00	365	8.15	465	235	202
		Total Rec	06/29/10	15:18	52.79	1.00	6.94	470	10.00	365			248	
		DISSOLVED	06/20/11	15:15	52.20	2.40	6.80	450	8.65	366	7.43	487	232	163
		Total Rec	06/20/11	15:15	52.20	2.40	6.80	450	8.65	366			229	

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Old Works WMA
Appendix C

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Fe (mg/L)	Mn (mg/L)	SiO_2 (mg/L)	HCO_3 (mg/L)	CO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)	F (mg/L)
IW-01	250038	DISSOLVED	06/10/09	74.8	14.00	6.07	1.84	<0.008	0.002	13.8	144	0.0	2.0	126	1.31	0.57
		DISSOLVED	10/13/10	45.7	8.55	4.56	1.52	0.013	0.010	12.3	128	0.0	1.8	54	0.32	0.60
		DISSOLVED	06/23/11	77.7	13.94	5.69	1.69	0.029	0.099	13.2	89	0.0	1.6	187	0.98	0.66
MW-204	250041	DISSOLVED	06/08/09	55.2	12.80	6.82	1.74	<0.002	0.004	12.3	191	0.0	6.1	50	0.63	0.55
		DISSOLVED	07/01/10	62.1	14.30	7.03	1.70	<0.002	<0.001	11.5	235	0.0	6.7	73	0.63	0.54
		Total Rec	07/01/10	75.1	14.70	7.75	1.92	0.025	<0.003							
		DISSOLVED	06/17/11	69.7	14.56	7.44	1.71	<0.004	<0.002	11.2	188	0.0	7.4	79	0.70	0.41
		Total Rec	06/17/11	64.9	14.27	7.35	1.81	0.051	<0.004	NR						
MW-206	250042	DISSOLVED	06/08/09	72.9	14.50	8.08	2.09	0.004	0.019	13.4	242	0.0	8.8	61	2.99	0.50
		DISSOLVED	07/01/10	75.3	13.40	8.24	1.98	<0.002	<0.001	12.5	289	0.0	8.6	60	2.55	0.56
		Total Rec	07/01/10	91.0	15.40	9.71	2.24	0.029	<0.003							
		DISSOLVED	06/17/11	97.6	17.57	9.87	2.18	<0.004	<0.002	12.0	238	0.0	13.0	96	4.66	0.42
		Total Rec	06/17/11	86.5	16.33	9.63	2.22	0.040	0.007							
MW-206D	250054	DISSOLVED	06/08/09	66.1	13.50	8.18	1.86	0.006	0.035	13.5	213	0.0	7.2	56	2.82	0.50
		DISSOLVED	07/01/10	62.8	12.30	8.36	1.73	0.008	0.013	12.8	299	0.0	6.7	46	2.42	0.55
		Total Rec	07/01/10	87.4	14.80	10.40	2.10	0.026	0.016							
		DISSOLVED	06/17/11	80.8	14.59	9.50	1.83	0.023	0.011	12.2	225	0.0	11.0	73	3.43	0.44
		Total Rec	06/17/11	79.1	15.02	9.81	2.04	0.047	0.011							
MW-207	250043	DISSOLVED	05/05/09	86.3	16.50	6.28	2.75	0.808	<0.001	14.7	210	0.0	12.1	98	6.65	<0.50
		DISSOLVED	06/11/09	91.8	17.00	7.04	2.97	<0.002	<0.001	15.9	211	0.0	15.5	90	7.29	<0.50
		DISSOLVED	09/21/09	105.0	19.10	7.01	2.76	0.003	0.001	14.0	217	0.0	10.2	155	4.15	0.68
		DISSOLVED	03/23/10	85.3	16.10	6.64	2.53	0.003	<0.001	13.4	199	0.0	14.5	101	2.83	0.72
		DISSOLVED	07/01/10	81.4	15.20	6.48	2.70	<0.002	<0.001	15.3	214	0.0	15.5	102	6.28	0.57
		Total Rec	07/01/10	107.0	18.50	7.76	3.12	0.003	<0.003							
		DISSOLVED	04/04/11	88.6	16.30	7.34	2.60	0.015	<0.001	14.3	510	0.0	15.4	72	3.33	0.51
		Total Rec	04/04/11	93.8	16.50	7.34	2.68	0.109	<0.003							
		DISSOLVED	06/17/11	86.5	15.93	7.22	2.71	0.001	<0.000	14.1	217	0.0	13.0	75	5.47	0.47
		Total Rec	06/17/11	91.5	16.41	7.88	3.10	<0.025	<0.013							
MW-208	250044	DISSOLVED	06/10/09	41.0	8.12	3.17	1.34	<0.008	<0.001	12.6	143	0.0	1.9	23	0.23	0.41
		DISSOLVED	06/30/10	35.6	7.27	2.81	1.21	<0.003	<0.001	10.3	195	0.0	0.9	15	0.13	0.44
		Total Rec	06/30/10	39.9	7.49	3.03	1.30	0.031	<0.003							
		DISSOLVED	06/21/11	38.1	7.22	2.94	1.23	0.006	<0.000	10.1	140	0.0	1.1	11	0.08	0.34
		Total Rec	06/21/11	34.8	6.87	2.63	1.24	<0.025	<0.013							
MW-209	250045	DISSOLVED	06/12/09	87.5	14.80	6.70	1.97	0.010	<0.001	14.6	192	0.0	<5.0	119	1.82	0.78
		DISSOLVED	06/29/10	72.9	12.90	5.86	1.76	<0.002	<0.001	13.4	246	0.0	2.5	81	0.69	0.81
		Total Rec	06/29/10	78.6	12.50	5.52	74.40	0.036	<0.005							
		DISSOLVED	06/20/11	73.3	11.99	5.71	1.63	0.002	<0.000	12.7	199	0.0	3.1	65	0.66	0.65
		Total Rec	06/20/11	72.7	11.51	5.11	1.77	<0.025	<0.013							

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Old Works WMA
Appendix C

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Al (µg/L)	Ag (µg/L)	As (µg/L)	B (µg/L)	Ba (µg/L)	Be (µg/L)	Cd (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	Hg (µg/L)	Li (µg/L)	Mo (µg/L)	Ni (µg/L)	Pb (µg/L)	Se (µg/L)	Sr (µg/L)	U (µg/L)	Zn (µg/L)
IW-01	250038	DISSOLVED	06/10/09	<0.35	<0.06	0.68	12.3	63.8	<0.15	3.44	<0.13	<0.12	608		8.00	3.53	2.22	2.44	0.74	191	0.26	602
		DISSOLVED	10/13/10	3.33	<0.20	0.83	9.0	34.6	<0.20	3.29	0.21	<0.20	1,120		7.28	1.39	2.56	0.47	0.30	119	<0.20	590
		DISSOLVED	06/23/11	193	<0.50	1.05	8.5	39.1	<0.50	6.91	2.26	<0.50	2,333		9.81	2.48	7.03	0.24	0.74	162	0.65	1,411
MW-204	250041	DISSOLVED	06/08/09	<7.68	<0.04	0.67	11.8	35.7	<0.20	1.13	<0.10	0.09	258		5.84	3.62	0.38	<0.15	0.48	173	1.62	338
		DISSOLVED	07/01/10	<2.00	<0.20	0.62	10.6	34.6	<0.20	1.26	<0.20	<0.20	249		4.76	3.63	<0.20	<0.20	0.49	168	2.53	406
		Total Rec	07/01/10	<5.00	<0.50	0.51		36.1	<0.50	1.33	<0.50	<0.50	257		8.87	3.71	<0.50	<0.50	<0.50	174	2.45	433
		DISSOLVED	06/17/11	28.48	<0.50	0.66	11.4	38.4	<0.50	1.36	<0.50	<0.50	262		7.21	3.65	0.77	<0.20	0.50	181	2.67	369
		Total Rec	06/17/11	29.08	<1.25	0.62		40.4	0.04	1.39	<1.25	0.40	265		5.75	3.97	1.38	<0.50	0.38	188	2.79	369
MW-206	250042	DISSOLVED	06/08/09	<7.68	<0.04	0.58	15.1	39.8	<0.20	9.93	<0.10	0.09	115		7.88	3.02	1.03	<0.15	1.94	208	<0.02	1,606
		DISSOLVED	07/01/10	<2.00	<0.20	0.56	14.1	43.9	<0.20	9.01	<0.20	<0.20	101		5.72	3.00	0.71	<0.20	2.54	195	<0.20	1,532
		Total Rec	07/01/10	<5.00	<0.50	<0.50		47.9	<0.50	9.51	<0.50	<0.50	120		9.45	3.29	0.86	<0.50	2.12	200	<0.50	1,692
		DISSOLVED	06/17/11	36.19	<0.50	0.68	14.6	48.2	<0.50	10.82	0.11	<0.50	121		7.86	3.22	1.67	<0.200	3.26	228	<0.50	1,782
		Total Rec	06/17/11	49.10	<1.25	1.55		48.1	<1.25	10.62	<1.25	0.43	123		9.01	3.47	2.32	2.22	2.91	230	<1.25	1,685
MW-206D	250054	DISSOLVED	06/08/09	<7.68	<0.04	0.55	15.1	48.3	<0.20	7.57	0.23	0.04	76.4		7.78	2.45	0.85	<0.15	1.93	185	0.04	983
		DISSOLVED	07/01/10	<2.00	<0.20	0.54	13.3	46.0	<0.20	6.09	<0.20	<0.20	66.2		5.90	2.32	0.31	<0.20	1.92	167	<0.20	725
		Total Rec	07/01/10	<5.00	<0.50	<0.50		52.7	<0.50	7.20	<0.50	<0.50	81.5		9.59	2.50	0.48	<0.50	1.70	186	<0.50	953
		DISSOLVED	06/17/11	31.64	<0.50	0.59	13.8	52.6	<0.50	7.96	0.12	<0.50	80.3		7.62	2.53	1.26	<0.200	2.52	188	<0.50	983
		Total Rec	06/17/11	30.29	<1.25	0.64		57.3	<1.25	8.18	<1.25	0.40	80.3		5.65	2.82	1.95	<0.50	2.44	208	<1.25	996
MW-207	250043	DISSOLVED	05/05/09	12.00	<0.07	0.69	15.3	57.1	<0.19	<0.05	0.09	0.09	0.58		5.44	2.09	<0.08	<0.20	1.32	217	1.28	<1.29
		DISSOLVED	06/11/09	<7.68	<0.04	0.75	18.6	61.9	<0.20	<0.05	<0.10	<0.04	0.46		6.03	2.11	<0.10	<0.15	1.10	260	1.22	<0.91
		DISSOLVED	09/21/09	<7.60	<0.04	0.75	15.8	64.7	<0.20	<0.05	<0.10	0.32	1.06		5.76	2.34	<0.10	<0.16	1.14	259	1.75	<0.90
		DISSOLVED	03/23/10	2.62	<0.10	0.81	15.1	52.1	<0.10	<0.10	0.12	0.17	0.74		3.96	2.36	<0.10	0.15	1.25	213	1.32	1.40
		DISSOLVED	07/01/10	<2.00	<0.20	0.73	16.8	55.9	<0.20	<0.20	<0.20	<0.20	1.93		3.21	2.04	<0.20	<0.20	1.26	229	1.23	<1.00
		Total Rec	07/01/10	9.18	<0.50	0.56		61.4	<0.50	<0.50	<0.50	<0.50	2.74		<0.50	2.07	<0.50	<0.50	0.96	248	1.27	<2.50
		DISSOLVED	04/04/11	26.50	<0.20	0.81	14.0	51.3	<0.20	<0.20	<0.20	<0.20	0.58		3.09	1.94	<0.20	<0.20	1.23	232	1.11	<0.50
		Total Rec	04/04/11	76.20	0.97	0.80	16.8	51.6	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	2.12	<0.50	<0.50	0.99	234	1.30	<1.30
		DISSOLVED	06/17/11	23.87	<0.50	0.67	18.1	57.4	<0.50	<0.50	<0.50	<0.50	0.33		7.76	2.01	0.48	<0.200	1.14	225	1.08	<1.00
		Total Rec	06/17/11	11.29	<1.25	0.68		60.3	<1.25	<1.25	<1.25	<1.25	<1.25		<5.00	2.28	0.95	0.47	0.91	259	1.22	<2.50
MW-208	250044	DISSOLVED	06/10/09	<0.35	<0.06	0.72	6.0	25.1	<0.15	<0.11	<0.13	<0.12	0.42		5.86	3.07	<0.08	<0.05	0.29	98	0.64	<0.48
		DISSOLVED	06/30/10	<2.00	<0.20	0.70	4.6	22.1	<0.20	<0.20	<0.20	<0.20	<0.5		4.14	3.42	<0.20	<0.20	<0.20	87	0.66	<1.00
		Total Rec	06/30/10	8.91	<0.50	0.58		21.8	<0.50	<0.50	<0.50	<0.50	<1.30		7.06	3.35	<0.50	<0.50	<0.50	81	0.60	<2.50
		DISSOLVED	06/21/11	18.23	<0.50	0.71	4.2	22.5	<0.50	<0.50	<0.50	<0.50	<0.50		8.45	3.39	<0.50	<0.20	0.11	80	0.49	<1.00
		Total Rec	06/21/11	6.90	<1.25	0.70		22.4	<1.25	<1.25	<1.25	<1.25	<1.25		<5.00	3.65	0.50	0.24	<1.25	81	0.53	<2.50
MW-209	250045	DISSOLVED	06/12/09	11.90	<0.04	0.47	11.1	51.9	<0.20	7.99	0.12	0.13	0.56		10.40	1.65	0.49	<0.15	0.87	195	0.22	1,168
		DISSOLVED	06/29/10	<2.00	<0.20	0.37	10.3	41.8	<0.20	6.22	<0.20	<0.20	<0.5		7.27	1.70	<0.20	<0.20	0.40	163	<0.20	951
		Total Rec	06/29/10	<10.00	<1.00	<0.90	12.6	42.7	<1.00	6.40	<0.90	<1.00	<2.50		<10.00	1.92	<0.90	<1.00	<0.90	165	<1.00	936
		DISSOLVED	06/20/11	26.55	<0.50	0.35	10.3	45.1	<0.50	5.71	<0.50	<0.50	<0.50		12.42	1.68	0.80	<0.200	0.41	143	0.13	805
		Total Rec	06/20/11	6.75	<1.25	<1.25		46.8	<1.25	5.61	<1.25	0.52	<1.25		8.83	1.98	1.38	<0.50	<1.25	164	<1.25	763

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Old Works WMA
Appendix C

				Additional Trace Metals													
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Cerium Ce (µg/L)	Cesium Cs (µg/L)	Gallium Ga (µg/L)	Lanthanum La (µg/L)	Niobium Nb (µg/L)	Neodymium Nd (µg/L)	Palladium Pd (µg/L)	Praseodymium Pr (µg/L)	Rubidium Rb (µg/L)	Thallium Tl (µg/L)	Thorium Th (µg/L)	Tin Sn (µg/L)	Titanium Ti (µg/L)	Tungsten W (µg/L)
IW-01	250038	DISSOLVED	06/10/09	<0.05	0.14	<0.07	0.22	<0.03	0.13	<0.10	0.03	3.02	0.05	<0.02	0.11	1.14	0.08
		DISSOLVED	10/13/10	<0.20	<0.50	<0.20	0.27	<0.50	<0.20	<0.50	<0.20	2.51	<0.20	<0.20	<0.50	0.48	<0.20
		DISSOLVED	06/23/11	0.42	<0.50	<0.50	0.74	<0.50	<0.50	<0.50	<0.50	2.78	0.11	<0.50	<0.50	2.87	<0.50
MW-204	250041	DISSOLVED	06/08/09	<0.02	0.13	<0.050	0.27	<0.04	0.16	<0.10	0.04	2.66	<0.03	<0.02	<0.04	0.29	0.06
		DISSOLVED	07/01/10	<0.20	<0.50	<0.20	0.41	<0.20	0.25	<0.50	<0.20	2.59	<0.20	<0.20	<0.20	0.65	<0.20
		Total Rec	07/01/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	2.70	<0.50	<0.50		0.58	<0.50
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	0.28	<0.50	<0.50	<0.50	<0.50	2.69	0.17	<0.50	<0.50	1.15	<0.50
		Total Rec	06/17/11	<1.25	<1.25	<1.25	0.29	<1.25	<1.25	<1.25	<1.25	2.88	<1.25	<1.25	<1.25	1.94	<1.25
MW-206	250042	DISSOLVED	06/08/09	<0.02	0.06	<0.05	0.08	<0.04	0.66	<0.10	<0.02	1.81	0.06	<0.02	<0.04	1.08	0.36
		DISSOLVED	07/01/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.73	<0.20	<0.20	<0.20	0.54	0.29
		Total Rec	07/01/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	1.90	<0.50	<0.50		0.60	0.75
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.89	0.24	<0.50	<0.50	1.57	0.28
		Total Rec	06/17/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.03	<1.25	<1.25	<1.25	3.42	0.31
MW-206D	250054	DISSOLVED	06/08/09	<0.02	0.07	<0.05	0.04	<0.04	<0.05	<0.10	<0.02	1.90	0.06	<0.02	<0.04	1.00	0.22
		DISSOLVED	07/01/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.89	<0.20	<0.20	<0.20	0.43	0.26
		Total Rec	07/01/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	2.17	<0.50	<0.50		<0.50	<0.50
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.94	0.23	<0.50	<0.50	1.17	0.20
		Total Rec	06/17/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.11	<1.25	<1.25	<1.25	1.63	<1.25
MW-207	250043	DISSOLVED	05/05/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	3.89	<0.03	<0.02	<0.05	0.86	1.51
		DISSOLVED	06/11/09	<0.02	<0.04	<0.05	0.03	<0.04	<0.05	<0.10	<0.02	4.33	<0.03	<0.02	<0.04	1.02	1.41
		DISSOLVED	09/21/09	<0.02	<0.04	<0.05	0.02	<0.10	<0.04	<0.10	<0.02	3.85	<0.03	<0.02	<0.04	1.81	1.74
		DISSOLVED	03/23/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	3.71	<0.10	<0.10	<0.10	0.93	1.77
		DISSOLVED	07/01/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	3.94	<0.20	<0.20	<0.20	0.97	1.27
		Total Rec	07/01/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	4.32	<0.50	<0.50		1.06	1.42
		DISSOLVED	04/04/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	3.73	<0.20	<0.20	<0.50	2.03	1.50
		Total Rec	04/04/11	<0.50	<1.30	69.80	<0.50	<1.30	<0.50	<1.30	<0.50	4.11	<0.50	<0.50		4.45	1.73
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.31	0.21	<0.50	<0.50	1.20	1.12
		Total Rec	06/17/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	4.71	<1.25	<1.25	<1.25	2.06	1.21
MW-208	250044	DISSOLVED	06/10/09	<0.05	0.07	<0.07	<0.03	<0.03	<0.07	<0.10	<0.02	1.84	<0.03	<0.02	<0.05	<0.32	0.17
		DISSOLVED	06/30/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	1.75	<0.20	<0.20	<0.20	<0.20	0.26
		Total Rec	06/30/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	1.74	<0.50	<0.50		<0.50	<0.50
		DISSOLVED	06/21/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.77	<0.50	<0.50	<0.50	0.10	0.16
		Total Rec	06/21/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	1.83	<1.25	<1.25	<1.25	0.58	<1.25
MW-209	250045	DISSOLVED	06/12/09	<0.02	<0.04	<0.05	0.05	<0.04	<0.05	<0.10	<0.02	2.97	<0.03	<0.02	<0.04	1.78	0.07
		DISSOLVED	06/29/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.71	<0.20	<0.20	<0.20	0.72	<0.20
		Total Rec	06/29/10	<1.00	<2.50	<0.90	<1.00	<0.90	<1.00	<2.50	<1.00	2.78	<1.00	<1.00		<1.00	<1.00
		DISSOLVED	06/20/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.51	<0.50	<0.50	<0.50	1.01	<0.50
		Total Rec	06/20/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.76	<1.25	<1.25	<1.25	1.62	<1.25

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soils
Old Works WMA
Appendix C

						PHYSICAL PARAMETERS								
							FIELD				LAB			
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	TIME (HRS)	SWL (FT)	FLOW (GPM)	pH	SC (UMHOS)	TEMP (C)	REDOX (mv)	pH	SC (UMHOS)	HARDNESS (MG/L)	ALKALINITY (MG/L)
MW-213	138022	DISSOLVED	06/08/09	13:30	33.92	2.50	6.61	615	7.70	402	6.73	614	262	98
		DISSOLVED	08/28/09	14:50	35.40	3.00	6.64	550	7.48	363	7.11	570	285	132
		DISSOLVED	07/01/10	9:47	33.50	3.00	6.16	440	8.23	417	8.23	455	214	169
		Total Rec	07/01/10	9:47	33.50	3.00	6.16	440	8.23	417			240	
		DISSOLVED	06/17/11	13:24	33.31	2.00	6.55	473	8.24	495	6.96	499	221	14
		Total Rec	06/17/11	13:24	33.31	2.00	6.55	473	8.24	495			215	
MW-240	250047	DISSOLVED	06/10/09	16:45	68.88	3.00	7.42	615	9.15	318	7.48	595	291	176
		DISSOLVED	07/01/10	13:05	68.53	3.00	6.62	480	11.46	358	7.52	485	219	212
		Total Rec	07/01/10	13:05	68.53	3.00	6.62	480	11.46	358			270	
		DISSOLVED	6/21/11	11:50	68.26	2.00	7.35	485	10.00	347	7.16	544	236	175
		Total Rec	06/21/11	11:50	68.26	2.00	7.35	485	10.00	347			233	
MW-241	250048	DISSOLVED	06/10/09	15:40	37.89	2.50	7.01	355	8.00	357	7.09	335	160	125
		DISSOLVED	06/30/10	13:38	37.49	2.00	6.33	335	9.25	396	8.15	340	164	181
		Total Rec	06/30/10	13:38	37.49	2.00	6.33	335	9.25	396			185	
		DISSOLVED	06/20/11	16:05	36.20	2.00	6.74	366	9.10	424	7.18	398	179	132
		Total Rec	06/20/11	16:05	36.20	2.00	6.74	366	9.10	424			166	
MW-242	250049	DISSOLVED	06/09/09	16:35	44.86	2.50	7.43	435	8.80	367	7.55	417	202	160
		DISSOLVED	06/29/10	13:29	43.28	2.00	6.53	380	9.51	377	8.33	370	186	196
		Total Rec	06/29/10	13:29	43.28	2.00	6.53	380	9.51	377			219	
		DISSOLVED	06/17/11	11:15	44.65	2.40	6.90	396	8.37	440	7.42	398	204	163
		Total Rec	06/17/11	11:15	44.65	2.40	6.90	396	8.37	440			203	
MW-251	250014	DISSOLVED	05/05/09	17:10	69.05	2.20	7.33	635	8.07	573	7.69	641	350	164
		DISSOLVED	06/12/09	13:00	54.98	0.20	7.68	595	10.40	308	7.62	577	292	161
		DISSOLVED	09/23/09	11:36	55.80	1.00	7.16	490	9.39	345	7.42	500	235	146
		DISSOLVED	03/19/10	12:33	69.19	1.00	6.86	480	7.87	379	7.80	475	231	162
		DISSOLVED	06/30/10	12:59	53.28	1.00	6.43	455	9.19	366	8.01	410	228	178
		Total Rec	06/30/10	12:59	53.28	1.00	6.43	455	9.19	366			282	
		DISSOLVED	03/31/11	14:41	71.52	2.00	7.18	469	8.59	348	7.40	480	240	157
		Total Rec	03/31/11	14:41	71.52	2.00	7.18	469	8.59	348			234	
		DISSOLVED	06/20/11	14:15	55.15	2.50	6.61	444	9.23	338	7.42	478	220	166
		Total Rec	06/20/11	14:15	55.15	2.50	6.61	444	9.23	338			216	

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
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Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Fe (mg/L)	Mn (mg/L)	SiO_2 (mg/L)	HCO_3 (mg/L)	CO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)	F (mg/L)
MW-213	138022	DISSOLVED	06/08/09	77.4	16.60	6.77	1.94	<0.002	0.447	13.5	120	0.0	<5.0	230	0.93	0.55
		DISSOLVED	08/28/09	88.6	15.60	7.72	1.81	<0.002	0.058	12.0	161	0.0	<5.0	151	2.14	0.65
		DISSOLVED	07/01/10	64.4	13.00	6.16	1.61	<0.002	0.103	11.2	206	0.0	1.9	103	0.64	0.74
		Total Rec	07/01/10	74.1	13.40	6.78	1.80	0.030	0.105							
		DISSOLVED	06/17/11	67.7	12.62	6.30	1.55	<0.004	0.061	10.6	177	0.0	2.3	92	0.82	0.64
		Total Rec	06/17/11	65.1	12.76	6.56	1.83	0.047	0.059							
MW-240	250047	DISSOLVED	06/10/09	89.7	16.20	8.74	1.84	<0.002	0.192	15.9	214	0.0	7.2	96	6.40	<0.50
		DISSOLVED	07/01/10	67.9	11.90	7.44	1.66	<0.002	0.144	14.9	259	0.0	7.6	52	4.21	0.59
		Total Rec	07/01/10	85.2	14.00	8.84	1.76	0.032	0.164							
		DISSOLVED	6/21/11	73.2	13.04	8.75	1.38	0.003	0.149	14.0	213	0.0	10.4	46	4.31	0.45
		Total Rec	06/21/11	71.5	13.29	9.34	1.67	<0.001	<0.001							
MW-241	250048	DISSOLVED	06/10/09	46.9	10.40	5.88	1.51	<0.008	<0.001	13.8	152	0.0	3.5	51	0.44	0.54
		DISSOLVED	06/30/10	48.5	10.40	5.88	1.59	<0.002	<0.001	11.2	221	0.0	4.0	36	0.45	0.68
		Total Rec	06/30/10	55.9	11.10	6.48	1.72	0.032	<0.003							
		DISSOLVED	06/20/11	53.4	11.13	6.19	1.58	0.001	<0.00	10.5	161	0.0	6.3	44	0.52	0.52
		Total Rec	06/20/11	48.8	10.78	5.70	1.71	<0.025	<0.013							
MW-242	250049	DISSOLVED	06/09/09	61.8	11.70	6.40	1.61	<0.008	0.001	14.1	195	0.0	4.2	68	0.55	0.54
		DISSOLVED	06/29/10	55.9	11.30	6.43	1.67	<0.002	<0.001	11.6	239	0.0	2.7	33	0.35	0.58
		Total Rec	06/29/10	67.9	11.90	6.97	1.79	0.048	<0.003							
		DISSOLVED	06/17/11	62.7	11.57	6.24	1.60	0.001	<0.000	11.6	199	0.0	4.7	37	0.41	0.45
		Total Rec	06/17/11	62.6	11.47	6.46	1.69	<0.025	<0.013							
MW-251	250014	DISSOLVED	05/05/09	110.0	18.20	6.95	2.08	0.008	<0.001	13.6	200	0.0	<5.0	234	0.97	0.75
		DISSOLVED	06/12/09	92.1	15.10	6.66	2.01	0.105	0.002	15.5	196	0.0	<5.0	133	1.64	0.89
		DISSOLVED	09/23/09	74.5	11.80	5.68	1.67	0.007	0.001	12.7	178	0.0	3.1	111	1.24	0.84
		DISSOLVED	03/19/10	73.0	11.90	5.54	1.57	0.002	0.001	11.5	198	0.0	2.2	94	0.66	0.93
		DISSOLVED	06/30/10	71.3	12.10	5.68	1.65	<0.002	<0.001	12.9	217	0.0	2.3	74	0.53	0.90
		Total Rec	06/30/10	90.8	13.40	6.33	1.96	0.131	<0.003							
		DISSOLVED	03/31/11	76.5	12.00	6.21	1.64	0.003	<0.001	12.6	192	0.0	2.3	80	0.60	0.80
		Total Rec	03/31/11	74.3	11.80	5.88	1.63	0.101	<0.003							
		DISSOLVED	06/20/11	69.6	11.21	5.71	1.53	0.001	<0.00	12.5	203	0.0	2.9	61	0.56	0.77
		Total Rec	06/20/11	37.9	11.31	5.44	1.82	<0.025	<0.013							

NA-not applicable
NR not reported

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Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Al (µg/L)	Ag (µg/L)	As (µg/L)	B (µg/L)	Ba (µg/L)	Be (µg/L)	Cd (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	Hg (µg/L)	Li (µg/L)	Mo (µg/L)	Ni (µg/L)	Pb (µg/L)	Se (µg/L)	Sr (µg/L)	U (µg/L)	Zn (µg/L)
MW-213	138022	DISSOLVED	06/08/09	33.40	<0.04	0.22	18.3	30.6	0.25	21.10	7.51	0.07	4,574		15.50	1.84	6.90	<0.15	0.96	218	3.63	12,780
		DISSOLVED	08/28/09	<7.60	<0.04	0.21	20.6	20.5	<0.20	8.59	0.97	0.11	1,295		9.45	1.77	2.07	<0.16	0.92	189	0.72	3,873
		DISSOLVED	07/01/10	6.92	<0.20	<0.20	15.2	32.7	<0.20	6.87	1.60	<0.20	1,306		8.23	1.83	1.67	<0.20	0.62	164	0.26	3,217
		Total Rec	07/01/10	11.50	<0.50	<0.50		31.9	<0.50	6.87	1.55	<0.50	1,422		12.20	1.81	1.87	<0.50	0.51	156	<0.50	3,791
		DISSOLVED	06/17/11	31.20	<0.50	0.23	14.4	34.5	<0.50	5.04	0.83	<0.50	1,013		9.25	1.97	2.59	<0.200	0.64	151	0.23	2,029
		Total Rec	06/17/11	33.20	<1.25	<1.25		37.9	<1.25	4.99	0.91	0.30	1,006		9.46	2.27	2.61	<0.50	0.62	166	0.26	1,948
MW-240	250047	DISSOLVED	06/10/09	<7.68	<0.04	0.72	20.4	71.6	<0.20	0.12	0.14	<0.04	0.83		8.59	2.41	<0.10	<0.15	2.96	254	0.83	<0.91
		DISSOLVED	07/01/10	<2.00	<0.20	0.59	16.7	53.6	<0.20	<0.20	<0.20	<0.20	2.90		5.40	2.06	<0.20	<0.20	1.55	187	0.54	<1.00
		Total Rec	07/01/10	14.00	<0.50	0.49		56.2	<0.50	<0.50	<0.50	<0.50	3.57		10.10	2.08	<0.50	<0.50	1.22	196	0.52	<2.50
		DISSOLVED	6/21/11	25.35	<0.50	0.64	17.1	52.1	<0.50	<0.50	0.12	<0.50	<0.50		9.71	1.88	0.20	<0.200	1.76	180	0.42	<1.00
		Total Rec	06/21/11	5.00	<1.25	0.55	17.8	55.4	0.04	<1.25	<1.25	<1.25	<25.00		6.98	2.19	1.02	<1.25	1.49	209	<1.25	<2.500
MW-241	250048	DISSOLVED	06/10/09	5.03	<0.06	0.39	11.6	31.4	<0.15	3.20	<0.13	<0.12	169		6.37	2.26	0.82	<0.05	0.39	119	<0.01	957
		DISSOLVED	06/30/10	<2.00	<0.20	0.35	10.7	42.6	<0.20	3.24	<0.20	<0.20	183		5.11	2.44	0.72	<0.20	0.30	129	<0.20	952
		Total Rec	06/30/10	7.44	<0.50	<0.50		42.4	<0.50	3.23	<0.50	<0.50	182		8.54	2.39	0.95	<0.50	<0.50	124	<0.50	1,004
		DISSOLVED	06/20/11	0.43	<0.50	0.45	12.1	41.0	<0.50	3.18	<0.50	<0.50	185		7.28	2.79	1.14	<0.200	0.48	126	<0.50	850
		Total Rec	06/20/11	8.81	<1.25	<1.25		41.2	<1.25	3.07	<1.25	<1.25	184		5.00	2.95	1.63	<0.50	<1.25	137	<1.25	763
MW-242	250049	DISSOLVED	06/09/09	<0.35	<0.06	0.47	11.8	49.8	<0.15	0.30	<0.13	<0.12	<0.33		7.88	2.72	<0.08	<0.05	0.40	139	0.25	46.9
		DISSOLVED	06/29/10	<2.00	<0.20	0.46	11.8	49.0	<0.20	0.24	<0.20	<0.20	<0.50		6.61	2.98	<0.20	<0.20	0.25	135	0.21	36.0
		Total Rec	06/29/10	30.70	<0.50	<0.50		49.6	<0.50	<0.50	<0.50	<0.50	<0.3		7.87	3.03	<0.50	<0.50	<0.50	131	<0.50	36.3
		DISSOLVED	06/17/11	19.76	<0.50	0.47	12.6	51.5	<0.50	0.25	<0.50	<0.50	<0.50		10.79	2.80	0.13	<0.200	0.37	133	0.20	40.9
		Total Rec	06/17/11	77.02	<1.25	0.83		52.2	<1.25	0.58	<1.25	0.78	1.70		7.69	3.22	1.30	<0.50	0.49	145	<1.25	35.7
MW-251	250014	DISSOLVED	05/05/09	9.58	<0.07	0.41	9.6	77.5	<0.19	0.07	0.09	<0.09	0.46		14.10	1.20	<0.08	<0.20	0.76	236	0.33	5.39
		DISSOLVED	06/12/09	111	<0.04	0.56	11.0	58.1	<0.20	0.67	<0.10	0.22	0.52		12.70	1.49	<0.10	<0.15	0.72	198	0.31	81.8
		DISSOLVED	09/23/09	45.83	<0.13	0.46	9.8	51.1	<0.14	<0.09	0.34	0.15	0.53		11.80	1.38	<0.23	<0.11	0.47	168	0.23	4.09
		DISSOLVED	03/19/10	3.55	<0.10	0.48	7.8	49.1	<0.10	<0.10	<0.10	11.00	0.33		10.50	1.42	<0.10	<0.10	0.47	171	0.21	2.88
		DISSOLVED	06/30/10	<2.00	<0.20	0.42	10.4	46.3	<0.20	<0.20	<0.20	<0.20	<0.50		9.55	1.41	<0.20	<0.20	0.37	153	0.21	10.5
		Total Rec	06/30/10	103	<0.50	<0.50		48.0	<0.50	<0.50	<0.50	<0.50	<1.30		14.30	1.48	<0.50	<0.50	<0.50	153	<0.50	10.5
		DISSOLVED	03/31/11	<2.00	<2.00	0.48	9.7	45.7	<0.20	<0.20	<0.20	<0.20	<0.50		7.71	1.32	<0.20	<0.20	0.44	158	<0.20	3.9
		Total Rec	03/31/11	67.60	<0.50	<0.50	10.4	46.0	<0.50	<0.50	<0.50	<0.50	<1.30		10.10	1.41	<0.50	<0.50	<0.50	156	<0.50	2.0
		DISSOLVED	06/20/11	35.95	<0.50	0.45	10.3	42.6	<0.50	0.22	<0.50	<0.50	<0.50		15.21	1.46	0.12	<0.200	0.38	133	0.17	23.2
		Total Rec	06/20/11	24.06	<1.25	0.50		46.1	<1.25	<1.25	<1.25	0.61	<1.25		11.45	1.72	0.81	<0.50	<1.25	157	<1.25	20.2

NA-not applicable
NR not reported

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				Additional Trace Metals													
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Cerium Ce (µg/L)	Cesium Cs (µg/L)	Gallium Ga (µg/L)	Lanthanum La (µg/L)	Niobium Nb (µg/L)	Neodymium Nd (µg/L)	Palladium Pd (µg/L)	Praseodymium Pr (µg/L)	Rubidium Rb (µg/L)	Thallium Tl (µg/L)	Thorium Th (µg/L)	Tin Sn (µg/L)	Titanium Ti (µg/L)	Tungsten W (µg/L)
MW-213	138022	DISSOLVED	06/08/09	1.57	0.17	<0.05	2.11	<0.04	1.35	0.18	0.35	3.51	0.09	<0.02	<0.04	3.63	<0.05
		DISSOLVED	08/28/09	0.18	0.13	<0.05	0.67	0.04	0.48	0.11	0.13	2.94	0.07	<0.02	<0.04	1.60	<0.05
		DISSOLVED	07/01/10	<0.20	<0.50	<0.20	0.67	<0.20	0.56	<0.50	<0.20	2.82	<0.20	<0.20	<0.20	0.92	<0.20
		Total Rec	07/01/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	2.81	<0.50	<0.50		0.87	<0.50
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	0.39	<0.50	<0.50	0.14	<0.50	2.62	0.14	<0.50	<0.50	1.45	<0.50
		Total Rec	06/17/11	<1.25	<1.25	<1.25	0.37	<1.25	<1.25	<1.25	<1.25	2.85	<1.25	<1.25	<1.25	1.98	<1.25
MW-240	250047	DISSOLVED	06/10/09	<0.02	<0.04	<0.05	0.04	<0.04	<0.05	<0.10	<0.02	3.34	0.08	<0.02	<0.04	1.06	1.04
		DISSOLVED	07/01/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.81	<0.20	<0.20	<0.20	0.49	0.97
		Total Rec	07/01/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	3.03	<0.50	<0.50		0.89	0.99
		DISSOLVED	6/21/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.64	0.22	<0.50	<0.50	0.75	0.78
		Total Rec	06/21/11	<1.25	<1.25	<1.25	<5.00	<1.25	<1.25	<1.25	<1.25	2.90	<1.25	<1.25	<1.25	1.24	<5.00
MW-241	250048	DISSOLVED	06/10/09	<0.05	0.08	<0.07	0.06	<0.03	<0.07	<0.10	<0.02	2.19	0.04	<0.02	<0.05	0.58	<0.07
		DISSOLVED	06/30/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.50	2.50	<0.20	<0.20	<0.20	0.34	<0.20
		Total Rec	06/30/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	2.52	<0.50	<0.50		<0.50	<0.50
		DISSOLVED	06/20/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.44	0.11	<0.50	<0.50	0.63	<0.50
		Total Rec	06/20/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.52	<1.25	<1.25	<1.25	1.17	<1.25
MW-242	250049	DISSOLVED	06/09/09	<0.05	<0.04	<0.07	<0.03	<0.03	<0.07	<0.10	<0.02	2.35	<0.03	<0.02	<0.05	0.63	0.10
		DISSOLVED	06/29/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.52	<0.20	<0.20	<0.20	0.34	<0.20
		Total Rec	06/29/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	2.63	<0.50	<0.50		1.48	<0.50
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.44	0.16	<0.50	<0.50	0.63	<0.50
		Total Rec	06/17/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.69	<1.25	<1.25	<1.25	3.66	<1.25
MW-251	250014	DISSOLVED	05/05/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	2.98	<0.03	<0.02	<0.05	1.81	0.05
		DISSOLVED	06/12/09	0.15	0.05	<0.05	0.09	<0.04	0.09	<0.10	0.02	3.34	<0.03	0.03	<0.04	7.28	0.09
		DISSOLVED	09/23/09	<0.05	<0.06	<0.11	<0.05	<0.24	<0.09	<0.13	<0.10	2.60	<0.07	<0.06	<0.10	1.13	<0.14
		DISSOLVED	03/19/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	2.57	<0.10	<0.10	<0.10	0.94	<0.10
		DISSOLVED	06/30/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.50	<0.20	<0.20	<0.20	0.70	<0.20
		Total Rec	06/30/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	2.85	<0.50	<0.50		5.17	<0.50
		DISSOLVED	03/31/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	2.38	<0.20	<0.20	<0.50	1.05	<0.20
		Total Rec	03/31/11	<0.50	<1.30	65.60	<0.50	<1.30	<0.50	<1.30	<0.50	2.75	<0.50	<0.50	NR	4.34	<0.50
		DISSOLVED	06/20/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.42	0.11	<0.50	<0.50	1.01	<0.50
		Total Rec	06/20/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.65	<1.25	<1.25	<1.25	2.17	<1.25

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
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Appendix C

						PHYSICAL PARAMETERS								
							FIELD				LAB			
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	TIME (HRS)	SWL (FT)	FLOW (GPM)	pH	SC (UMHOS)	TEMP (C)	REDOX (mv)	pH	SC (UMHOS)	HARDNESS (MG/L)	ALKALINITY (MG/L)
MW-252	249797	DISSOLVED	05/06/09	13:55	61.46	2.30	7.48	410	8.66	408	8.22	457	223	162
		DISSOLVED	06/09/09	17:50	42.20	2.50	7.49	445	8.70	384	7.50	420	222	164
Dup		DISSOLVED	06/09/09	17:52	42.20	2.50	7.49	445	8.70	384	7.45	430	220	160
		DISSOLVED	09/22/09	14:35	49.44	0.75	7.32	415	8.92	353	7.74	490	205	145
		DISSOLVED	03/18/10	13:34	60.89	1.00	6.51	400	8.74	407	7.74	425	185	166
Dup		DISSOLVED	03/18/10	13:34	60.89	1.00	6.51	400	8.74	407	7.67	430	183	154
		DISSOLVED	06/29/10	14:08	40.56	1.00	6.54	380	9.60	372	7.96	380	175	197
		Total Rec	06/29/10	14:08	40.56	1.00	6.54	380	9.60	372			178	
		DISSOLVED	03/31/11	14:03	63.70	2.00	6.81	407	8.83	336	7.54	405	209	153
		Total Rec	03/31/11	14:03	63.70	2.00	6.81	407	8.83	336			211	
		DISSOLVED	06/17/11	10:25	21.91	2.00	6.81	390	8.37	430	7.47	430	199	162
		Total Rec	06/17/11	10:25	21.91	2.00	6.81	390	8.37	430			201	
MW-255	250055	DISSOLVED	05/05/09	17:05	70.43	2.00	7.48	330	7.76	400	7.64	395	177	133
		DISSOLVED	06/09/09	15:30	45.08	2.50	7.44	345	8.20	378	7.51	425	179	137
		DISSOLVED	09/22/09	12:25	60.67	1.00	7.26	360	10.06	340	7.64	355	173	121
		DISSOLVED	03/19/10	14:52	69.92	1.00	6.72	330	8.09	373	7.66	350	155	136
		DISSOLVED	06/29/10	12:49	43.85	1.00	6.51	320	8.74	392	8.12	300	145	166
		Total Rec	06/29/10	12:49	43.85	1.00	6.51	320	8.74	392			155	
		DISSOLVED	04/04/11	12:31	72.73	2.00	6.72	338	7.40	338	7.52	380	171	135
		Total Rec	04/04/11	12:31	72.73	2.0	6.72	338	7.40	338			161	
		DISSOLVED	06/17/11	9:50	43.81	2.4	6.78	310	7.47	410	7.44	347	157	136
		Total Rec	06/17/11	9:50	43.81	2.4	6.78	310	7.47	410			155	

NA-not applicable
NR not reported

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Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Fe (mg/L)	Mn (mg/L)	SiO_2 (mg/L)	HCO_3 (mg/L)	CO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)	F (mg/L)
MW-252	249797	DISSOLVED	05/06/09	67.3	13.30	6.71	1.77	0.005	<0.001	12.3	198	0.0	3.6	86	0.54	0.56
		DISSOLVED	06/09/09	67.9	12.70	6.85	1.73	<0.008	<0.001	13.6	200	0.0	4.4	74	0.51	0.54
Dup		DISSOLVED	06/09/09	66.7	13.00	7.07	1.83	<0.008	<0.001	14.1	195	0.0	4.2	69	0.42	0.53
		DISSOLVED	09/22/09	63.4	11.40	5.73	1.53	<0.003	0.001	11.4	177	0.0	6.0	74	0.97	0.59
		DISSOLVED	03/18/10	56.1	10.90	6.14	1.49	0.002	0.001	11.5	202	0.0	3.3	46	0.51	0.57
Dup		DISSOLVED	03/18/10	55.6	10.70	6.10	1.47	0.002	0.001	11.5	188	0.0	3.3	46	0.51	0.58
		DISSOLVED	06/29/10	52.4	10.70	6.15	1.55	0.004	<0.001	12.2	240	0.0	3.2	36	0.42	0.57
		Total Rec	06/29/10	54.2	10.40	5.81	1.67	0.110	<0.002							
		DISSOLVED	03/31/11	64.0	12.00	6.93	1.41	<0.002	<0.001	11.9	187	0.0	3.5	41	0.46	0.51
		Total Rec	03/31/11	65.4	11.70	6.98	1.62	0.072	<0.003							
		DISSOLVED	06/17/11	60.8	11.45	6.58	1.59	0.002	<0.000	11.5	197	0.0	4.0	37	0.39	0.43
		Total Rec	06/17/11	61.9	11.36	6.21	1.80	<0.025	<0.013							
MW-255	250055	DISSOLVED	05/05/09	51.9	11.50	4.27	1.64	0.004	<0.001	11.5	162	0.0	4.9	50	0.61	0.36
		DISSOLVED	06/09/09	52.9	11.30	4.22	1.60	<0.008	0.001	12.3	167	0.0	3.8	42	0.48	0.40
		DISSOLVED	09/22/09	51.6	10.70	3.97	1.55	0.013	0.001	10.8	148	0.0	18.2	46	0.84	0.45
		DISSOLVED	03/19/10	45.8	9.92	3.98	1.42	0.004	0.001	10.1	166	0.0	3.3	34	0.33	0.43
		DISSOLVED	06/29/10	42.4	9.47	3.84	1.45	<0.002	<0.001	11.2	203	0.0	2.2	26	0.29	0.42
		Total Rec	06/29/10	45.5	9.96	3.81	1.59	0.081	<0.005							
		DISSOLVED	04/04/11	51.2	10.50	4.78	1.53	<0.002	<0.001	10.8	165	0.0	3.2	27	0.32	0.36
		Total Rec	04/04/11	48.3	9.72	4.24	1.45	0.260	0.004							
		DISSOLVED	06/17/11	46.7	9.78	3.81	1.38	<0.002	<0.000	10.6	166	0.0	2.7	22	0.24	0.31
		Total Rec	06/17/11	46.0	9.65	3.98	1.39	0.039	<0.013							

NA-not applicable
NR not reported

Montana Bureau of Mines and Geology
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Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Al (µg/L)	Ag (µg/L)	As (µg/L)	B (µg/L)	Ba (µg/L)	Be (µg/L)	Cd (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	Hg (µg/L)	Li (µg/L)	Mo (µg/L)	Ni (µg/L)	Pb (µg/L)	Se (µg/L)	Sr (µg/L)	U (µg/L)	Zn (µg/L)
MW-252	249797	DISSOLVED	05/06/09	7.01	<0.07	0.43	10.1	59.7	<0.19	0.94	0.18	<0.09	<0.41		8.37	2.81	<0.08	<0.20	0.43	169	0.37	98.2
		DISSOLVED	06/09/09	0.89	<0.06	0.43	12.0	56.7	<0.15	2.21	<0.13	<0.12	0.35		7.29	2.90	<0.08	<0.05	0.43	153	0.32	248
Dup		DISSOLVED	06/09/09	<0.35	<0.06	0.43	11.7	58.1	<0.15	2.25	0.22	<0.12	0.37		7.37	2.94	<0.08	<0.05	0.42	156	0.33	249
		DISSOLVED	09/22/09	<15.83	<0.13	0.46	9.4	51.9	<0.14	1.54	0.11	0.12	0.71		6.85	3.05	<0.23	<0.11	0.32	144	0.33	152
		DISSOLVED	03/18/10	2.67	<0.10	0.49	10.0	50.0	<0.10	1.20	<0.10	<0.10	0.73		6.20	2.90	<0.10	<0.10	0.36	142	0.24	129
Dup		DISSOLVED	03/18/10	2.18	<0.10	0.49	9.1	49.8	<0.10	1.23	<0.10	0.13	0.66		6.17	2.90	<0.10	<0.10	0.33	142	0.26	130
		DISSOLVED	06/29/10	<2.00	<0.20	0.44	11.4	49.9	<0.20	1.24	<0.20	<0.20	<0.50		6.23	3.01	<0.20	<0.20	0.32	135	0.26	128
		Total Rec	06/29/10	109	<1.00	<0.90	12.3	51.4	<1.00	1.21	<0.90	<1.00	<2.50		<10	2.97	<0.90	<1.00	<0.90	132	<1.00	129
		DISSOLVED	03/31/11	<2.00	<0.20	0.49	9.7	48.3	<0.20	0.43	<0.20	<0.20	<0.50		5.73	2.81	<0.20	<0.20	0.29	150	0.28	45
		Total Rec	03/31/11	35.50	<0.50	<0.50	10.1	48.9	<0.50	<0.50	<0.50	<0.50	<1.30		6.46	3.03	<0.50	<0.50	<0.50	145	<0.50	41
		DISSOLVED	06/17/11	19.22	<0.50	0.40	9.9	51.6	<0.50	2.00	<0.50	<0.50	<0.50		9.85	2.88	0.18	<0.200	0.31	130	0.22	211
		Total Rec	06/17/11	23.36	<1.25	<1.25		<1.25	<1.25	2.08	0.49	0.54	1.71		6.13	3.18	0.88	<0.50	<1.25	150	<1.25	197
MW-255	250055	DISSOLVED	05/05/09	24.90	<0.07	0.75	6.0	35.5	<0.19	<0.05	<0.04	<0.09	<0.41		3.98	2.82	<0.08	<0.20	0.41	140	1.41	1.59
		DISSOLVED	06/09/09	0.77	<0.06	0.78	7.0	33.6	<0.15	<0.11	0.21	<0.12	0.36		3.85	2.79	<0.08	<0.05	0.36	129	1.26	<0.48
		DISSOLVED	09/22/09	<15.83	<0.13	0.76	6.0	33.1	<0.14	<0.09	0.46	0.12	0.54		3.79	2.69	<0.23	<0.11	0.36	127	1.21	3.37
		DISSOLVED	03/19/10	5.79	<0.10	0.77	4.2	30.8	<0.10	<0.10	0.13	0.11	0.32		2.84	2.91	<0.10	<0.10	0.26	124	1.21	<0.81
		DISSOLVED	06/29/10	<2.00	<0.20	0.71	6.3	27.4	<0.20	<0.20	<0.20	<0.20	<0.50		2.57	2.79	<0.20	<0.20	0.19	109	0.97	<1.00
		Total Rec	06/29/10	70.40	<1.00	<0.90	<10	31.5	<1.00	<1.00	<0.90	<1.00	<2.50		<10.00	2.83	<0.90	<1.00	<0.90	119	1.06	<5.0
		DISSOLVED	04/04/11	4.81	<0.20	0.72	5.5	29.1	<0.20	<0.20	<0.20	<0.20	<0.50		2.08	2.73	<0.20	<0.20	0.19	123	0.95	<0.50
		Total Rec	04/04/11	410	<0.50	0.82	5.8	36.4	<0.50	<0.50	<0.50	<0.50	1.98		<5.00	2.92	0.48	<0.50	<0.50	125	1.07	<1.30
		DISSOLVED	06/17/11	1.56	<0.50	0.73	5.2	27.9	<0.50	<0.50	<0.50	<0.50	<0.50		5.69	2.76	<0.50	<0.200	0.10	103	0.84	0.47
		Total Rec	06/17/11	41.25	0.00	0.82		28.3	<1.25	<1.25	<1.25	<1.25	<1.25		6.03	2.80	<1.25	<0.50	0.33	112	0.86	0.00

NA-not applicable
NR not reported

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				Additional Trace Metals													
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Cerium Ce (µg/L)	Cesium Cs (µg/L)	Gallium Ga (µg/L)	Lanthanum La (µg/L)	Niobium Nb (µg/L)	Neodymium Nd (µg/L)	Palladium Pd (µg/L)	Praseodymium Pr (µg/L)	Rubidium Rb (µg/L)	Thallium Tl (µg/L)	Thorium Th (µg/L)	Tin Sn (µg/L)	Titanium Ti (µg/L)	Tungsten W (µg/L)
MW-252	249797	DISSOLVED	05/06/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	2.63	<0.03	<0.02	<0.05	0.66	0.08
		DISSOLVED	06/09/09	<0.05	0.06	<0.07	<0.03	<0.03	<0.07	<0.10	<0.02	2.58	<0.03	<0.02	<0.05	0.70	0.09
Dup		DISSOLVED	06/09/09	<0.05	0.07	<0.07	0.04	<0.03	<0.07	<0.10	<0.02	2.67	0.03	<0.02	<0.05	0.71	0.09
		DISSOLVED	09/22/09	<0.05	<0.06	<0.11	<0.05	<0.24	<0.09	<0.13	<0.10	2.46	<0.07	<0.06	<0.10	0.67	<0.14
		DISSOLVED	03/18/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	2.51	<0.10	<0.10	<0.10	0.47	<0.10
Dup		DISSOLVED	03/18/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	2.51	<0.10	<0.10	<0.10	0.47	<0.10
		DISSOLVED	06/29/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	2.54	<0.20	<0.20	<0.20	0.35	<0.20
		Total Rec	06/29/10	<1.00	<2.50	<0.90	<1.00	<0.90	<1.00	<2.50	<1.00	3.14	<1.00	<1.00		5.27	<1.00
		DISSOLVED	03/31/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	2.48	<0.20	<0.20	<0.50	0.57	<0.20
		Total Rec	03/31/11	<0.50	<1.30	54.70	<0.50	<1.30	<0.50	<1.30	<0.50	2.70	<0.50	<0.50		2.18	<0.50
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.52	0.14	<0.50	<0.50	0.67	<0.50
		Total Rec	06/17/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	2.79	<1.25	<1.25	<1.25	1.99	<1.25
MW-255	250055	DISSOLVED	05/05/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	2.28	<0.03	<0.02	<0.05	0.41	0.15
		DISSOLVED	06/09/09	<0.05	<0.04	<0.07	<0.03	<0.03	<0.07	<0.10	<0.02	2.30	<0.03	<0.02	<0.05	0.36	0.18
		DISSOLVED	09/22/09	<0.05	<0.06	<0.11	<0.05	<0.24	<0.09	<0.13	<0.10	2.28	<0.07	<0.06	<0.10	0.64	0.15
		DISSOLVED	03/19/10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	2.19	<0.10	<0.10	<0.10	0.42	0.15
		DISSOLVED	06/29/10	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20	<0.50	<0.20	2.04	<0.20	<0.20	<0.20	0.27	<0.20
		Total Rec	06/29/10	<1.00	<2.50	<0.90	<1.00	<0.90	<1.00	<2.50	<1.00	<2.50	<1.00	<1.00		2.33	<1.00
		DISSOLVED	04/04/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	2.07	<0.20	<0.20	<0.50	0.53	<0.20
		Total Rec	04/04/11	<0.50	<1.30	43.90	<0.50	<1.30	<0.50	<1.30	<0.50	3.28	<0.50	<0.50		13.00	<0.50
		DISSOLVED	06/17/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.84	<0.50	<0.50	<0.50	0.20	<0.50
		Total Rec	06/17/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	1.96	<1.25	<1.25	<1.25	1.18	<1.25

NA-not applicable
NR not reported

Appendix D: Anaconda Regional Water, Waste, and Soil South/Opportunity
Yellow Ditch AOC, Water-Quality Data

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

					PHYSICAL PARAMETERS									
							FIELD				LAB			
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	TIME (HRS)	SWL (FT)	FLOW (GPM)	pH	SC (UMHOS)	TEMP (C)	REDOX (mv)	pH	SC (UMHOS)	HARDNESS (MG/L)	ALKALINITY (MG/L)
LTW-1D	249936	DISSOLVED	09/11/09	18:05	12.34	3.0	6.96	180	8.80	301	6.91	190	78	80
		DISSOLVED	03/17/10	12:22	22.50	2.5	6.05	190	8.73	403	6.91	195	76	67
		DISSOLVED	07/15/10	9:40	8.41	4.0	6.25	190	8.94	353	8.94	190	80	68
		TOTAL REC	07/15/10	9:40	8.41	4.0	6.25	190	8.94	353			88	
		DISSOLVED	03/30/11	15:00	22.84	2.5	6.47	202	8.64	323	6.85	214	85	65
		TOTAL REC	03/30/11	15:00	22.84	2.5	6.74	202	8.64	323			86	
		DISSOLVED	07/25/11	16:50	6.89	2.8	6.12	190	8.51	449	6.88	179	81	65
		TOTAL REC	07/25/11	16:50	6.89	2.8	6.12	190	8.51				77	
LTW-1S	249937	DISSOLVED	09/11/09	17:25	12.40	3.0	7.23	170	10.19	288	6.73	195	73	62
		DISSOLVED	03/17/10	12:45	23.20	2.0	6.30	190	8.37	401	6.88	210	75	66
		DISSOLVED	07/15/10	9:21	8.54	4.0	5.99	200	8.75	354	7.84	205	83	60
		TOTAL REC	07/15/10	9:21	8.54	4.0	5.99	200	8.75	354			88	
		DISSOLVED	03/30/11	14:34	22.91	2.5	6.71	201	8.33	315	6.86	203	86	62
		TOTAL REC	03/30/11	14:34	22.91	2.5	6.71	201	8.33	315			88	
		DISSOLVED	07/25/11	16:05	7.01	2.5	6.53	219	8.90	219	6.94	218	92	66
		TOTAL REC	07/25/11	16:05	7.01	2.5	6.53	219	8.90	219			91	
LTW-3D	249938	DISSOLVED	09/15/09	14:38	5.58	8.0	6.80	245	8.86	382	6.89	275	124	112
		DISSOLVED	03/17/10	13:27	8.33	4.0	6.42	255	9.14	389	6.96	230	85	57
		DISSOLVED	07/14/10	10:09	5.15	3.0	6.46	245	8.81	346	7.89	270	96	104
		TOTAL REC	07/14/10	10:09	5.15	3.0	6.46	245	8.81	346			121	
		DISSOLVED	04/04/11	14:11	8.58	2.5	6.77	244	8.25	336	7.22	293	116	103
		TOTAL REC	04/04/11	14:11	8.58	2.5	6.77	244	8.25	336			116	
		DISSOLVED	07/26/11	11:15	4.98	2.5	7.00	225	9.04	402	7.16	217	105	99
		TOTAL REC	07/26/11	11:15	4.98	2.5	7.00	225	9.04	402			103	
LTW-3S	249939	DISSOLVED	09/15/09	14:40	6.35	8.0	6.54	265	9.37	368	6.76	270	125	111
		DISSOLVED	03/17/10	13:45	8.78	4.0	6.60	235	7.16	380	7.31	250	101	99
		DISSOLVED	07/14/10	10:28	5.63	4.0	6.48	230	8.24	355	8.25	240	97	101
		TOTAL REC	07/14/10	10:28	5.63	4.0	6.48	230	8.24	355			110	
		DISSOLVED	04/04/11	14:39	9.02	3.0	6.77	246	6.38	352	6.90	262	111	101
		TOTAL REC	04/04/11	14:39	9.02	3.0	6.77	246	6.38	352			110	
		DISSOLVED	07/26/11	11:50	5.45	2.5	7.06	249	9.27	486	6.91	256	114	112
		TOTAL REC	07/26/11	11:50	5.45	2.5	7.06	249	9.27	486			112	

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Fe (mg/L)	Mn (mg/L)	SiO_2 (mg/L)	HCO_3 (mg/L)	CO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)	F (mg/L)
LTW-1D	249936	DISSOLVED	09/11/09	21.60	5.95	6.59	0.89	0.012	0.001	14.1	97	0.0	1.20	21.0	1.34	0.29
		DISSOLVED	03/17/10	20.60	5.88	6.28	0.77	0.007	0.001	12.5	82	0.0	0.97	21.1	1.26	0.28
		DISSOLVED	07/15/10	21.80	6.13	6.26	0.82	0.004	<0.001	13.1	83	0.0	1.06	22.4	1.42	0.30
		TOTAL REC	07/15/10	24.20	6.71	7.26	1.02	0.090	<0.003							
		DISSOLVED	03/30/11	23.30	6.52	6.98	0.82	<0.002	<0.001	12.9	79	0.0	0.78	24.9	1.08	0.22
		TOTAL REC	03/30/11	23.60	6.58	6.93	0.83	0.059	<0.003							
		DISSOLVED	07/25/11	21.94	6.42	6.20	0.94	0.019	<0.003	12.8	79	0.0	0.88	24.9	0.86	0.21
		TOTAL REC	07/25/11	20.52	6.31	6.24	0.85	0.051	<0.006							
LTW-1S	249937	DISSOLVED	09/11/09	20.20	5.36	6.27	0.91	0.004	<0.001	14.6	75	0.0	1.27	21.0	1.11	0.46
		DISSOLVED	03/17/10	20.60	5.67	5.68	0.80	0.005	0.001	12.8	80	0.0	1.04	25.9	1.87	0.41
		DISSOLVED	07/15/10	23.10	6.17	6.02	0.82	<0.002	<0.001	12.9	73	0.0	7.77	24.1	1.63	0.43
		TOTAL REC	07/15/10	24.60	6.52	6.65	1.01	0.140	0.002							
		DISSOLVED	03/30/11	24.00	6.39	6.34	0.84	<0.002	<0.001	12.7	75	0.0	1.28	25.7	1.19	0.33
		TOTAL REC	03/30/11	24.30	6.53	6.33	0.86	0.099	<0.003							
		DISSOLVED	07/25/11	25.44	6.89	6.60	0.91	<0.002	<0.003	13.0	80	0.0	7.28	30.3	1.28	0.33
		TOTAL REC	07/25/11	24.58	7.24	6.87	0.95	0.054	<0.006							
LTW-3D	249938	DISSOLVED	09/15/09	34.30	9.30	6.54	1.01	0.004	0.001	14.1	137	0.0	2.57	22.0	<0.05	0.49
		DISSOLVED	03/17/10	23.40	6.34	5.21	0.84	<0.001	0.001	9.6	69	0.0	2.07	21.9	0.70	0.44
		DISSOLVED	07/14/10	25.70	7.81	5.59	0.91	<0.002	0.001	13.0	127	0.0	1.24	20.9	0.41	0.47
		TOTAL REC	07/14/10	33.60	9.10	6.81	1.13	0.043	<0.003							
		DISSOLVED	04/04/11	32.30	8.64	6.73	0.98	<0.002	<0.001	13.6	126	0.0	0.04	17.4	0.21	0.38
		TOTAL REC	04/04/11	32.20	8.66	6.54	0.97	0.058	<0.003							
		DISSOLVED	07/26/11	29.00	7.94	5.92	0.98	<0.002	<0.003	12.9	121	0.0	0.79	16.0	0.22	0.37
		TOTAL REC	07/26/11	27.74	8.20	6.00	1.03	0.052	<0.006							
LTW-3S	249939	DISSOLVED	09/15/09	34.90	9.27	7.52	0.96	<0.002	<0.001	14.3	135	0.0	4.36	27.2	0.31	0.65
		DISSOLVED	03/17/10	27.90	7.52	6.50	0.79	<0.001	0.001	12.9	121	0.0	1.09	19.5	0.12	0.58
		DISSOLVED	07/14/10	26.90	7.12	6.03	0.76	<0.002	<0.001	13.1	123	0.0	0.96	18.3	0.16	0.62
		TOTAL REC	07/14/10	30.60	8.04	7.08	0.98	0.056	<0.003							
		DISSOLVED	04/04/11	31.00	8.19	7.24	0.78	<0.002	<0.001	13.1	123	0.0	1.09	17.2	0.10	0.48
		TOTAL REC	04/04/11	29.80	8.59	7.35	0.87	0.064	<0.003							
		DISSOLVED	07/26/11	31.21	8.77	6.69	0.89	<0.002	<0.003	13.1	137	0.0	1.74	17.8	0.10	0.50
		TOTAL REC	07/26/11	30.54	8.78	7.32	1.00	0.099	<0.006							

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Al (µg/L)	Ag (µg/L)	As (µg/L)	B (µg/L)	Ba (µg/L)	Be (µg/L)	Cd (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	Hg (µg/L)	Li (µg/L)	Mo (µg/L)	Ni (µg/L)	Pb (µg/L)	Se (µg/L)	Sr (µg/L)	U (µg/L)	Zn (µg/L)
LTW-1D	249936	DISSOLVED	09/11/09	<17.80	<0.10	0.44	4.64	51.60	<0.10	<0.20	<0.10	0.18	<0.80		2.54	0.89	<1.90	<0.10	<0.30	108	1.47	<1.90
		DISSOLVED	03/17/10	3.17	<0.10	0.49	<2.00	49.90	<0.10	<0.10	0.11	0.12	3.59		1.62	0.80	<0.10	<0.10	0.30	110	1.49	6.06
		DISSOLVED	07/15/10	6.78	<0.20	0.45	51.80	4.14	<0.20	<0.20	<0.20	<0.20	<0.50		2.58	0.80	<0.20	<0.20	0.28	111	1.40	<1.00
		TOTAL REC	07/15/10	71.10	<0.50	<0.50	<5.00	54.30	<0.50	<0.50	<0.50	<0.50	1.65		<5.00	0.93	<0.50	<0.50	<0.50	109	1.35	<2.50
		DISSOLVED	03/30/11	<2.00	<0.20	0.44	3.22	51.00	<0.20	<0.20	<0.20	<0.20	<0.50		<2.00	0.71	<0.20	<0.20	0.39	113	1.40	0.59
		TOTAL REC	03/30/11	11.60	<0.50	<0.50	<5.00	51.30	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	0.80	<0.50	<0.50	<0.50	116	1.61	<1.30
		DISSOLVED	07/25/11	84.46	<0.50	0.42	1.96	53.45	<0.50	<0.50	<0.50	<0.50	0.27		<2.00	0.76	<0.50	<0.20	0.45	104	1.52	0.33
		TOTAL REC	07/25/11	10.29	<1.25	0.45		50.75	<1.25	<1.25	<1.25	<1.25	0.37		10.51	0.67	0.45	6.80	<1.25	105	1.61	<2.50
LTW-1S	249937	DISSOLVED	09/11/09	<17.80	<0.10	6.24	5.48	55.70	<0.10	<0.20	0.15	0.16	<0.80		2.74	1.12	<0.10	<0.10	0.44	102	1.20	<1.90
		DISSOLVED	03/17/10	5.88	<0.10	1.78	2.25	57.60	<0.10	<0.10	0.32	0.17	1.28		1.70	0.77	<0.10	<0.10	0.49	110	1.01	1.69
		DISSOLVED	07/15/10	<2.00	<0.20	4.72	4.48	63.40	<0.20	<0.20	<0.20	<0.20	0.64		2.82	0.71	<0.20	<0.20	<0.20	117	1.04	<1.00
		TOTAL REC	07/15/10	18.40	<0.50	4.22	<5.00	65.30	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	0.79	<0.5	<0.50	0.52	115	1.01	<2.50
		DISSOLVED	03/30/11	3.13	<0.20	1.46	3.09	58.10	<0.20	<0.20	<0.20	<0.20	<0.50		2.03	0.66	<0.20	<0.20	0.46	114	1.07	<0.50
		TOTAL REC	03/30/11	52.00	<0.50	1.27	<5.00	61.90	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	0.77	<0.50	<0.50	<0.50	120	1.26	<1.30
		DISSOLVED	07/25/11	1.40	<0.50	4.57	6.09	67.85	<0.500	<0.50	<0.50	<0.50	0.67		<2.00	0.79	<0.50	<0.20	0.66	118	1.51	0.73
		TOTAL REC	07/25/11	11.02	<1.25	4.56	NR	70.40	<1.25	<1.25	<1.25	<1.25	0.78		7.47	0.74	0.58	0.32	0.52	134	1.65	<2.50
LTW-3D	249938	DISSOLVED	09/15/09	<17.80	<0.10	0.42	4.05	73.10	<0.10	<0.20	0.47	0.18	<0.80		2.36	3.19	<0.10	<0.10	<0.30	169	10.50	<1.90
		DISSOLVED	03/17/10	1.08	<0.10	0.35	2.66	50.50	<0.10	<0.10	<0.10	0.11	0.91		1.28	2.46	<0.10	<0.10	<0.20	121	6.28	<0.81
		DISSOLVED	07/14/10	<2.00	<0.20	0.36	4.59	63.80	<0.20	<0.20	<0.20	<0.20	0.67		<2.00	3.18	<0.20	<0.20	<0.20	153	8.40	<1.00
		TOTAL REC	07/14/10	8.07	<0.50	<0.50	<5.00	66.10	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	3.38	<0.50	<0.50	<0.50	106	7.99	<2.50
		DISSOLVED	04/04/11	<2.00	<0.20	0.39	27.80	58.50	<0.20	<0.20	<0.20	<0.20	<0.50		<2.00	3.07	<0.20	<0.20	<0.20	150	7.75	<0.50
		TOTAL REC	04/04/11	11.90	<0.50	<0.50	<5.00	60.40	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	3.52	<0.50	<0.50	<0.50	153	8.86	<1.30
		DISSOLVED	07/26/11	16.48	<0.50	0.38	5.05	57.85	<0.50	<0.50	<0.50	<0.50	0.35		2.38	3.24	<0.50	<0.20	<0.50	132	7.65	<1.00
		TOTAL REC	07/26/11	24.45	<1.25	0.44	NR	60.75	<1.25	<1.25	<1.25	<1.25	0.51		9.74	2.96	0.59	0.14	<1.25	144	8.28	0.92
LTW-3S	249939	DISSOLVED	09/15/09	<17.80	<0.10	2.32	5.55	92.40	<0.10	<0.20	<0.10	0.14	1.08		2.77	3.22	0.16	<0.10	<0.30	170	20.90	<1.90
		DISSOLVED	03/17/10	1.43	<0.10	2.36	2.51	74.60	<0.10	<0.10	<0.10	<0.10	1.15		1.64	2.78	0.14	<0.10	0.23	147	17.30	<0.81
		DISSOLVED	07/14/10	<2.00	<0.20	2.37	4.47	71.70	<0.20	<0.20	<0.20	<0.20	1.16		2.10	2.95	<0.20	<0.20	0.32	140	15.10	<1.00
		TOTAL REC	07/14/10	19.90	<0.50	2.10	<5.00	74.40	<0.50	<0.50	<0.50	<0.50	11.50		5.15	3.08	<0.50	<0.50	<0.50	138	14.00	<2.50
		DISSOLVED	04/04/11	<2.00	<0.20	2.23	4.04	67.70	<0.20	<0.20	<0.20	<0.20	0.66		<2.00	2.70	<0.20	<0.20	0.28	142	19.50	<0.50
		TOTAL REC	04/04/11	60.40	<0.50	1.98	<5.00	73.30	<0.50	<0.50	<0.50	<0.50	2.38		<5.00	3.08	<0.50	<0.50	<0.50	156	20.70	4.16
		DISSOLVED	07/26/11	19.11	<0.50	2.77	3.15	79.06	<0.50	<0.50	<0.50	<0.50	0.99		<2.00	3.23	0.23	<0.20	0.47	144	23.24	0.49
		TOTAL REC	07/26/11	33.72	<1.25	2.52	NR	80.02	<1.25	<1.25	<1.25	<1.25	1.19		10.48	2.87	0.83	<0.50	0.32	155	22.51	<2.50

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

				Additional Trace Metals													
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Cerium Ce (µg/L)	Cesium Cs (µg/L)	Gallium Ga (µg/L)	Lanthanum La (µg/L)	Niobium Nb (µg/L)	Neodymium Nd (µg/L)	Palladium Pd (µg/L)	Praseodymium Pr (µg/L)	Rubidium Rb (µg/L)	Thallium Tl (µg/L)	Thorium Th (µg/L)	Tin Sn (µg/L)	Titanium Ti (µg/L)	Tungsten W (µg/L)
LTW-1D	249936	DISSOLVED	09/11/09	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.43	<0.10	<0.10	<0.10	<0.30	<0.10
		DISSOLVED	03/17/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.42	<0.10	<0.10	<0.10	0.25	<0.10
		DISSOLVED	07/15/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	0.39	<0.20
		TOTAL REC	07/15/10	<0.50	<1.30	<0.50	<0.50	<0.4	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		2.61	<0.50
		DISSOLVED	03/30/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.50	0.37	<0.20
		TOTAL REC	03/30/11	<0.50	<1.30	17.20	<0.50	<1.30	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		0.74	<0.50
		DISSOLVED	07/25/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.35	<0.50	<0.50	<0.50	0.12	<0.50
		TOTAL REC	07/25/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	0.36	<1.25	<1.25	NR	0.39	<1.25
LTW-1S	249937	DISSOLVED	09/11/09	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.35	<0.10	<0.10	<0.10	<0.30	<0.10
		DISSOLVED	03/17/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.34	<0.10	<0.10	<0.10	0.36	<0.10
		DISSOLVED	07/15/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	0.22	<0.20
		TOTAL REC	07/15/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50	NR	0.81	<0.50
		DISSOLVED	03/30/11	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.50	0.45	<0.20
		TOTAL REC	03/30/11	<0.50	<1.30	20.10	<0.50	<1.30	<0.50	<1.30	<1.30	<1.30	<0.50	<0.50	NR	3.36	<0.50
		DISSOLVED	07/25/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	280	<0.50	<0.50	<0.50	0.18	<0.50
		TOTAL REC	07/25/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	0.30	<1.25	<1.25	NR	0.87	<1.25
LTW-3D	249938	DISSOLVED	09/15/09	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.37	<0.10	<0.10	<0.10	0.34	0.12
		DISSOLVED	03/17/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.33	<0.10	<0.10	<0.10	<0.20	<0.10
		DISSOLVED	07/14/10	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20
		TOTAL REC	07/14/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		<0.50	<0.20
		DISSOLVED	04/04/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.50	0.26	<0.20
		TOTAL REC	04/04/11	<0.50	<1.30	23.30	<0.50	<1.30	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50	NR	0.52	<0.50
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.29	<0.50	<0.50	<0.50	<0.50	<0.50
		TOTAL REC	07/26/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	0.31	<1.25	<1.25	NR	<1.25	<1.25
LTW-3S	249939	DISSOLVED	09/15/09	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.17	<0.10	<0.10	<0.10	<0.30	<0.10
		DISSOLVED	03/17/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.14	<0.10	<0.10	<0.10	<0.20	<0.10
		DISSOLVED	07/14/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20
		TOTAL REC	07/14/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		0.79	<0.50
		DISSOLVED	04/04/11	<0.20	<0.50	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.50	0.28	<0.20
		TOTAL REC	04/04/11	<0.50	<1.30	27.70	<0.50	<1.30	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50	NR	0.91	<0.50
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.16	<0.50	<0.50	<0.50	<0.50	<0.50
		TOTAL REC	07/26/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	NR	0.30	<1.25

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

					PHYSICAL PARAMETERS									
							FIELD				LAB			
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	TIME (HRS)	SWL (FT)	FLOW (GPM)	pH	SC (UMHOS)	TEMP (C)	REDOX (mv)	pH	SC (UMHOS)	HARDNESS (MG/L)	ALKALINITY (MG/L)
LTW-4D	249940	DISSOLVED	09/11/09	16:20	15.64	8.0	7.25	120	9.45	303	6.95	135	50	56
		DISSOLVED	04/13/10	12:55	27.38	2.5	6.41	145	7.72	289	8.11	180	61	61
		DISSOLVED	07/15/10	10:25	3.81	3.0	6.38	155	7.68	355	7.86	155	65	69
		TOTAL REC	07/15/10	10:25	3.81	3.0	6.38	155	7.68	355			73	
		DISSOLVED	03/30/11	12:42	28.41	2.5	6.46	153	7.93	332	7.07	153	68	61
		TOTAL REC	03/30/11	12:42	28.41	2.5	6.46	153	7.93	332			67	
		DISSOLVED	07/26/11	13:45	4.00	2.8	6.87	136	9.15	457	7.11	133	58	54
		TOTAL REC	07/26/11	13:45	4.00	2.8	6.87	136	9.15	457			59	
LTW-4S	249941	DISSOLVED	09/11/09	15:40	15.17	3.0	7.29	125	11.74	300	6.88	150	56	62
		DISSOLVED	04/13/10		Dry									
		DISSOLVED	07/15/10	10:07	3.33	3.0	6.07	115	9.76	351	6.91	120	47	45
		TOTAL REC	07/15/10	10:07	3.33	3.0	6.07	115	9.76	351			52	
		DISSOLVED	07/26/11	14:15	3.57	2.8	6.63	106	11.17	463	7.07	107	46	49
		TOTAL REC	07/26/11	14:15	3.57	2.8	6.63	106	11.17	463			44	
		DISSOLVED												
		TOTAL REC												
MW-9 (LAB)	249898	DISSOLVED	05/06/09	15:10	24.38	3.0	6.24	160	8.30	330	6.79	230	78	64
		DISSOLVED	09/17/09	12:45	17.79	8.0	6.57	178	8.48	253	7.05	210	73	66
		DISSOLVED	03/18/10	15:38	27.98	4.0	6.43	185	7.98	313	7.12	210	77	62
		DISSOLVED	07/14/10	11:14	9.79	4.0	6.31	185	8.20	289	8.05	200	76	62
		TOTAL REC	07/14/10	11:14	9.79	4.0	6.31	185	8.20	289			86	
		DISSOLVED	03/30/11	13:56	28.77	2.5	6.67	181	8.99	284	6.93	206	74	57
		TOTAL REC	03/30/11	13:56	28.77	2.5	6.67	181	8.99	284			76	
		DISSOLVED	07/26/11	15:40	8.96	2.5	6.86	168	9.41	456	6.86	158	70	54
		TOTAL REC	07/26/11	15:40	8.96	2.5	6.86	168	9.41	456			70	

NA-not applicable
NR-not reported

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Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Fe (mg/L)	Mn (mg/L)	SiO_2 (mg/L)	HCO_3 (mg/L)	CO_3 (mg/L)	Cl (mg/L)	SO_4 (mg/L)	NO_3-N (mg/L)	F (mg/L)
LTW-4D	249940	DISSOLVED	09/11/09	13.70	3.95	4.93	0.93	0.009	0.001	13.3	68	0.0	<0.50	7.0	<0.05	0.45
		DISSOLVED	04/13/10	16.40	4.86	5.22	0.92	<0.002	<0.001	12.3	74	0.0	<0.50	10.6	0.12	0.46
		DISSOLVED	07/15/10	17.40	5.16	4.77	0.92	0.005	<0.001	11.5	84	0.0	<0.50	13.4	0.18	0.45
		TOTAL REC	07/15/10	20.00	5.67	5.72	1.11	0.177	<0.003							
		DISSOLVED	03/30/11	18.60	5.25	5.76	0.94	<0.002	<0.001	13.4	74	0.0	0.91	10.2	0.16	0.36
		TOTAL REC	03/30/11	18.20	5.25	5.48	1.04	0.191	<0.003							
		DISSOLVED	07/26/11	15.84	4.56	4.55	0.85	<0.002	<0.003	12.7	66	0.0	<0.50	13.9	0.07	0.34
		TOTAL REC	07/26/11	15.84	4.82	5.16	0.90	0.060	<0.006							
LTW-4S	249941	DISSOLVED	09/11/09	15.50	4.20	4.74	1.20	0.008	<0.001	14.5	75	0.0	<0.50	7.1	<0.05	0.44
		DISSOLVED	04/13/10													
		DISSOLVED	07/15/10	12.70	3.81	3.88	0.98	<0.002	<0.001	12.4	55	0.0	<0.50	7.8	0.12	0.54
		TOTAL REC	07/15/10	14.20	4.06	4.56	1.11	0.071	<0.003							
		DISSOLVED	07/26/11	12.54	3.64	3.99	0.90	0.002	<0.003	13.6	60	0.0	0.39	5.7	0.05	0.37
		TOTAL REC	07/26/11	11.78	3.66	4.11	1.01	0.047	<0.006							
		DISSOLVED														
		TOTAL REC														
MW-9 (LAB)	249898	DISSOLVED	05/06/09	21.30	5.94	6.02	0.88	0.007	<0.001	13.4	78	0.0	0.93	21.2	1.19	0.43
		DISSOLVED	09/17/09	20.10	5.54	5.68	0.78	0.128	0.006	12.2	81	0.0	0.92	23.8	0.77	0.43
		DISSOLVED	03/18/10	21.20	5.85	5.78	0.78	0.060	0.005	11.6	76	0.0	0.63	29.1	0.83	0.45
		DISSOLVED	07/14/10	20.70	5.97	5.77	0.78	0.051	0.01	11.0	75	0.0	0.68	29.8	0.87	0.47
		TOTAL REC	07/14/10	23.70	6.42	6.47	0.96	0.910	0.01							
		DISSOLVED	03/30/11	20.70	5.50	6.66	0.62	0.041	0.01	12.0	70	0.0	0.59	23.6	0.61	0.38
		TOTAL REC	03/30/11	21.10	5.70	6.04	0.78	0.936	0.01							
		DISSOLVED	07/26/11	19.03	5.50	5.17	0.75	0.011	0.00	11.9	66	0.0	0.51	26.1	0.40	0.36
		TOTAL REC	07/26/11	18.82	5.60	5.85	0.81	0.446	0.01							

NA-not applicable
NR-not reported

Montana Bureau of Mines and Geology
Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Al (µg/L)	Ag (µg/L)	As (µg/L)	B (µg/L)	Ba (µg/L)	Be (µg/L)	Cd (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	Hg (µg/L)	Li (µg/L)	Mo (µg/L)	Ni (µg/L)	Pb (µg/L)	Se (µg/L)	Sr (µg/L)	U (µg/L)	Zn (µg/L)
LTW-4D	249940	DISSOLVED	09/11/09	<17.80	<0.10	0.55	4.19	39.10	<0.10	<0.20	0.12	0.17	1.01		1.69	2.60	0.26	<0.10	<0.30	88	0.97	53.50
		DISSOLVED	04/13/10	<1.00	<0.10	0.48	3.14	45.00	<0.20	<0.10	0.34	0.09	0.55		9.80	2.49	0.44	<0.20	<0.10	107	1.59	70.50
		DISSOLVED	07/15/10	9.95	<0.20	0.47	3.62	49.30	<0.20	<0.20	<0.20	<0.20	0.75		<2.00	2.11	0.27	<0.20	<0.20	114	1.73	78.00
		TOTAL REC	07/15/10	284	<0.50	0.47	<5.00	55.80	<0.50	<0.50	<0.50	<0.50	4.14		<5.00	2.33	0.47	<0.50	<0.50	120	1.83	72.00
		DISSOLVED	03/30/11	25.50	<0.20	0.52	3.21	44.70	<0.20	<0.20	<0.20	<0.20	0.66		<2.00	2.15	0.30	<0.20	<0.20	108	1.49	80.80
		TOTAL REC	03/30/11	246	<0.50	0.52	<5.00	47.70	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	2.39	0.53	<0.50	<0.50	107	1.65	65.50
		DISSOLVED	07/26/11	0.86	<0.50	0.52	2.31	40.43	<0.50	<0.50	<0.50	<0.50	0.73		<2.00	2.27	0.28	<0.20	<0.50	88	1.19	48.03
		TOTAL REC	07/26/11	21.98	<1.25	0.59	NR	42.17	<1.25	<1.25	<1.25	<1.25	0.91		6.97	2.08	0.66	<0.50	<1.25	93	1.33	47.90
LTW-4S	249941	DISSOLVED	09/11/09	<17.80	<0.10	0.56	4.68	37.30	<0.10	<0.20	<0.10	0.10	1.09		1.23	1.99	0.27	<0.10	<0.30	89	0.75	68.90
		DISSOLVED	04/13/10																			
		DISSOLVED	07/15/10	4.87	<0.20	0.51	3.47	29.20	<0.20	<0.20	<0.20	<0.20	1.39		<2.00	1.66	0.28	<0.20	<0.20	76	0.48	64.00
		TOTAL REC	07/15/10	57.30	<0.50	<0.50	<5.00	30.80	<0.50	<0.50	<0.50	<0.50	1.75		<5.00	1.70	<0.50	<0.50	<0.50	74	<0.50	52.80
		DISSOLVED	07/26/11	15.22	<0.50	0.55	2.73	26.89	<0.50	<0.50	<0.50	<0.50	1.34		<2.00	1.52	0.31	<0.20	<0.50	66	0.45	58.25
		TOTAL REC	07/26/11	35.20	<1.25	0.59	NR	27.53	<1.25	<1.25	<1.25	<1.25	1.76		9.84	1.36	0.78	0.17	<1.25	67	0.48	52.77
		DISSOLVED																				
		TOTAL REC																				
MW-9 (LAB)	249898	DISSOLVED	05/06/09	<6.02	<0.07	0.25	2.93	46.80	<0.19	<0.01	<0.04	<0.09	<0.41		2.59	0.83	<0.08	<0.20	0.41	110	1.42	<1.29
		DISSOLVED	09/17/09	<7.60	<0.04	0.27	3.44	46.40	<0.20	<0.05	0.29	0.85	<0.40		2.29	0.81	0.15	<0.16	0.42	106	1.33	<0.90
		DISSOLVED	03/18/10	<0.81	<0.10	0.31	<2.00	46.70	<0.10	<0.10	<0.10	<0.10	0.27		1.71	0.78	<0.10	<0.10	0.51	113	1.44	<0.81
		DISSOLVED	07/14/10	<2.00	<0.20	0.22	2.95	42.30	<0.20	<0.20	<0.20	<0.20	<0.50		2.09	0.70	<0.20	<0.20	0.43	99	1.09	<1.00
		TOTAL REC	07/14/10	6.37	<0.50	<0.50	<5.00	48.50	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	0.74	<0.50	<0.50	<0.50	106	1.18	<2.50
		DISSOLVED	03/30/11	<2.00	<0.20	0.25	3.16	39.50	<0.20	<0.20	<0.20	<0.20	<0.5		<2.00	0.77	<0.20	<0.20	0.42	98	1.05	<0.50
		TOTAL REC	03/30/11	6.89	<0.50	<0.50	<5.00	43.90	<0.50	<0.50	<0.50	<0.50	<1.30		<5.00	0.80	<0.50	<0.50	<0.50	104	1.22	<1.30
		DISSOLVED	07/26/11	0.76	<0.50	0.25	1.08	42.95	<0.50	<0.50	<0.50	<0.50	0.25		2.39	0.44	<0.50	<0.20	0.51	90	1.05	<1.00
		TOTAL REC	07/26/11	18.73	<1.25	0.32	NR	43.16	<1.25	<1.25	<1.25	<1.25	0.50		10.38	0.75	0.50	<0.50	0.38	94	1.13	<2.50

NA-not applicable
NR-not reported

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Anaconda Regional Water, Waste and Soil
South Opportunity/Yellow Ditch AOC
Appendix D

				Additional Trace Metals												
Site ID	GWIC ID	Sample Type	DATE (MM/DD/YR)	Cerium Ce (µg/L)	Cesium Cs (µg/L)	Gallium Ga (µg/L)	Lanthanum La (µg/L)	Niobium Nb (µg/L)	Neodymium Nd (µg/L)	Palladium Pd (µg/L)	Praseodymium Pr (µg/L)	Rubidium Rb (µg/L)	Thallium Tl (µg/L)	Thorium Th (µg/L)	Tin Sn (µg/L)	Titanium Ti (µg/L)	Tungsten W (µg/L)
LTW-4D	249940	DISSOLVED	09/11/09	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.32	<0.10	<0.10	<0.10	0.82	0.11
		DISSOLVED	04/13/10	<0.10	<0.10	<0.10	<0.10	0.07	<0.10	0.26	<0.10	0.33	<0.10	<0.10	<0.10	<0.20	0.12
		DISSOLVED	07/15/10	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	0.24	<0.20
		TOTAL REC	07/15/10	0.74	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		5.43	<0.50
		DISSOLVED	03/30/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.50	1.06	<0.20
		TOTAL REC	03/30/11	0.90	<1.30	15.10	0.51	<1.30	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50	NR	6.49	<0.50
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.27	<0.50	<0.50	<0.50	<0.50	<0.50
		TOTAL REC	07/26/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	0.32	<1.25	<1.25	NR	0.26	<1.25
LTW-4S	249941	DISSOLVED	09/11/09	<0.10	<0.10	<0.10	0.11	<0.20	<0.10	<0.10	<0.10	0.20	<0.10	<0.10	<0.10	<0.30	0.12
		DISSOLVED	04/13/10														
		DISSOLVED	07/15/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20
		TOTAL REC	07/15/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		1.77	<0.50
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	0.10	<0.50	<0.50	<0.50	<0.50	0.14	<0.50	<0.50	<0.50	<0.50	<0.50
		TOTAL REC	07/26/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	NR	1.06	<1.25
		DISSOLVED															
		TOTAL REC															
MW-9 (LAB)	249898	DISSOLVED	05/06/09	<0.04	<0.04	<0.04	<0.05	<0.03	<0.04	<0.07	<0.03	0.37	<0.03	<0.02	<0.05	0.14	<0.03
		DISSOLVED	09/17/09	<0.04	<0.04	<0.05	<0.02	<0.04	<0.05	<0.10	<0.02	0.36	<0.03	<0.02	<0.04	0.25	0.10
		DISSOLVED	03/18/10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10	0.37	<0.10	<0.10	<0.10	0.26	<0.10
		DISSOLVED	07/14/10	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.20	0.22	<0.20
		TOTAL REC	07/14/10	<0.50	<1.30	<0.50	<0.50	<0.40	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50		<0.50	<0.50
		DISSOLVED	03/30/11	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.50	<0.20	<0.50	<0.20	<0.20	<0.50	0.29	<0.20
		TOTAL REC	03/30/11	<0.50	<1.30	17.50	<0.50	<1.30	<0.50	<1.30	<0.50	<1.30	<0.50	<0.50	NR	0.53	<0.50
		DISSOLVED	07/26/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.32	<0.50	<0.50	<0.50	0.17	<0.50
		TOTAL REC	07/26/11	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	0.33	<1.25	<1.25	NR	0.34	<1.25

NA-not applicable
NR-not reported

Appendix E: Anaconda Regional Water, Waste, and Soils
Domestic Well Water-Quality Results

Montana Bureau of Mines and Geology
Anaconda regional Water, Waste, and Soils
2011 Domestic Well Water Quality Results
Appendix E

Sample	Gwic Id	Site Name	Sample Date	Field Number	Water Temp	Fld pH	Fld SC	Lab pH	Lab SC	Ca (mg/l)	Mg (mg/l)
200125	238047	BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	12.0	7.16	326			40.56	6.09
200124	238047	BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	12.0	7.16	326	7.68	342	42.27	6.37
2011Q0980	219266	BAKER, LINDA	2/11/2011 14:36	BAKER-219266	13.6	7.23	287			21.00	4.02
200924	246960	CONNORS KEN	10/12/2011	CONNORS CONFIRM.	13.2	7.01	636			60.23	16.49
200018	259577	JETTE, JOE	4/27/2011 13:18	JETTE - 259777	5.8	7.66	348			58.23	7.44
200925	246960	CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	13.2	7.01	636	7.51	648	65.07	16.37
2011Q1127	250294	MCQUEARY CAM	4/21/2011 13:56	MCQUEARY-250294	11.5	8.07	405			37.50	5.14
200019	259577	JETTE, JOE	4/27/2011 13:18	JETTE - 259777	5.8	7.66	348	7.30	405	59.21	7.91
2011Q0978	158784	BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	17.3	7.18	311			20.70	5.28
2011Q0979	219266	BAKER, LINDA	2/11/2011 14:36	BAKER-219266	13.6	7.23	287	7.20	302	21.00	4.09
2011Q1130	250294	MCQUEARY CAM	4/21/2011 13:56	MCQUEARY-250294	11.5	8.07	405	7.85	382	42.70	5.56
200016	259580	JONES, BRENT	4/25/2011 13:42	JONES - 259580	8.4	7.78	546			67.51	28.12
200017	259580	JONES, BRENT	4/25/2011 13:42	JONES - 259580	8.4	7.78	546	7.42	553	67.53	29.35
2011Q1125	156249	WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	13.5	8.14	278			29.10	3.32
2011Q1126	259949	GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE-259949	11.6	8.27	258			26.70	2.90
2011Q0974	122351	CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	10.9	6.91	445			38.90	12.90
2011Q0977	158784	BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	17.3	7.18	311	7.26	335	21.50	5.64
2011Q1129	259949	GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE-259949	11.6	8.27	258	7.91	304	29.60	3.05
2011Q1128	156249	WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	13.5	8.14	278	7.86	277	27.20	2.87
2011Q0973	122351	CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	10.9	6.91	445	7.48	463	35.30	11.90
201170	173106	WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106	9.4	6.77	192			22.40	6.07
201132	152577	KINNEY, GREGG	12/20/2011 16:00	KINNEY	9.8	7.31	394			42.26	10.25
201173	52670	WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670-DUP	8.8	7.63	195			23.60	6.44
201137	263916	PAMENTER, RUTH	12/9/2011 11:59	PAMENTER-263916						27.84	7.78
200262	251739	TOWN PUMP ANACONDA	6/28/2011 14:50	251739	12.5	9.42	383	9.28	369	2.73	0.27
200263	254941	KITTLESON JANET	6/28/2011 15:26	254941	9.9	7.57	493	7.39	470	68.68	14.60
200264	254941	KITTLESON JANET	6/28/2011 15:26	254941	9.9	7.57	493			68.32	15.24
200261	251739	TOWN PUMP ANACONDA	6/28/2011 14:50	251739	12.5	9.42	383			2.80	0.34
2011Q0929	257616	DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616	10.0	7.23	826			105.00	24.40
2011Q0921	144735	MEHRENS, JOE	1/5/2011 13:10	MURNS-91567	5.0	7.40	305			<0.038	<0.105
2011Q0923	209945	CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945	8.8	7.27	635			50.00	4.58
2011Q0999	259954	PUNOHU, LAVONE	2/28/2011 13:49	PUNOHV-259954	7.0	7.10	276			40.20	10.20
2011Q1124	53538	WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538	6.4	6.89	291			34.00	7.55
2011Q1121	219268	BYRNE, PAT	3/23/2011 12:16	BYRNE-219268	7.3	7.05	278			39.70	10.20
2011Q0997	189213	DODD DARYL	2/28/2011 12:51	DODD-189213	6.7	6.94	246			36.40	8.84
2011Q0925	213082	MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082	7.9	6.88	237			32.60	8.97
200677	51365	MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI- 51365	7.3	5.93	98			9.90	2.02
200667	183288	WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD	12.2	6.95	452			56.21	16.87
200106	261318	WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318	9.1	7.03	280			33.53	7.94
200434	52041	SENN, HANK	8/3/2011 12:02	52041-SENN2	8.5	6.84	213			31.87	7.04
2011Q0936	259996	JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996	9.2	7.07	590			70.90	14.60
201136	263931	KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE-263931	7.2	7.18	260			33.57	8.71
200557	229026	SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA	9.1	7.07	585			38.48	12.29
200815	216789	CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW	7.5	6.21	282			31.09	9.38
200105	261316	SESTRICH, PEG	3/25/2011 12:14	SESTRICH-261316	5.5	6.72	302			41.73	9.92
2011Q0926	185843	JOHNS LORI	1/26/2011 13:40	JOHNS-185843	10.7	7.44	517			56.60	8.89
201140	51206	PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206	7.1	7.93	351			46.57	11.06
200743	262855	WALTER, RICHARD	9/12/2011 12:10	WALTER #2	10.0	7.05	603			63.26	13.82
2011Q0993	179119	KING, DALE	2/18/2011 14:39	KING-179119	12.8	6.80	196			<0.065	<0.049
200987	263246	HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	8.7	6.61	607			77.39	16.50
200700	201943	POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943	7.4	6.87	550			83.20	14.51
200301	262072	BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	7.3	5.66	36			3.46	0.700 J
2011Q1122	178972	MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK-178972	6.4	7.22	488			59.40	28.20
200433	52147	GARRITY BROS. #1	8/3/2011	52147-SENN	8.6	7.48	319			47.14	10.65
200985	5412	RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY - 5412	8.0	6.93	493			32.13	18.67
200854	198927	RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN - 198927	5.2	5.20	69			6.13	1.02

Montana Bureau of Mines and Geology
Anaconda regional Water, Waste, and Soils
2011 Domestic Well Water Quality Results
Appendix E

Site Name	Sample Date	Field Number	Na (mg/l)	K (mg/l)	Fe (mg/l)	Mn (mg/l)	SiO2 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	11.55	8.81	0.351	0.005	49.1		
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	12.31	9.08	<2.00 U	0.002	54.7	159.0	0.0
BAKER, LINDA	7/11/2011 14:36	BAKER-219266	28.20	3.61	0.073	<0.003	58.6		
CONNORS KEN	10/12/2011	CONNORS CONFIRM.	51.11	2.88	0.289	0.015			
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	9.55	1.48	0.039	0.2800 J	13.5		
CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	50.57	3.12	0.233	0.014	8.1	303.4	0.0
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	35.00	10.40	0.198	0.007			
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	10.42	1.23	<0.002 U	<0.001 U	14.0	212.1	0.0
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT 158784	31.10	5.12	0.059	<0.003	69.1		
BAKER, LINDA	2/11/2011 14:36	BAKER 219266	28.60	3.61	<0.002	<0.001	56.3	111.6	0.0
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	38.30	11.10	0.021	0.003	59.2	155.4	0.0
JONES, BRENT	4/25/2011 13:42	JONES - 259580	16.79	1.16	0.044	0.000			
JONES, BRENT	4/25/2011 13:42	JONES - 259580	17.99	1.07	<0.002 U	<0.001 U	45.1	289.6	0.0
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	22.40	9.50	0.090	<0.003			
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	23.30	8.90	0.067	<0.003			
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	26.20	6.49	0.050	<0.003	49.1		
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	32.40	5.28	<0.002	<0.001	68.1	120.2	0.0
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	24.60	9.21	<0.002	<0.001	53.7	133.7	0.0
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	19.30	8.17	<0.002	<0.001	47.7	144.1	0.0
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	25.00	5.76	<0.002	<0.001	50.8	118.5	0.0
WOLFE, FRANK	12/27/2011 11:48	WOLFE 173106	5.77	0.97	0.037	<0.003 U			
KINNEY, GREGG	12/20/2011 16:00	KINNEY	26.82	0.230 J	0.043	<0.003 U			
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670-DUP	5.60	0.99	0.035	<0.003 U			
PAMENTER, RUTH	12/9/2011 11:59	PAMENTER-263916	5.63	0.95	0.051	<0.003 U			
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	81.01	0.13	<0.004 U	<0.002 U	10.5	135.8	24.2
KITTLESON JANET	6/28/2011 15:26	254941	6.32	1.85	<0.004 U	<0.002 U	11.5	203.0	0.0
KITTLESON JANET	6/28/2011 15:26	254941	6.84	2.070 J	0.048	<0.010 U			
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	93.92	0.18	0.041	<0.004 U			
DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616	43.10	2.33	0.345	<0.003			
MEHRENS, JOE	1/5/2011 13:10	MURNS-91567	64.30	0.06	0.055	<0.003			
CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945	80.50	1.30	0.108	<0.003			
PUNOHU, LAVONE	2/28/2011 13:49	PUNOHU-259954	1.88	1.22	<0.047	<0.061			
WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538	10.30	2.44	0.410	0.004			
BYRNE, PAT	3/23/2011 12:16	BYRNE-219268	1.88	1.19	0.053	<0.003			
DODD DARYL	2/28/2011 12:51	DODD-189213	2.20	1.15	0.049	<0.003			
MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082	2.46	1.04	0.171	<0.003			
MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI- 51365	5.53	1.13	0.020	<0.001 U			
WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD	12.30	1.56	0.018	<0.001 U			
WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318	10.91	3.73	1.869	0.006			
SENN, HANK	8/3/2011 12:02	52041-SENN2	3.59	1.18	0.059	<0.001 U			
JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996	39.50	3.77	0.478	0.003			
KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE 263931	7.98	0.93	4.090	0.036			
SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA	69.91	1.43	0.045	<0.001 U			
CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW	19.02	1.36	<0.005 U	0.063			
SESTRICH, PEG	3/25/2011 12:14	SESTRICH 261316	1.95	1.33	0.023	<3.75 U			
JOHNS LORI	1/26/2011 13:40	JOHNS-185843	48.00	1.96	0.049	<0.003			
PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206	8.62	0.88	0.325	0.007 J			
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	49.25	3.24	13.058	0.206			
KING, DALE	7/18/2011 14:39	KING-179119	48.30	0.10	0.038	<0.003			
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	20.99	2.35	0.057	<0.003 U			
POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943	5.61	1.79	0.012 J	<0.003 U			
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	2.440 J	<2.500 U	0.224	0.002 J			
MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK 178972	1.92	1.27	0.055	<0.003			
GARRITY BROS. #1	8/3/2011	52147-SENN	2.78	1.97	0.060	<0.001 U			
RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY - 5412	45.05	2.35	0.128	<0.003 U			
RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN - 198927	5.92	1.62	0.077	<0.003 U			

Montana Bureau of Mines and Geology
Anaconda regional Water, Waste, and Soils
2011 Domestic Well Water Quality Results
Appendix E

Site Name	Sample Date	Field Number	SO4 (mg/l)	Cl (mg/l)	NO3-N (mg/l)	F (mg/l)	OPO4-P (mg/l)	Ag (ug/l)	Al (ug/l)
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE						<1.00 U	22.93
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	16.6	8.40	1.11	0.19	<0.10 U	<0.50 U	1.5700 J
BAKER, LINDA	2/11/2011 14:36	BAKER-219266						<0.5	26.70
CONNORS KEN	10/12/2011	CONNORS CONFIRM.						<0.250 U	26.15
JETTE, JOE	4/27/2011 13:18	JETTE 259777						<0.5U	31.22
CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	91.6	4.96	<0.010 U	2.52	<0.020 U	<0.100 U	18.20
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294						<0.5	72.00
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	13.6	0.97	0.44	0.46	<0.10 U	<0.50 U	<2.00 U
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784						<0.5	17.90
BAKER, LINDA	2/11/2011 14:36	BAKER 219266	17.1	11.97	1.78	0.55	<0.1	<0.2	<2.0
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	38.8	23.38	1.31	0.36	<0.1	<0.2	<2.0
JONES, BRENT	4/25/2011 13:42	JONES - 259580						<0.50 U	9.43
JONES, BRENT	4/25/2011 13:42	JONES 259580	62.4	2.39	1.81	0.76	<0.10 U	<0.50 U	<2.00 U
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249						<0.5	11.80
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949						<0.5	19.50
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351						<0.5	9.21
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	28.7	8.98	1.27	0.54	<0.1	<0.2	<2.0
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	13.8	6.35	0.78	0.42	<0.1	<0.2	<2.0
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	15.5	6.22	0.96	0.28	<0.1	<0.2	<2.0
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	52.9	34.76	2.24	0.40	<0.1	<0.2	<2.0
WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106						<0.250 U	1.890 J
KINNEY, GREGG	12/20/2011 16:00	KINNEY						<0.250 U	10.52
WHITE RUSSELL & PAI	12/27/2011 12:39	WHITE-52670-DUP						<0.250 U	4.860 J
PAMENTER, RUTH	12/9/2011 11:59	PAMENTER 263916						<0.250 U	4.440 J
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	29.4	4.20	0.06	0.50	<0.100 U	<0.500 U	3.47
KITTLESON JANET	6/28/2011 15:26	254941	56.1	12.90	2.46	0.30	<0.100 U	<0.500 U	18.35
KITTLESON JANET	6/28/2011 15:26	254941						<2.000 U	5.300 J
TOWN PUMP ANACONDA	6/28/2011 14:50	251739						<1.250 U	9.76
DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616						<0.5	14.70
MEHRENS, JOE	1/5/2011 13:10	MURNS-91567						<0.5	<5.0
CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945						<0.5	5.95
PUNOHU, LAVONE	2/28/2011 13:49	PUNOHU-259954						<0.5	5.01
WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538						<0.5	<5.0
BYRNE, PAT	3/23/2011 12:16	BYRNE-219268						<0.5	5.55
DODD DARYL	2/28/2011 12:51	DODD-189213						<0.5	5.31
MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082						<0.5	7.39
MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI-51365						0.151 J	77.89
WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD						<0.250 U	21.06
WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318						<1.25 U	94.96
SENN, HANK	8/3/2011 12:02	52041-SENN2						<0.250 U	25.39
JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996						<0.5	5.32
KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE-263931						<0.250 U	95.07
SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA						<0.250 U	14.11
CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW						<0.250 U	4.480 J
SESTRICH, PEG	3/25/2011 12:14	SESTRICH 261316						<1.25 U	26.81
JOHNS LORI	1/26/2011 13:40	JOHNS-185843						<0.5	8.27
PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206						<0.250 U	15.58
WALTER, RICHARD	9/12/2011 12:10	WALTER #2						<0.250 U	35.98
KING, DALE	2/18/2011 14:39	KING-179119						<0.5	<5.0
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246						<0.250 U	3.760 J
POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943						<0.250 U	27.35
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN						<1.250 U	526.13
MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK 178972						<0.5	5.10
GARRITY BROS. #1	8/3/2011	52147-SENN						<0.250 U	31.74
RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY 5412						<0.250 U	6.00
RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN 198927						<0.250 U	64.62

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Appendix E

Site Name	Sample Date	Field Number	As (ug/l)	B (ug/l)	Ba (ug/l)	Be (ug/l)	Br (ug/l)	Cd (ug/l)	Co (ug/l)	Cr (ug/l)	Cu (ug/l)
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	5.40		95.45	<0.02 U		<1.00 U	<1.00 U	<1.00 U	3.0800 J
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	6.62	25.24	106.41	<0.50 U	80.00	<0.50 U	<0.50 U	<0.50 U	0.76
BAKER, LINDA	2/11/2011 14:36	BAKER-219266	8.18	36.70	64.80	<0.5		<0.5	<0.5	<0.5	6.50
CONNORS KEN	10/12/2011	CONNORS CONFIRM.	8.49		26.28	<0.250 U		<0.250 U	<0.250 U	0.250 J	0.590 J
JETTE, JOE	4/27/2011 13:18	JETTE 259777	8.55	4.04	41.66	<0.50 U		<0.50 U	<0.50 U	<0.50 U	1.65
CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	8.67	47.06	25.03	0.160 J	<10.000 U	<0.100 U	<0.100 U	0.150 J	<0.100 U
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	9.21	39.70	39.80	<0.5		<0.5	<0.5	0.53	<1.3
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	10.09	3.62	29.28	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	3.15
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	10.10	48.00	32.50	<0.5		<0.5	<0.5	7.53	2.42
BAKER, LINDA	2/11/2011 14:36	BAKER 219266	10.20	31.80	63.80	<0.2	115.00	<0.2	<0.2	<0.2	1.90
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	10.20	27.20	35.70	<0.2	226.00	<0.2	<0.2	<0.2	0.57
JONES, BRENT	4/25/2011 13:42	JONES 259580	10.28	131.78	139.96	<0.50 U		<0.50 U	<0.50 U	<0.50 U	6.61
JONES, BRENT	4/25/2011 13:42	JONES 259580	11.64	131.34	97.60	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	2.93
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	11.70	33.40	78.40	<0.5		<0.5	<0.5	<0.5	<1.3
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	12.00	41.60	41.20	<0.5		<0.5	<0.5	<0.5	<1.3
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	12.10	33.50	71.60	<0.5		<0.5	<0.5	0.57	<1.3
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	12.20	39.50	31.20	<0.2	99.00	<0.2	<0.2	6.00	1.23
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	13.10	28.40	35.50	<0.2	75.00	<0.2	<0.2	<0.2	<0.5
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	13.60	24.00	66.60	<0.2	71.00	<0.2	<0.2	<0.2	<0.5
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	15.00	28.90	62.90	<0.2	286.00	<0.2	<0.2	0.46	4.53
WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106	0.270 J		30.56	<0.250 U		<0.250 U	<0.250 U	<0.250 U	2.06
KINNEY, GREGG	12/20/2011 16:00	KINNEY	0.290 J		13.48	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.700 J
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670-DUP	0.300 J		21.67	<0.250 U		<0.250 U	<0.250 U	<0.250 U	5.86
PAMENTER, RUTH	12/9/2011 11:59	PAMENTER-263916	0.440 J		46.14	<0.250 U		<0.250 U	<0.250 U	<0.250 U	6.41
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	0.78	80.60	0.68	<0.500 U	<50.000 U	<0.500 U	<0.500 U	<0.500 U	1.24
KITTLESON JANET	6/28/2011 15:26	254941	2.16	20.15	44.77	<0.500 U	<50.000 U	<0.500 U	0.140 J	<0.500 U	4.78
KITTLESON JANET	6/28/2011 15:26	254941	2.22		48.36	<2.000 U		<2.000 U	<2.000 U	0.430 J	30.72
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	0.870 J		0.960 J	<1.250 U		<1.250 U	<1.250 U	0.380 J	3.65
DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616	0.50	18.90	27.70	<0.5		<0.5	<0.5	0.62	4.52
MEHRENS, JOE	1/5/2011 13:10	MURNS-91567	0.80	<5.0	<0.5	<0.5		<0.5	<0.5	<0.5	5.71
CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945	0.82	199.00	45.60	<0.5		<0.5	<0.5	<0.5	1.78
PUNOHU, LAVONE	2/28/2011 13:49	PUNOHU-259954	0.85	<5.0	23.70	<0.5		<0.5	<0.5	<0.5	11.60
WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538	0.88	10.10	131.00	<0.5		<0.5	<0.5	<0.5	4.87
BYRNE, PAT	3/23/2011 12:16	BYRNE-219268	0.95	<5.0	24.90	<0.5		<0.5	<0.5	<0.5	1.71
DODD DARYL	2/28/2011 12:51	DODD-189213	1.00	<5.0	23.80	<0.5		<0.5	<0.5	<0.5	<1.3
MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082	1.07	<5.0	20.30	<0.5		<0.5	<0.5	<0.5	11.10
MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI-51365	1.10		64.72	<0.100 U		<0.100 U	<0.100 U	0.270 J	8.66
WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD	1.30		154.45	<0.250 U		<0.250 U	<0.250 U	0.360 J	7.82
WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318	1.30		171.82	<1.25 U		<1.25 U	<1.25 U	1.47	1.1100 J
SENN, HANK	8/3/2011 12:02	52041-SENN2	1.31		19.88	<0.250 U		<0.250 U	<0.250 U	<0.250 U	2.58
JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996	1.32	65.00	105.00	<0.5		<0.5	<0.5	<0.5	15.00
KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE-263931	1.38		47.50	<0.250 U		<0.250 U	<0.250 U	0.290 J	0.340 J
SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA	1.40		69.55	<0.250 U		<0.250 U	<0.250 U	<0.250 U	1.220 J
CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW	1.48		48.77	<0.250 U		<0.250 U	<0.250 U	0.360 J	21.13
SESTRICH, PEG	3/25/2011 12:14	SESTRICH 261316	1.49		20.30	<1.25 U		<1.25 U	<1.25 U	<1.25 U	1.37
JOHNS LORI	1/26/2011 13:40	JOHNS-185843	1.53	92.60	113.00	<0.5		<0.5	<0.5	<0.5	10.40
PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206	1.61		22.39	<0.250 U		<0.250 U	<0.250 U	0.360 J	4.89
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	1.68		97.18	<0.250 U		<0.250 U	0.280 J	0.300 J	0.420 J
KING, DALE	2/18/2011 14:39	KING-179119	1.71	9.52	<0.5	<0.5		<0.5	<0.5	<0.5	18.80
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN 263246	1.80		62.43	<0.250 U		<0.250 U	<0.250 U	<0.250 U	2.10
POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943	1.98		46.78	<0.250 U		<0.250 U	<0.250 U	0.310 J	1.61
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	1.99		4.67	<5.000 U		0.460 J	0.370 J	0.610 J	3.18
MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK-178972	2.29	7.17	20.40	<0.5		<0.5	<0.5	<0.5	5.29
GARRITY BROS. #1	8/3/2011	52147-SENN	2.32		36.49	<0.250 U		<0.250 U	<0.250 U	0.300 J	10.48
RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY 5412	2.37		125.58	<0.250 U		<0.250 U	<0.250 U	<0.250 U	1.150 J
RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN 198927	2.62		1.98	<0.250 U		<0.250 U	<0.250 U	0.560 J	14.45

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Site Name	Sample Date	Field Number	Li (ug/l)	Mo (ug/l)	Ni (ug/l)	Pb (ug/l)	Sb (ug/l)	Se (ug/l)	Sn (ug/l)	Sr (ug/l)	Ti (ug/l)
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	11.55	1.43	0.6600 J	<1.00 U	<1.00 U	0.7700 J	<1.00 U	194.77	0.6600 J
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	13.53	1.29	<0.50 U	0.0600 J	<0.50 U	0.82	<0.50 U	203.62	0.1100 J
BAKER, LINDA	2/11/2011 14:36	BAKER-219266	<5.0	2.64	<0.5	0.89	<0.5	<0.5	<1.3	189.00	1.68
CONNORS KEN	10/12/2011	CONNORS CONFIRM.	107.59	4.03	<0.250 U	<0.100 U	<0.250 U	0.290 J	<0.250 U	2744.74	1.110 J
JETTE, JOE	4/27/2011 13:18	JETTE 259777	3.69	2.25	<0.50 U	0.1800 J	0.53	0.3200 J	<0.50 U	256.57	0.3700 J
CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	108.89	4.16	<0.100 U	<0.040 U	0.210 J	<0.100 U	<0.100 U	2611.78	0.70
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	12.90	4.12	0.58	<0.5	<0.5	1.41	<1.3	176.00	3.72
JETTE, JOE	4/27/2011 13:18	JETTE 259777	1.0500 J	2.06	<0.50 U	<0.20 U	0.4100 J	0.2900 J	<0.50 U	255.63	0.1200 J
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	13.50	7.09	<0.5	<0.5	<0.5	<0.5	<1.3	207.00	1.03
BAKER, LINDA	2/11/2011 14:36	BAKER 219266	2.07	2.57	<0.2	0.44	<0.2	0.69	<0.5	183.00	0.21
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	5.90	3.62	<0.2	<0.2	<0.2	1.36	<0.5	165.00	0.42
JONES, BRENT	4/25/2011 13:42	JONES 259580	24.29	5.53	<0.50 U	0.41	0.1000 J	0.90	0.2600 J	802.30	0.56
JONES, BRENT	4/25/2011 13:42	JONES 259580	13.32	5.08	<0.50 U	0.21	0.1300 J	0.94	<0.50 U	783.05	0.4000 J
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	11.40	2.23	0.56	<0.5	<0.5	<0.5	<1.3	132.00	0.65
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	7.16	3.79	<0.5	<0.5	<0.5	<0.5	<1.3	119.00	1.27
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	<5.0	2.19	<0.5	<0.5	<0.5	1.44	<1.3	367.00	0.97
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	11.10	6.65	<0.2	0.26	<0.2	0.58	<0.5	199.00	0.29
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	2.43	3.10	<0.2	<0.2	<0.2	0.31	<0.5	111.00	<0.2
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	5.06	1.91	<0.2	<0.2	<0.2	0.48	<0.5	118.00	<0.2
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	4.47	2.05	0.19	<0.2	<0.2	2.27	<0.5	352.00	0.67
WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106	2.860 J	0.890 J	<0.250 U	<0.100 U	<0.250 U	0.790 J	<0.250 U	113.21	<0.250 U
KINNEY, GREGG	12/20/2011 16:00	KINNEY	16.66	3.70	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	1266.09	1.50
WHITE RUSSELL & PAI	12/27/2011 12:39	WHITE-52670-DUP	<1.000 U	1.61	<0.250 U	1.02	<0.250 U	<0.250 U	<0.250 U	122.82	<0.250 U
PAMENTER, RUTH	12/9/2011 11:59	PAMENTER 263916	2.540 J	4.03	1.33	1.20	<0.250 U	<0.250 U	<0.250 U	133.07	<0.250 U
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	38.00	2.84	<0.500 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U	6.70	0.67
KITTLESON JANET	6/28/2011 15:26	254941	5.42	2.56	0.120 J	0.060 J	0.340 J	0.94	<0.500 U	184.05	0.99
KITTLESON JANET	6/28/2011 15:26	254941	3.470 J	2.83	2.30	1.140 J	<2.000 U	0.780 J	<2.000 U	202.66	1.380 J
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	20.61	3.19	0.310 J	<1.250 U	<1.250 U	<1.250 U	<1.250 U	7.71	0.830 J
DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616	<5.0	3.17	<0.5	<0.5	<0.5	1.17	<1.3	333.00	2.52
MEHRENS, JOE	1/5/2011 13:10	MURNS-91567	<5.0	1.58	<0.5	<0.5	<0.5	<0.5	<1.3	<0.5	<0.5
CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945	11.50	4.27	<0.5	<0.5	<0.5	0.98	<1.3	233.00	1.23
PUNOHU, LAVONE	2/28/2011 13:49	PUNOHU-259954	<5.0	2.57	<0.5	0.58	<0.5	<0.5		86.50	<0.5
WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538	6.27	3.08	0.51	0.60	<0.5	<0.5	<1.3	489.00	0.53
BYRNE, PAT	3/23/2011 12:16	BYRNE-219268	<5.0	2.17	<0.5	<0.5	<0.5	<0.5		84.60	<0.5
DODD DARYL	2/28/2011 12:51	DODD-189213	<5.0	3.13	<0.5	<0.5	<0.5	2.39		513.00	182.00
MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082	<5.0	2.24	<0.5	0.69	<0.5	<0.5	<1.3	86.50	<0.5
MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI-51365	1.970 J	<0.100 U	0.61	0.33	<0.100 U	<0.100 U	0.120 J	86.99	1.70
WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD	8.40	1.93	0.350 J	<0.100 U	<0.250 U	1.100 J	<0.250 U	290.14	0.510 J
WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318	1.6700 J	4.85	<1.25 U	0.5700 J	<1.25 U	0.2600 J	<1.25 U	461.77	8.29
SENN, HANK	8/3/2011 12:02	52041-SENN2	3.410 J	3.46	0.630 J	<0.100 U	<0.250 U	<0.250 U	<0.250 U	54.15	<0.250 U
JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996	13.00	2.67	0.58	1.53	<0.5	<0.5	<1.3	450.00	<0.5
KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE-263931	3.560 J	1.32	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	394.85	4.14
SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA	6.32	<0.250 U	<0.250 U	<0.100 U	<0.250 U	0.440 J	<0.250 U	170.00	0.650 J
CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW	3.170 J	0.360 J	4.30	0.130 J	<0.250 U	0.400 J	<0.250 U	94.10	0.400 J
SESTRICH, PEG	3/25/2011 12:14	SESTRICH 261316	<5.00 U	2.11	<1.25 U	0.4100 J	<1.25 U	<1.25 U	<1.25 U	79.54	<1.25 U
JOHNS LORI	1/26/2011 13:40	JOHNS-185843	11.00	5.81	<0.5	<0.5	<0.5	<0.5	<1.3	407.00	<0.5
PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206	8.72	1.38	<0.250 U	0.190 J	<0.250 U	<0.250 U	<0.250 U	236.22	<0.250 U
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	55.01	1.090 J	0.930 J	<0.100 U	<0.250 U	0.550 J	<0.250 U	1759.06	1.92
KING, DALE	2/18/2011 14:39	KING-179119	<5.0	0.83	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN 263246	17.60	0.840 J	0.290 J	<0.100 U	<0.250 U	0.680 J	<0.250 U	1155.29	1.39
POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943	11.22	3.02	0.880 J	<0.100 U	0.670 J	1.050 J	<0.250 U	190.91	1.090 J
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	0.15	2.31	0.530 J	0.620 J	0.420 J	0.370 J	6.45	22.32	4.35
MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK-178972	<5.0	<0.5	0.46	<0.5	<0.5	<0.5		29.70	<0.5
GARRITY BROS. #1	8/3/2011	52147-SENN	1.850 J	2.88	1.100 J	<0.100 U	<0.250 U	<0.250 U	<0.250 U	88.69	<0.250 U
RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY 5412	11.17	1.58	0.600 J	<0.100 U	<0.250 U	<0.250 U	<0.250 U	787.68	0.480 J
RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN 198927	<1.000 U	<0.250 U	0.510 J	1.97	<0.250 U	<0.250 U	<0.250 U	15.06	2.11

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Site Name	Sample Date	Field Number	Tl (ug/l)	U (ug/l)	V (ug/l)	Zn (ug/l)	Zr (ug/l)	Ce (ug/l)	Cs (ug/l)	Ga (ug/l)	La (ug/l)
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	<1.00 U	1.8800 J	3.62	4.10	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<4.00 U
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	0.1600 J	1.97	3.83	10.36	<2.00 U	<0.50 U	<0.50 U	<2.00 U	<0.50 U
BAKER, LINDA	2/11/2011 14:36	BAKER-219266	<0.5	1.25	25.00	15.30	<0.2	<0.5	<1.3	<0.5	<0.5
CONNORS KEN	10/12/2011	CONNORS CONFIRM.	<0.250 U	0.640 J	<0.250 U	<0.500 U	<0.250 U	<0.250 U	2.94	<0.250 U	<0.250 U
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	<0.50 U	9.08	2.03	<1.00 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	<0.100 U	0.56	<0.100 U	0.860 J	<0.100 U	<0.100 U	2.80	<0.100 U	<0.100 U
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	<0.5	1.51	9.57	14.00	<0.5	<0.5	<1.3	<0.5	<0.5
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	<0.50 U	7.54	1.33	0.9900 J	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	<0.5	3.89	11.40	87.90	<0.5	<0.5	<1.3	<0.5	<1.3
BAKER, LINDA	2/11/2011 14:36	BAKER 219266	<0.2	1.29	20.20	21.60	<0.2	<0.2	<0.5	<0.2	<0.2
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	<0.2	1.23	6.23	14.70	<0.2	<0.2	<0.5	<0.2	<0.2
JONES, BRENT	4/25/2011 13:42	JONES - 259580	<0.50 U	18.42	43.82	8.39	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
JONES, BRENT	4/25/2011 13:42	JONES - 259580	<0.50 U	16.64	33.33	4.11	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	<0.5	1.09	12.20	3.78	<0.5	<0.5	<1.3	<0.5	<0.5
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	<0.5	1.61	12.60	8.00	<0.5	<0.5	<1.3	<0.5	<0.5
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	<0.5	2.00	15.10	2.35	<0.5	<0.5	<1.3	<0.5	<0.5
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	<0.2	3.94	8.83	104.00	<0.2	<0.2	<0.5	<0.2	<0.2
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	<0.2	1.26	7.88	7.49	<0.2	<0.2	<0.5	<0.2	<0.2
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	<0.2	0.86	7.71	4.68	<0.2	<0.2	<0.5	<0.2	<0.2
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	<0.2	1.92	11.80	3.14	<0.2	<0.2	<0.5	<0.2	<0.2
WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106	<0.250 U	1.090 J	0.480 J	21.15	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
KINNEY, GREGG	12/20/2011 16:00	KINNEY	<0.250 U	7.77	<0.250 U	5.60	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670-DUP	<0.250 U	0.870 J	0.650 J	3.00	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
PAMENTER, RUTH	12/9/2011 11:59	PAMENTER-263916	<0.250 U	5.87	0.680 J	6.28	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	0.110 J	0.140 J	<0.500 U	6.72	<0.500 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U
KITTLESON JANET	6/28/2011 15:26	254941	0.210 J	2.67	0.56	<1.000 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U
KITTLESON JANET	6/28/2011 15:26	254941	<2.000 U	2.68	0.770 J	17.81	<2.000 U	<2.000 U	<2.000 U	<2.000 U	<2.000 U
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	<1.250 U	<1.250 U	<1.250 U	12.20	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U
DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616	<0.5	131.00	0.94	7.31	<0.5	<0.5	<1.3	<0.5	<0.5
MEHRENS, JOE	1/5/2011 13:10	MURNS-91567	<0.5	1.40	<0.5	2.31	<0.5	<0.5	<1.3	<0.5	<0.5
CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945	<0.5	41.40	1.22	5.23	<0.5	<0.5	<1.3	<0.5	<0.5
PUNOHU, LAVONE	2/28/2011 13:49	PUNOHU-259954	<0.5	1.68	0.78	12.10	<0.5	<0.5	<1.3	35.70	<0.5
WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538	<0.5	3.42	1.44	31.80	<0.5	<0.5	<1.3	<0.5	<0.5
BYRNE, PAT	3/23/2011 12:16	BYRNE-219268	<0.5	1.35	0.69	5.02	<0.5	<0.5	<1.3	35.20	<0.5
DODD DARYL	2/28/2011 12:51	DODD-189213	<0.5	8.30	21.60	41.50	3.11	<0.5	<1.3	30.90	<0.5
MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082	<0.5	1.86	0.58	15.80	<0.5	<0.5	<1.3	<0.5	<0.5
MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI-51365	<0.100 U	<0.100 U	0.270 J	63.72	<0.100 U	0.100 J	<0.100 U	<0.100 U	0.140 J
WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD	<0.250 U	5.78	2.09	3.34	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318	<1.25 U	3.44	2.19	77.33	<1.25 U	0.4900 J	<1.25 U	<1.25 U	0.3000 J
SENN, HANK	8/3/2011 12:02	52041-SENN2	<0.250 U	0.860 J	0.430 J	6.35	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996	<0.5	79.20	2.43	43.70	<0.5	<0.5	<1.3	<0.5	<0.5
KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE-263931	<0.250 U	7.12	2.98	<0.500 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.270 J
SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA	<0.250 U	2.14	1.32	0.900 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW	0.410 J	0.360 J	<0.250 U	24.06	<0.250 U	<0.250 U	0.830 J	<0.250 U	<0.250 U
SESTRICH, PEG	3/25/2011 12:14	SESTRICH 261316	<1.25 U	1.1900 J	0.8400 J	52.95	<1.25 U	<1.25 U	<1.25 U	<1.25 U	<1.25 U
JOHNS LORI	1/26/2011 13:40	JOHNS-185843	<0.5	31.90	2.05	5.00	<0.5	<0.5	<1.3	<0.5	<0.5
PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206	<0.250 U	12.62	2.64	4.50	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	<0.250 U	<0.250 U	<0.250 U	32.90	<0.250 U	<0.250 U	2.85	<0.250 U	<0.250 U
KING, DALE	2/18/2011 14:39	KING-179119	<0.5	<0.5	3.69	3.01	<0.5	<0.5	<1.3	<0.5	<0.5
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	<0.250 U	0.890 J	<0.250 U	0.830 J	<0.250 U	<0.250 U	0.460 J	<0.250 U	<0.250 U
POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943	<0.250 U	3.23	0.780 J	11.35	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	0.360 J	1.60	0.740 J	1.210 J	<1.250 U	1.56	<1.250 U	<1.250 U	<5.000 U
MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK-178972	<0.5	<0.5	0.84	2.83	<0.5	<0.5	<1.3	51.20	<0.5
GARRITY BROS. #1	8/3/2011	52147-SENN	<0.250 U	1.39	0.480 J	37.73	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY 5412	<0.250 U	0.470 J	<0.250 U	1.660 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN - 198927	<0.250 U	<0.250 U	0.960 J	29.02	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U

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Site Name	Sample Date	Field Number	Nb (ug/l)	Nd (ug/l)	Pd (ug/l)	Pr (ug/l)	Rb (ug/l)	Th (ug/l)	W (ug/l)	Procedure
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	<1.00 U	<1.00 U	<1.00 U	<1.00 U	4.65	<1.00 U	<1.00 U	TOTAL RECOVERABLE
BLOM LORIN	5/24/2011 11:50	BLOM- RESAMPLE	<2.00 U	<2.00 U	<0.50 U	<0.50 U	4.70	<0.50 U	<0.50 U	DISSOLVED
BAKER, LINDA	2/11/2011 14:36	BAKER-219266	<1.3	<0.5	<1.3	<0.5	5.56	<0.5	3.71	TOTAL RECOVERABLE
CONNORS KEN	10/12/2011	CONNORS CONFIRM.	<0.250 U	<0.250 U	1.51	<0.250 U	8.96	<0.250 U	4.28	TOTAL RECOVERABLE
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	<0.50 U	<0.50 U	<0.50 U	<0.50 U	0.4200 J	<0.50 U	<0.50 U	TOTAL RECOVERABLE
CONNORS KEN	10/12/2011 13:30	CONNORS CONFIRM.	<0.100 U	<0.100 U	0.75	<0.100 U	8.65	<0.100 U	3.93	DISSOLVED
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	<1.3	<0.5	<1.3	<0.5	7.32	<0.5	1.33	TOTAL RECOVERABLE
JETTE, JOE	4/27/2011 13:18	JETTE - 259777	<0.50 U	<0.50 U	0.1200 J	<0.50 U	0.3400 J	<0.50 U	<0.50 U	DISSOLVED
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	<1.3	<0.5	<1.3	<0.5	10.80	<0.5	5.35	TOTAL RECOVERABLE
BAKER, LINDA	2/11/2011 14:36	BAKER 219266	<0.5	<0.2	<0.5	<0.2	5.12	<0.2	3.49	DISSOLVED
MCQUEARY CAM	4/21/2011 13:56	MCQUEARY 250294	<0.5	<0.2	<0.5	<0.2	6.21	<0.2	0.95	DISSOLVED
JONES, BRENT	4/25/2011 13:42	JONES - 259580	<0.50 U	<0.50 U	0.4000 J	<0.50 U	0.1400 J	<0.50 U	0.4200 J	TOTAL RECOVERABLE
JONES, BRENT	4/25/2011 13:42	JONES - 259580	<0.50 U	<0.50 U	0.3600 J	<0.50 U	<0.50 U	<0.50 U	0.2500 J	DISSOLVED
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	<1.3	<0.5	<1.3	<0.5	6.60	<0.5	<0.5	TOTAL RECOVERABLE
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	<1.3	<0.5	<1.3	<0.5	6.57	<0.5	<0.5	TOTAL RECOVERABLE
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	<1.3	<0.5	<1.3	<0.5	10.50	<0.5	1.03	TOTAL RECOVERABLE
BOITNOTT, STEVE	2/11/2011 13:37	BOITNOTT-158784	<0.5	<0.2	<0.5	<0.2	9.97	<0.2	4.79	DISSOLVED
GESSELE, EDWIN C JR	4/21/2011 13:20	GESSELE 259949	<0.5	<0.2	<0.5	<0.2	5.30	<0.2	<0.2	DISSOLVED
WAYMIRE, EDWARD	4/21/2011 12:45	WAYMIRE-156249	<0.5	<0.2	<0.5	<0.2	5.11	<0.2	<0.2	DISSOLVED
CHOQUETTE, WALTER	2/7/2011 14:57	CHOQUETTE-122351	<0.5	<0.2	<0.5	<0.2	8.85	<0.2	0.95	DISSOLVED
WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.350 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
KINNEY, GREGG	12/20/2011 16:00	KINNEY	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.980 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670-DUP	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
PAMENTER, RUTH	12/9/2011 11:59	PAMENTER 263916	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.380 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	<0.500 U	<0.500 U	<0.500 U	<0.500 U	0.420 J	<0.500 U	0.240 J	DISSOLVED
KITTLESON JANET	6/28/2011 15:26	254941	<0.500 U	<0.500 U	<0.500 U	<0.500 U	2.21	<0.500 U	0.160 J	DISSOLVED
KITTLESON JANET	6/28/2011 15:26	254941	<2.000 U	<2.000 U	<2.000 U	<2.000 U	2.47	<2.000 U	<2.000 U	TOTAL RECOVERABLE
TOWN PUMP ANACONDA	6/28/2011 14:50	251739	<1.250 U	<1.250 U	<1.250 U	<1.250 U	0.510 J	<1.250 U	0.250 J	TOTAL RECOVERABLE
DEMERS SHAWN	1/28/2011 14:36	DEMERS-257616	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
MEHRENS, JOE	1/5/2011 13:10	MURNS-91567	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
CHLADEK DAN	1/6/2011 13:56	CHLADEK-209945	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
PUNOHU, LAVONE	2/28/2011 13:49	PUNOHU-259954	<0.5	<0.5	<1.3	<0.5	1.76	<0.5	<0.5	TOTAL RECOVERABLE
WOOLSEY, JOHN	3/25/2011 13:29	WOOSLEY-53538	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
BYRNE, PAT	3/23/2011 12:16	BYRNE-219268	<1.3	<0.5	<1.3	<0.5	1.77	<0.5	<0.5	TOTAL RECOVERABLE
DODD DARYL	2/28/2011 12:51	DODD-189213	<1.3	<0.5	<1.3	<0.5	1.36	1.39	<0.5	TOTAL RECOVERABLE
MAGNESS MARY ALICE	1/24/2011 12:52	MAGNESS-213082	<1.3	<0.5	<1.3	<0.5	1.68	<0.5	0.78	TOTAL RECOVERABLE
MARTELLI, ISABELLE	8/31/2011 15:30	MARTELLI-51365	<0.100 U	0.160 J	<0.100 U	<0.100 U	0.360 J	<0.100 U	<0.100 U	TOTAL RECOVERABLE
WOOD KENNETH	8/26/2011 11:50	KENNETH WOOD	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
WOOLSEY, JOHN	3/25/2011 14:02	WOOLSEY-261318	<1.25 U	<1.25 U	<1.25 U	<1.25 U	3.59	<1.25 U	<1.25 U	TOTAL RECOVERABLE
SENN, HANK	8/3/2011 12:02	52041-SENN2	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.31	<0.250 U	0.260 J	TOTAL RECOVERABLE
JACOBSON, EDNA	1/26/2011 13:02	JACOBSON-259996	<1.3	<0.5	<1.3	<0.5	5.50	<0.5	<0.5	TOTAL RECOVERABLE
KLEESE, CLAIRE & MENCEL, MARK	12/20/2011 14:56	KLEESE-263931	<0.250 U	0.350 J	<0.250 U	<0.250 U	0.400 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SEVEYKA, PAUL	8/9/2011 13:10	SEVEYKA	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
CROMWELL, ANDREW	9/22/2011 12:10	CROMWELL, MEGHAN + ANDREW	<0.250 U	<0.250 U	<0.250 U	<0.250 U	4.94	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SESTRICH, PEG	3/25/2011 12:14	SESTRICH 261316	<1.25 U	<1.25 U	<1.25 U	<1.25 U	1.36	<1.25 U	0.2800 J	TOTAL RECOVERABLE
JOHNS LORI	1/26/2011 13:40	JOHNS-185843	<1.3	<0.5	<1.3	<0.5	2.61	<0.5	<0.5	TOTAL RECOVERABLE
PATTERSON, GERALD AND PEG	11/30/2011 14:10	PATTERSON-51206	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	5.03	TOTAL RECOVERABLE
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	<0.250 U	<0.250 U	1.000 J	<0.250 U	6.87	<0.250 U	0.610 J	TOTAL RECOVERABLE
KING, DALE	2/18/2011 14:39	KING-179119	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	<0.250 U	<0.250 U	0.560 J	<0.250 U	1.65	<0.250 U	<0.250 U	TOTAL RECOVERABLE
POLAND, DEBBIE	8/29/2011 12:43	POLAND - 201943	<0.250 U	<0.250 U	<0.250 U	<0.250 U	2.43	<0.250 U	<0.250 U	TOTAL RECOVERABLE
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	<1.250 U	1.14	<1.250 U	0.250 J	0.650 J	<1.250 U	0.710 J	TOTAL RECOVERABLE
MAHKUK CHRISTINE	3/23/2011 13:40	MAHKUK-178972	<1.3	<0.5	<1.3	<0.5	1.34	<0.5	<0.5	TOTAL RECOVERABLE
GARRITY BROS. #1	8/3/2011	52147-SENN	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.33	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RILEY WESLEY & LEONA	10/5/2011 12:46	RILEY - 5412	<0.250 U	<0.250 U	0.390 J	<0.250 U	2.14	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RANKIN, KEITH AND JEAN	9/14/2011 13:31	RANKIN - 198927	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.300 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE

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Sample	Gwic Id	Site Name	Sample Date	Field Number	Water Temp	Fld pH	Fld SC	Lab pH	Lab SC	Ca (mg/l)	Mg (mg/l)
200341	257556	JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	11.4	6.09	411			56.39	7.48
2011Q0930	259950	MAYNARD, DAVE	1/24/2011 13:45	MAYNARD	8.7	7.00	710			93.20	18.20
2011Q0990	260552	CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552	11.0	7.23	538			34.30	8.83
200375	145972	MCNEIL SCOTT	7/20/2011 11:32	145972-MCNEIL	6.7	7.36	455			66.83	12.39
200850	262782	BAILEY, DIANA	8/24/2011 14:15	BAILEY - 262782	10.9	6.83	340			42.50	6.50
200855	51744	JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE - 51744	11.8	7.39	312			41.57	5.52
200665	51380	MILLER, GARY	8/26/2011 10:45	MILLER, GARY	7.1	5.32	88			8.84	2.46
2011Q1010	223085	PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TR"	12.8	7.21	269			30.40	7.48
2011Q0991	260549	MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL-260549	10.9	7.27	347			46.70	6.51
200853	198928	RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN - 198928	5.4	5.12	59			5.90	1.14
200705	126679	FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL - 126679	11.6	6.98	342			26.12	3.13
200558	241972	FLACHMEYER DAN	8/10/2011	FLACHMEYER	11.7	7.10	382			46.94	7.67
2011Q1123	181457	WHITAKER, RAY	3/23/2011 14:57	WHITAKER-181457	9.6	7.36	552			41.80	11.00
200020	196975	GRAVES RUSSEL	4/27/2011 14:31	GRAVES - 196975	14.1	8.30	288			27.91	7.88
2011Q0922	250294	MCQUEARY CAM	1/6/2011 12:12	MCQUEARY-250294	11.6	7.24	472			40.80	5.82
200993	122350	DENNIS KEVIN	10/26/2011 12:38	DENNIS - 122350	11.4	8.05	733			66.18	24.52
2011Q0902	156249	WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249	13.7	7.59	308			30.60	3.54
2011Q0931	259949	GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949	11.2	7.01	285			30.20	3.10
200996	153593	ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ	11.7	7.22	407			36.36	3.75
2011Q0996	260551	UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551	12.3	7.23	680			40.90	21.60
200447	226131	ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN	14.2	8.22	406			10.20	2.28
2011Q1013	163704	THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON	7.8	6.58	399			44.20	11.40
200344	257557	JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	11.2	5.54	1,058			133.35	16.36
201038	51358	SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ	8.7	7.53	1,040			156.35	26.45
201139	51372	CARTER, ADENA	11/30/2011 13:01	CARTER-51372	6.3	7.27	133			13.52	3.89
200432	53483	MATTICE, BRADLY S	8/2/2011	53483-MATICE	8.9	6.61	350			52.28	9.13
201063	164821	NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA - 164821	8.3	7.32	221			30.10	6.99
201061	170885	SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER - 170885	8.0	7.09	219			27.48	7.49
200706	170887	LANES, BUTCH	9/7/2011 14:30	LANES	8.0	6.30	102			10.91	2.56
201064	190777	BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777	7.5	6.56	76			9.77	2.04
200560	20616?	LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN	17.1	7.06	693			82.08	18.92
200555	227190	METCALF, BOB	8/8/2011 13:25	METCALF	10.3	6.65	449			39.89	15.13
201066	237622	HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622	4.7	6.40	118			12.44	1.60
200702	246833	KACHINKSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833	8.0	6.28	142			18.32	3.73
201065	250979	PRETE, JOSEPH	11/2/2011 12:34	PRETE - 250979	5.7	6.06	105			12.57	1.13
200852	262839	SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839	9.9	5.69	175			20.05	5.93
200851	262840	MICHELS, KEITH	9/9/2011 12:59	SILZLY - 262840	8.1	5.65	165			17.08	5.05
200922	263378	STANDISH, NANCY	10/11/2011 15:20	STANDISH	6.1	5.50	102			9.66	2.68
201074	263724	RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724	7.9	6.20	274			34.87	9.66
201075	263725	VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE 263725	9.7	7.02	207			24.44	6.56
201131	263908	SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN	8.5	6.13	288			37.87	10.71
2011Q1001	53497	ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:12	ELMOSE-53497	6.8	6.95	257			41.80	5.71
2011Q0995	53514	GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514	7.7	6.79	311			48.30	6.32
2011Q0924	185841	EDGE KEITH	1/6/2011 14:39	EDGE-185841	6.4	6.63	150			16.10	2.99
2011Q1000	186594	PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT-186594	5.0	6.88	394			62.10	7.99
2011Q0998	195506	DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506	7.4	6.96	298			46.70	6.14
2011Q0901	221439	KIESER, FRANK	1/5/2011 14:15	KIESER 221439	6.2	6.80	200			28.00	4.78
2011Q0937	259998	KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998	8.6	6.90	279			37.30	6.93
2011Q0994	260033	SHAFFORD, LAURA	2/18/2011 12:41	STAFFORD-260033	8.9	6.93	284			35.50	9.42
2011Q0992	260550	HANSON, ROGER	2/18/2011 13:34	HANSON-260550	9.7	6.76	194			25.30	5.92
2011Q0989	260555	CLAWSON, CINDY	2/9/2011 13:36	CLAWSON-260555	10.1	6.91	281			34.60	7.35
200988	263360	SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED - 263360	8.1	6.14	209			23.71	6.78
200610	178942	MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE	12.9	5.70	461			49.21	10.25
201172	52670	WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670	8.8	7.63	195			23.77	6.51
201133	152577	KINNEY, GREGG	12/20/2011 16:10	KINNEY #2	9.8	7.31	394			42.40	10.31
201171	173106	WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106-DUP	9.4	6.77	192			22.61	6.14

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Site Name	Sample Date	Field Number	Na (mg/l)	K (mg/l)	Fe (mg/l)	Mn (mg/l)	SiO2 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	15.88	<2.500 U	0.052	<0.005 U			
MAYNARD, DAVE	1/24/2011 13:45	MAYNARD	40.90	3.09	0.080	<0.003			
CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552	13.90	5.93	0.072	0.003			
MCNEIL SCOTT	7/20/2011 11:32	145972 MCNEIL	7.68	2.22	0.118	<0.006 U			
BAILEY, DIANA	8/24/2011 14:15	BAILEY 262782	13.52	6.90	0.029	<0.003 U			
JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE 51744	12.53	5.90	0.029	<0.003 U			
MILLER, GARY	8/26/2011 10:45	MILLER, GARY	4.40	1.34	0.479	0.004 J			
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TH"	15.30	5.25	0.121	0.004			
MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL-260549	11.50	8.41	4.360	0.047			
RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN - 198928	3.57	1.85	0.102	<0.003 U			
FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL - 126679	27.75	7.42	0.009 J	<0.003 U			
FLACHMEYER DAN	8/10/2011	FLACHMEYER	16.47	9.58	0.422	0.011			
WHITAKER, RAY	3/23/2011 14:57	WHITAKER-181457	59.00	5.56	0.146	<0.003			
GRAVES RUSSEL	4/27/2011 14:31	GRAVES 196975	21.39	5.02	0.279	0.001	45.3		
MCQUEARY CAM	1/6/2011 12:12	MCQUEARY-250294	35.40	10.60	0.881	0.019			
DENNIS KEVIN	10/26/2011 12:38	DENNIS 122350	39.89	7.73	0.047	<0.003 U			
WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249	21.60	9.88	0.097	<0.003			
GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949	20.90	8.96	0.180	0.003			
ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ	36.28	10.81	0.112	0.004 J			
UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551	75.20	6.30	2.410	0.050			
ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN	76.22	4.38	0.058	<0.001 U			
THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON	23.50	3.23	0.053	<0.003			
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	74.36	7.53	0.286	0.010			
SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ	34.13	2.98	0.052	<0.003 U			
CARTER, ADENA	11/30/2011 13:01	CARTER-51372	5.69	0.98	0.056	0.009 J			
MATTICE, BRADLY S	8/2/2011	53483 MATICE	5.32	1.29	0.066	<0.001 U			
NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA 164821	6.20	0.95	0.067	<0.003 U			
SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER 170885	6.09	1.04	0.167	<0.003 U			
LANES, BUTCH	9/7/2011 14:30	LANES	6.50	0.68	0.153	<0.003 U			
BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777	2.72	0.58	<5.000 U	<0.003 U			
LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN	48.65	3.50	0.158	0.011			
METCALF, BOB	8/8/2011 13:25	METCALF	32.86	1.42	0.062	<0.001 U			
HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622	9.58	0.84	1.143	0.047			
KACHINSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833	4.13	0.80	0.194	<0.003 U			
PRETE, JOSEPH	11/2/2011 12:34	PRETE - 250979	5.50	0.98	0.237	0.009 J			
SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839	6.24	1.51	0.043	<0.003 U			
MICHELS, KEITH	9/9/2011 12:59	SILZLY 262840	5.95	1.52	2.751	0.021			
STANDISH, NANCY	10/11/2011 15:20	STANDISH	6.09	0.44	0.082	<0.003 U			
RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724	6.89	1.12	0.910	<0.003 U			
VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE 263725	6.41	0.92	0.045	<0.003 U			
SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN	8.99	1.19	0.049	<0.003 U			
ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:17	ELMOSE-53497	4.74	1.89	0.096	<0.003			
GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514	7.53	2.21	0.441	<0.003			
EDGE KEITH	1/6/2011 14:39	EDGE-185841	2.89	0.51	0.105	<0.003			
PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT-186594	5.15	3.48	0.784	0.015			
DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506	6.48	1.16	0.056	<0.003			
KIESER, FRANK	1/5/2011 14:15	KIESER 221439	3.32	0.59	0.173	<0.003			
KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998	10.40	1.14	0.069	<0.003			
SHAFFORD, LAURA	2/18/2011 12:41	STAFFORD 260033	8.89	0.84	0.083	<0.003			
HANSON, ROGER	2/18/2011 13:34	HANSON 260550	4.97	1.83	0.050	<0.003			
CLAWSON, CINDY	2/9/2011 13:36	CLAWSON-260555	11.30	3.35	<0.005	<0.003			
SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED 263360	5.94	0.89	0.085	<0.003 U			
MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE	44.78	1.56	0.053	0.022			
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE-52670	5.56	1.07	0.037	<0.003 U			
KINNEY, GREGG	12/20/2011 16:10	KINNEY #2	27.21	0.230 J	0.045	<0.003 U			
WOLFE, FRANK	12/27/2011 11:48	WOLFE-173106-DUP	5.78	0.95	0.052	<0.003 U			

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Site Name	Sample Date	Field Number	SO4 (mg/l)	Cl (mg/l)	NO3-N (mg/l)	F (mg/l)	OPO4-P (mg/l)	Ag (ug/l)	Al (ug/l)
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3						<1.250 U	28.03
MAYNARD, DAVE	1/24/2011 13:45	MAYNARD						<0.5	<5.0
CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552						<0.5	<5.0
MCNEIL SCOTT	7/20/2011 11:32	145972 MCNEIL						<1.250 U	30.84
BAILEY, DIANA	8/24/2011 14:15	BAILEY 262782						<0.250 U	10.37
JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE - 51744						<0.250 U	4.980 J
MILLER, GARY	8/26/2011 10:45	MILLER, GARY						<0.250 U	958.54
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TR"						<0.5	<5.0
MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL 260549						<0.5	385.00
RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN 198928						<0.250 U	189.49
FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL 126679						<0.250 U	16.53
FLACHMEYER DAN	8/10/2011	FLACHMEYER						<0.250 U	613.86
WHITAKER, RAY	3/23/2011 14:57	WHITAKER 181457						<0.5	<5.0
GRAVES RUSSEL	4/27/2011 14:31	GRAVES - 196975						<0.50 U	2.37
MCQUEARY CAM	1/6/2011 12:12	MCQUEARY 250294						<0.5	448.00
DENNIS KEVIN	10/26/2011 12:38	DENNIS 122350						<0.250 U	43.53
WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249						<0.5	114.00
GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949						<0.5	353.00
ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ						<0.250 U	19.88
UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551						<0.5	3306.00
ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN						<0.250 U	6.43
THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON						<0.5	<5.0
JAMISON SHERRI * WELL #4	/12/2011 16:00	WELL #4						<1.250 U	71.78
SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ						<0.250 U	58.58
CARTER, ADENA	11/30/2011 13:01	CARTER-51372						<0.250 U	12.68
MATTICE, BRADLY S	8/2/2011	53483-MATICE						<0.250 U	34.34
NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA - 164821						<0.250 U	4.670 J
SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER - 170885						<0.250 U	24.15
LANES, BUTCH	9/7/2011 14:30	LANES						<0.250 U	5.71
BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777						<0.250 U	5.08
LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN						<0.250 U	3.530 J
METCALF, BOB	8/8/2011 13:25	METCALF						<0.250 U	23.36
HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622						<0.250 U	10.92
KACHINSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833						<0.250 U	5.87
PRETE, JOSEPH	11/7/2011 12:34	PRETE - 250979						<0.250 U	28.55
SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839						<0.250 U	3.150 J
MICHELS, KEITH	9/9/2011 12:59	SILZLY - 262840						<0.250 U	4.650 J
STANDISH, NANCY	10/11/2011 15:20	STANDISH						<0.250 U	14.77
RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724						<0.250 U	6.72
VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE-263725						<0.250 U	5.98
SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN						<0.250 U	16.12
ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:12	ELMOSE 53497						<0.5	17.70
GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514						<0.5	5.02
EDGE KEITH	1/6/2011 14:39	EDGE-185841						<0.5	10.90
PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT 186594						<0.5	12.10
DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506						<0.5	<5.0
KIESER, FRANK	1/5/2011 14:15	KIESER-221439						<0.5	<5.0
KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998						<0.5	5.68
STAFFORD, LAURA	2/18/2011 12:41	STAFFORD-260033						<0.5	9.94
HANSON, ROGER	2/18/2011 13:34	HANSON 260550						<0.5	5.31
CLAWSON, CINDY	2/9/2011 13:36	CLAWSON 260555						<0.5	<5.0
SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED - 263360						<0.250 U	3.670 J
MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE						<0.250 U	6.57
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE 52670						<0.250 U	4.970 J
KINNEY, GREGG	12/20/2011 16:10	KINNEY #2						<0.250 U	25.66
WOLFE, FRANK	12/27/2011 11:48	WOLFE 173106 DUP						<0.250 U	2.040 J

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Appendix E

Site Name	Sample Date	Field Number	As (ug/l)	B (ug/l)	Ba (ug/l)	Be (ug/l)	Br (ug/l)	Cd (ug/l)	Co (ug/l)	Cr (ug/l)	Cu (ug/l)
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	2.70		12.46	<5.000 U		<1.250 U	<1.250 U	0.470 J	1.62
MAYNARD, DAVE	1/24/2011 13:45	MAYNARD	2.73	32.30	79.50	<0.5		<0.5	<0.5	<0.5	15.40
CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552	3.10	14.10	38.80	<0.5		<0.5	<0.5	<0.5	7.15
MCNEIL SCOTT	7/20/2011 11:32	145972 MCNEIL	3.31		126.08	<1.250 U		<1.250 U	<1.250 U	<1.250 U	2.28
BAILEY, DIANA	8/24/2011 14:15	BAILEY 262782	3.89		112.70	<0.250 U		<0.250 U	<0.250 U	0.340 J	1.26
JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE - 51744	3.90		106.25	<0.250 U		<0.250 U	<0.250 U	0.300 J	0.930 J
MILLER, GARY	8/26/2011 10:45	MILLER, GARY	4.33		51.72	<0.250 U		<0.250 U	<0.250 U	0.550 J	49.59
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TR"	4.39	28.30	36.60	<0.5		<0.5	<0.5	1.11	<1.3
MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL 260549	5.23	20.70	122.00	<0.5		<0.5	<0.5	0.76	2.90
RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN 198928	5.38		2.23	<0.250 U		<0.250 U	<0.250 U	0.530 J	3.49
FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL 126679	8.25		39.46	<0.250 U		<0.250 U	<0.250 U	0.310 J	4.11
FLACHMEYER DAN	8/10/2011	FLACHMEYER	8.83		125.73	<0.250 U		<0.250 U	<0.250 U	0.500 J	3.99
WHITAKER, RAY	3/23/2011 14:57	WHITAKER 181457	9.33	78.00	43.10	<0.5		<0.5	0.95	<0.5	2.99
GRAVES RUSSEL	4/27/2011 14:31	GRAVES - 196975	10.15	19.97	31.83	<0.50 U		<0.50 U	<0.50 U	0.3000 J	11.04
MCQUEARY CAM	1/6/2011 12:12	MCQUEARY 250294	10.40	51.10	44.20	<0.5		<0.5	<0.5	0.52	2.26
DENNIS KEVIN	10/26/2011 12:38	DENNIS 122350	11.21		110.15	<0.250 U		<0.250 U	<0.250 U	0.410 J	1.98
WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249	12.30	31.50	79.50	<0.5		<0.5	<0.5	<0.5	<1.3
GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949	12.40	39.10	40.90	<0.5		<0.5	<0.5	0.63	<1.3
ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ	13.30		78.66	<0.250 U		<0.250 U	<0.250 U	0.350 J	0.420 J
UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551	16.50	28.00	118.00	<0.5		<0.5	1.10	12.20	11.30
ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN	18.42	83.90	39.04	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.500 J
THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON	30.90	25.60	78.40	<0.5		<0.5	<0.5	<0.5	4.16
JAMISON SHERRI * WELL #4	/12/2011 16:00	WELL #4	54.05		12.52	<5.000 U		<1.250 U	0.270 J	0.310 J	0.750 J
SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ	<0.250 U		14.27	<0.250 U		<0.250 U	<0.250 U	0.430 J	16.00
CARTER, ADENA	11/30/2011 13:01	CARTER-51372	<0.250 U		225.11	<0.250 U		<0.250 U	<0.250 U	<0.250 U	77.02
MATTICE, BRADLY S	8/2/2011	53483-MATICE	<0.250 U		53.85	<0.250 U		<0.250 U	<0.250 U	<0.250 U	4.02
NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA - 164821	<0.250 U		12.62	<0.250 U		<0.250 U	<0.250 U	<0.250 U	3.22
SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER - 170885	<0.250 U		23.92	<0.250 U		<0.250 U	<0.250 U	0.260 J	5.60
LANES, BUTCH	9/7/2011 14:30	LANES	<0.250 U		3.71	<0.250 U		<0.250 U	<0.250 U	0.540 J	6.89
BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777	<0.250 U		12.49	<0.250 U		<0.250 U	<0.250 U	<0.250 U	11.69
LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN	<0.250 U		98.03	<0.250 U		<0.250 U	<0.250 U	<0.250 U	4.14
METCALF, BOB	8/8/2011 13:25	METCALF	<0.250 U		31.00	<0.250 U		<0.250 U	<0.250 U	0.280 J	1.57
HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622	<0.250 U		115.46	<0.250 U		<0.250 U	<0.250 U	<0.250 U	8.79
KACHINKSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833	<0.250 U		16.42	<0.250 U		<0.250 U	<0.250 U	0.280 J	0.390 J
PRETE, JOSEPH	11/7/2011 12:34	PRETE - 250979	<0.250 U		23.96	<0.250 U		<0.250 U	<0.250 U	0.380 J	1.92
SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839	<0.250 U		24.35	<0.250 U		<0.250 U	<0.250 U	<0.250 U	24.46
MICHELS, KEITH	9/9/2011 12:59	SILZLY - 262840	<0.250 U		35.53	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.580 J
STANDISH, NANCY	10/11/2011 15:20	STANDISH	<0.250 U		30.49	<0.250 U		<0.250 U	<0.250 U	0.370 J	3.56
RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724	<0.250 U		22.40	<0.250 U		<0.250 U	<0.250 U	<0.250 U	6.15
VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE-263725	<0.250 U		50.32	<0.250 U		<0.250 U	<0.250 U	<0.250 U	14.10
SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN	<0.250 U		26.10	<0.250 U		<0.250 U	<0.250 U	<0.250 U	5.04
ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:12	ELMOSE 53497	<0.5	<5.0	92.40	<0.5		<0.5	<0.5	<0.5	<1.3
GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514	<0.5	<5.0	152.00	<0.5		<0.5	<0.5	<0.5	4.68
EDGE KEITH	1/6/2011 14:39	EDGE-185841	<0.5	<5.0	30.00	<0.5		<0.5	<0.5	<0.5	2.72
PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT 186594	<0.5	<5.0	220.00	<0.5		<0.5	<0.5	<0.5	1.98
DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506	<0.5	7.57	45.20	<0.5		<0.5	<0.5	<0.5	<1.3
KIESER, FRANK	1/5/2011 14:15	KIESER-221439	<0.5	<5.0	29.80	<0.5		<0.5	<0.5	<0.5	2.52
KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998	<0.5	14.50	29.30	<0.5		<0.5	<0.5	<0.5	4.01
SHAFFORD, LAURA	2/18/2011 12:41	STAFFORD-260033	<0.5	11.70	17.10	<0.5		<0.5	<0.5	<0.5	15.60
HANSON, ROGER	2/18/2011 13:34	HANSON 260550	<0.5	13.00	33.60	<0.5		<0.5	<0.5	<0.5	29.10
CLAWSON, CINDY	2/9/2011 13:36	CLAWSON 260555	<0.5	<5.0	<0.5	<0.5		<0.5	<0.5	<0.5	<1.3
SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED - 263360	0.250 J		30.79	<0.250 U		<0.250 U	<0.250 U	0.260 J	1.55
MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE	0.280 J		96.61	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.890 J
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE 52670	0.300 J		22.12	<0.250 U		<0.250 U	<0.250 U	<0.250 U	1.38
KINNEY, GREGG	12/20/2011 16:10	KINNEY #2	0.300 J		13.42	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.330 J
WOLFE, FRANK	12/27/2011 11:48	WOLFE 173106 DUP	0.300 J		30.44	<0.250 U		<0.250 U	<0.250 U	<0.250 U	2.00

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Site Name	Sample Date	Field Number	Li (ug/l)	Mo (ug/l)	Ni (ug/l)	Pb (ug/l)	Sb (ug/l)	Se (ug/l)	Sn (ug/l)	Sr (ug/l)	Ti (ug/l)
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	7.41	0.32	0.990 J	<1.250 U	<1.250 U	<1.250 U	5.68	696.87	1.82
MAYNARD, DAVE	1/24/2011 13:45	MAYNARD	18.80	0.95	<0.5	<0.5	<0.5	<0.5	<1.3	1188.00	1.16
CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552	<5.0	3.23	1.18	<0.5	<0.5	<0.5		288.00	<0.5
MCNEIL SCOTT	7/20/2011 11:32	145972 MCNEIL	2.810 J	1.130 J	1.220 J	<0.500 U	<1.250 U	<1.250 U	4.89	244.42	1.38
BAILEY, DIANA	8/24/2011 14:15	BAILEY - 262782	10.26	0.740 J	<0.250 U	0.280 J	<0.250 U	0.630 J	<0.250 U	213.75	0.540 J
JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE - 51744	4.100 J	1.050 J	<0.250 U	<0.100 U	<0.250 U	0.650 J	<0.250 U	168.66	<0.250 U
MILLER, GARY	8/26/2011 10:45	MILLER, GARY	1.700 J	<0.250 U	1.110 J	0.51	<0.250 U	<0.250 U	<0.250 U	76.55	15.68
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TR"	6.61	1.20	<0.5	<0.5	<0.5	<0.5		221.00	<0.5
MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL 260549	8.49	1.11	0.71	4.13	<0.5	0.75		226.00	21.60
RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN 198928	<1.000 U	<0.250 U	0.430 J	0.310 J	<0.250 U	<0.250 U	<0.250 U	15.76	5.99
FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL 126679	12.18	1.58	<0.250 U	0.240 J	<0.250 U	1.140 J	<0.250 U	151.81	1.060 J
FLACHMEYER DAN	8/10/2011	FLACHMEYER	16.05	1.26	0.490 J	1.25	<0.250 U	1.69	<0.250 U	194.79	20.20
WHITAKER, RAY	3/23/2011 14:57	WHITAKER 181457	48.60	6.76	<0.5	<0.5	<0.5	0.64	<1.3	370.00	1.01
GRAVES RUSSEL	4/27/2011 14:31	GRAVES - 196975	12.47	2.29	<0.50 U	6.54	<0.50 U	0.71	0.4800 J	253.21	0.3500 J
MCQUEARY CAM	1/6/2011 12:12	MCQUEARY 250294	8.58	4.18	<0.5	0.97	<0.5	1.55	<1.3	195.00	18.10
DENNIS KEVIN	10/26/2011 12:38	DENNIS 122350	9.55	2.49	<0.250 U	<0.100 U	<0.250 U	1.58	<0.250 U	687.30	0.960 J
WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249	<5.0	2.17	<0.5	<0.5	<0.5	<0.5	<1.3	139.00	4.58
GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949	<5.0	3.57	<0.5	<0.5	<0.5	<0.5	<1.3	127.00	9.04
ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ	21.91	3.14	<0.250 U	<0.100 U	<0.250 U	1.50	<0.250 U	140.14	<0.250 U
UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551	21.40	2.02	6.48	6.15	<0.5	2.39		513.00	182.00
ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN	5.87	3.33	<0.250 U	<0.100 U	<0.250 U	0.820 J	<0.250 U	85.97	1.48
THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON	8.72	2.98	<0.5	<0.5	<0.5	<0.5		422.00	0.74
JAMISON SHERRI * WELL #4	/12/2011 16:00	WELL #4	96.89	1.40	2.12	1.040 J	5.03	<1.250 U	4.22	5244.83	10.55
SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ	39.06	<0.250 U	<0.250 U	<0.100 U	<0.250 U	0.650 J	<0.250 U	2699.94	3.56
CARTER, ADENA	11/30/2011 13:01	CARTER-51372	<1.000 U	<0.250 U	1.37	0.59	<0.250 U	<0.250 U	<0.250 U	62.70	<0.250 U
MATTICE, BRADLY S	8/2/2011	53483-MATICE	2.740 J	4.17	0.990 J	0.80	<0.250 U	<0.250 U	<0.250 U	264.92	<0.250 U
NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA - 164821	2.070 J	2.04	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	206.06	<0.250 U
SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER - 170885	2.190 J	1.40	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	141.92	<0.250 U
LANES, BUTCH	9/7/2011 14:30	LANES	2.260 J	<0.250 U	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	80.90	<0.250 U
BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777	1.200 J	0.880 J	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	61.39	<0.250 U
LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN	27.14	1.210 J	<0.250 U	0.120 J	<0.250 U	<0.250 U	<0.250 U	983.53	0.290 J
METCALF, BOB	8/8/2011 13:25	METCALF	11.12	2.19	<0.250 U	<0.100 U	<0.250 U	0.920 J	<0.250 U	790.45	0.290 J
HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622	<1.000 U	<0.250 U	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	347.30	<0.250 U
KACHINKSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833	4.480 J	2.12	<0.250 U	0.240 J	<0.250 U	<0.250 U	<0.250 U	113.14	<0.250 U
PRETE, JOSEPH	11/2/2011 12:34	PRETE - 250979	1.720 J	<0.250 U	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	91.03	0.690 J
SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839	3.560 J	0.780 J	<0.250 U	2.58	<0.250 U	0.280 J	<0.250 U	98.68	<0.250 U
MICHELS, KEITH	9/9/2011 12:59	SILZLY - 262840	2.890 J	0.460 J	1.090 J	0.81	<0.250 U	0.260 J	<0.250 U	89.30	<0.250 U
STANDISH, NANCY	10/11/2011 15:20	STANDISH	<1.000 U	<0.250 U	<0.250 U	0.130 J	<0.250 U	<0.250 U	<0.250 U	140.71	0.730 J
RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724	2.600 J	1.47	0.960 J	2.71	<0.250 U	<0.250 U	<0.250 U	187.93	<0.250 U
VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE-263725	1.840 J	1.72	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	116.80	<0.250 U
SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN	3.670 J	1.180 J	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	209.44	<0.250 U
ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:12	ELMOSE 53497	<5.0	0.90	<0.5	<0.5	<0.5	<0.5		181.00	0.99
GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514	<5.0	1.60	<0.5	<0.5	<0.5	<0.5		235.00	<0.5
EDGE KEITH	1/6/2011 14:39	EDGE-185841	<5.0	3.04	<0.5	<0.5	<0.5	<0.5	<1.3	134.00	<0.5
PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT 186594	<5.0	2.01	<0.5	<0.5	<0.5	<0.5		323.00	1.07
DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506	<5.0	1.08	<0.5	<0.5	<0.5	<0.5		221.00	<0.5
KIESER, FRANK	1/5/2011 14:15	KIESER-221439	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<1.3	47.80	<0.5
KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998	<5.0	5.89	<0.5	<0.5	<0.5	<0.5	<1.3	214.00	<0.5
STAFFORD, LAURA	2/18/2011 12:41	STAFFORD-260033	<5.0	9.47	<0.5	1.82	<0.5	<0.5		173.00	0.83
HANSON, ROGER	2/18/2011 13:34	HANSON 260550	<5.0	0.51	<0.5	0.82	<0.5	<0.5		209.00	<0.5
CLAWSON, CINDY	2/9/2011 13:36	CLAWSON 260555	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED - 263360	<1.000 U	0.890 J	<0.250 U	<0.100 U	<0.250 U	0.370 J	<0.250 U	124.13	<0.250 U
MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE	20.64	0.480 J	0.290 J	0.240 J	<0.250 U	<0.250 U	<0.250 U	779.53	0.760 J
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE 52670	3.550 J	1.62	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	124.89	<0.250 U
KINNEY, GREGG	12/20/2011 16:10	KINNEY #2	16.08	3.77	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	1280.51	1.180 J
WOLFE, FRANK	12/27/2011 11:48	WOLFE 173106 DUP	3.000 J	0.900 J	<0.250 U	<0.100 U	<0.250 U	0.490 J	<0.250 U	114.70	<0.250 U

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Site Name	Sample Date	Field Number	Tl (ug/l)	U (ug/l)	V (ug/l)	Zn (ug/l)	Zr (ug/l)	Ce (ug/l)	Cs (ug/l)	Ga (ug/l)	La (ug/l)
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	<1.250 U	3.59	4.64	<1.250 U	<1.250 U	<0.020 U	<1.250 U	<1.250 U	<5.000 U
MAYNARD, DAVE	1/24/2011 13:45	MAYNARD	<0.5	1.55	0.75	3.04	<0.5	<0.5	<1.3	<0.5	<0.5
CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552	<0.5	4.08	6.72	51.80	<0.5	<0.5	<1.3	23.70	<0.5
MCNEIL SCOTT	7/20/2011 11:32	145972 MCNEIL	<1.250 U	2.82	1.95	2.010 J	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U
BAILEY, DIANA	8/24/2011 14:15	BAILEY - 262782	<0.250 U	2.39	1.73	9.59	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE - 51744	<0.250 U	1.77	2.43	1.930 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
MILLER, GARY	8/26/2011 10:45	MILLER, GARY	<0.250 U	0.320 J	0.980 J	2.420 J	0.930 J	1.60	0.720 J	0.260 J	0.890 J
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TR"	<0.5	1.73	5.47	2.14	<0.5	<0.5	<1.3	24.90	<0.5
MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL 260549	<0.5	1.94	3.64	50.10	1.32	0.93	<1.3	33.70	0.53
RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN 198928	<0.250 U	<0.250 U	1.090 J	12.89	<0.250 U	0.270 J	<0.250 U	<0.250 U	<0.250 U
FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL 126679	<0.250 U	2.44	9.93	6.23	<0.250 U	<0.250 U	0.430 J	<0.250 U	<0.250 U
FLACHMEYER DAN	8/10/2011	FLACHMEYER	<0.250 U	1.87	4.63	<0.500 U	0.340 J	2.13	<0.250 U	<0.250 U	1.26
WHITAKER, RAY	3/23/2011 14:57	WHITAKER 181457	<0.5	16.60	11.90	1.37	<0.5	<0.5	7.60	<0.5	<0.5
GRAVES RUSSEL	4/27/2011 14:31	GRAVES - 196975	0.1400 J	1.47	13.74	<1.00 U	0.1600 J	<0.50 U	0.2300 J	<0.50 U	<0.50 U
MCQUEARY CAM	1/6/2011 12:12	MCQUEARY 250294	<0.5	1.45	9.10	18.90	1.04	1.95	<1.3	<0.5	1.24
DENNIS KEVIN	10/26/2011 12:38	DENNIS 122350	<0.250 U	11.77	23.38	10.15	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249	<0.5	1.06	11.90	4.94	<0.5	<0.5	<1.3	<0.5	<0.5
GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949	<0.5	1.54	11.00	7.53	0.62	<0.5	<1.3	<0.5	<0.5
ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ	<0.250 U	0.950 J	14.50	4.36	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551	<0.5	8.30	21.60	41.50	3.11	5.71	15.90	28.70	3.16
ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN	<0.250 U	<0.250 U	1.100 J	4.65	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON	<0.5	4.66	4.16	9.34	<0.5	<0.5	18.10	35.40	<0.5
JAMISON SHERRI * WELL #4	/12/2011 16:00	WELL #4	<1.250 U	0.610 J	<1.250 U	<1.250 U	0.520 J	<0.020 U	1.94	<1.250 U	<5.000 U
SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ	<0.250 U	0.610 J	<0.250 U	37.23	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CARTER, ADENA	11/30/2011 13:01	CARTER-51372	<0.250 U	<0.250 U	<0.250 U	29.88	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
MATTICE, BRADLY S	8/2/2011	53483-MATICE	<0.250 U	14.60	0.340 J	21.54	0.560 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U
NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA - 164821	<0.250 U	5.51	0.750 J	4.36	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER - 170885	<0.250 U	3.03	0.570 J	20.99	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
LANES, BUTCH	9/7/2011 14:30	LANES	<0.250 U	<0.250 U	0.950 J	3.11	<0.250 U	<0.250 U	0.330 J	<0.250 U	<0.250 U
BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777	<0.250 U	0.450 J	0.260 J	1.320 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN	<0.250 U	1.69	<0.250 U	15.06	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
METCALF, BOB	8/8/2011 13:25	METCALF	<0.250 U	6.01	0.610 J	15.88	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622	<0.250 U	0.380 J	<0.250 U	19.80	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
KACHINSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833	<0.250 U	1.27	1.70	4.53	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
PRETE, JOSEPH	11/7/2011 12:34	PRETE - 250979	<0.250 U	<0.250 U	0.700 J	18.54	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839	<0.250 U	1.130 J	0.580 J	20.88	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
MICHELS, KEITH	9/9/2011 12:59	SILZLY - 262840	<0.250 U	0.420 J	<0.250 U	24.89	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
STANDISH, NANCY	10/11/2011 15:20	STANDISH	<0.250 U	<0.250 U	0.760 J	2.87	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724	<0.250 U	4.98	0.970 J	141.05	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE-263725	<0.250 U	5.75	0.440 J	6.21	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN	<0.250 U	5.34	0.820 J	4.26	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:12	ELMOSE 53497	<0.5	3.50	0.84	<1.3	<0.5	<0.5	<1.3	34.10	<0.5
GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514	<0.5	1.92	0.81	2.86	<0.5	<0.5	<1.3	38.60	<0.5
EDGE KEITH	1/6/2011 14:39	EDGE-185841	<0.5	13.60	<0.5	10.50	<0.5	<0.5	<1.3	<0.5	<0.5
PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT 186594	<0.5	4.32	0.78	5.00	<0.5	<0.5	<1.3	50.20	<0.5
DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506	<0.5	7.26	0.84	<1.3	<0.5	<0.5	<1.3	39.40	<0.5
KIESER, FRANK	1/5/2011 14:15	KIESER-221439	<0.5	<0.5	<0.5	<1.3	<0.5	<0.5	<1.3	<0.5	<0.5
KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998	<0.5	19.80	0.58	7.48	<0.5	<0.5	<1.3	<0.5	<0.5
STAFFORD, LAURA	2/18/2011 12:41	STAFFORD-260033	<0.5	85.70	1.14	<1.3	<0.5	<0.5	<1.3	30.40	<0.5
HANSON, ROGER	2/18/2011 13:34	HANSON 260550	<0.5	9.15	1.41	1.32	<0.5	<0.5	<1.3	21.10	<0.5
CLAWSON, CINDY	2/9/2011 13:36	CLAWSON 260555	<0.5	<0.5	<0.5	<1.3	<0.5	<0.5	<1.3	<0.5	<0.5
SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED - 263360	<0.250 U	2.16	0.630 J	0.580 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE	<0.250 U	0.720 J	<0.250 U	25.81	<0.250 U	<0.250 U	0.670 J	<0.250 U	<0.250 U
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE S2670	<0.250 U	1.77	0.660 J	<0.500 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
KINNEY, GREGG	12/20/2011 16:10	KINNEY #2	<0.250 U	7.86	<0.250 U	4.91	0.250 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U
WOLFE, FRANK	12/27/2011 11:48	WOLFE 173106 DUP	<0.250 U	1.120 J	0.490 J	28.27	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U

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Appendix E

Site Name	Sample Date	Field Number	Nb (ug/l)	Nd (ug/l)	Pd (ug/l)	Pr (ug/l)	Rb (ug/l)	Th (ug/l)	W (ug/l)	Procedure
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	<1.250 U	<0.050 U	0.270 J	<1.250 U	0.410 J	<1.250 U	<1.250 U	TOTAL RECOVERABLE
MAYNARD, DAVE	1/24/2011 13:45	MAYNARD	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
CLAWSON, CINDY	2/9/2011 14:18	CLAWSON-260552	<1.3	<0.5	<1.3	<0.5	2.85	<0.5	<0.5	TOTAL RECOVERABLE
MCNEIL SCOTT	7/20/2011 11:32	145972 MCNEIL	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U	TOTAL RECOVERABLE
BAILEY, DIANA	8/24/2011 14:15	BAILEY 262782	<0.250 U	<0.250 U	<0.250 U	<0.250 U	5.66	<0.250 U	<0.250 U	TOTAL RECOVERABLE
JETTE, ARTHUR & JESSIE	9/26/2011 12:18	JETTE - 51744	<0.250 U	<0.250 U	<0.250 U	<0.250 U	6.48	<0.250 U	<0.250 U	TOTAL RECOVERABLE
MILLER, GARY	8/26/2011 10:45	MILLER, GARY	<0.250 U	0.910 J	<0.250 U	<0.250 U	2.32	0.280 J	<0.250 U	TOTAL RECOVERABLE
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085 "TR"	<1.3	<0.5	<1.3	<0.5	13.50	<0.5	2.24	TOTAL RECOVERABLE
MITCHELL, HAROLD	2/16/2011 13:48	MITCHELL 260549	<1.3	0.54	<1.3	<0.5	5.59	<0.5	<0.5	TOTAL RECOVERABLE
RANKIN, KEITH AND JEAN	9/14/2011 12:42	RANKIN 198928	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.990 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
FARRELL, LARRY D & MICHELLE R	9/7/2011 14:54	FARRELL 126679	<0.250 U	<0.250 U	<0.250 U	<0.250 U	15.26	<0.250 U	0.570 J	TOTAL RECOVERABLE
FLACHMEYER DAN	8/10/2011	FLACHMEYER	<0.250 U	1.35	<0.250 U	0.270 J	6.78	0.360 J	<0.250 U	TOTAL RECOVERABLE
WHITAKER, RAY	3/23/2011 14:57	WHITAKER 181457	<1.3	<0.5	<1.3	<0.5	7.43	<0.5	26.50	TOTAL RECOVERABLE
GRAVES RUSSEL	4/27/2011 14:31	GRAVES - 196975	<0.50 U	<0.50 U	<0.50 U	<0.50 U	10.16	<0.50 U	3.68	TOTAL RECOVERABLE
MCQUEARY CAM	1/6/2011 12:12	MCQUEARY 250294	<1.3	<0.5	<1.3	0.74	8.37	<0.5	1.26	TOTAL RECOVERABLE
DENNIS KEVIN	10/26/2011 12:38	DENNIS 122350	<0.250 U	<0.250 U	<0.250 U	<0.250 U	7.10	<0.250 U	0.380 J	TOTAL RECOVERABLE
WAYMIRE, EDWARD	1/6/2011 13:02	WAYMIRE-156249	<1.3	<0.5	<1.3	<0.5	6.73	<0.5	<0.5	TOTAL RECOVERABLE
GESSELE, EDWIN C JR	1/11/2011 13:15	GESSELE 259949	<1.3	<0.5	<1.3	<0.5	6.53	<0.5	<0.5	TOTAL RECOVERABLE
ARENTZ, IVAN EUGENE	10/24/2011 14:20	ARENTZ	<0.250 U	<0.250 U	<0.250 U	<0.250 U	5.89	<0.250 U	<0.250 U	TOTAL RECOVERABLE
UPRIGHT, KELLY	2/23/2011 15:14	UPRIGHT-260551	<1.3	2.65	<1.3	0.68	32.20	1.39	<0.5	TOTAL RECOVERABLE
ANKELMAN, PATRICK AND LYNELLA	8/3/2011 15:30	ANKELMAN	<0.250 U	<0.250 U	<0.250 U	<0.250 U	3.35	<0.250 U	<0.250 U	TOTAL RECOVERABLE
THOMPSON, DAN & TAMMY	3/24/2011 14:53	THOMPSON	<1.3	<0.5	<1.3	<0.5	14.40	<0.5	<0.5	TOTAL RECOVERABLE
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	<1.250 U	<0.050 U	3.98	<1.250 U	4.26	<1.250 U	<1.250 U	TOTAL RECOVERABLE
SWARTZ, JAMES AND SHIRLEY	11/7/2011 14:30	SWARTZ	<0.250 U	<0.250 U	0.450 J	<0.250 U	4.14	<0.250 U	<0.250 U	TOTAL RECOVERABLE
CARTER, ADENA	11/30/2011 13:01	CARTER-51372	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.26	<0.250 U	<0.250 U	TOTAL RECOVERABLE
MATTICE, BRADLY S	8/2/2011	53483-MATICE	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.310 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
NELSON, JAMES A AND PAMELA L	10/31/2011 12:10	MASTANDREA - 164821	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SCHLOSSER, DAVE	10/28/2011 12:55	SCHLOSSER - 170885	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
LANES, BUTCH	9/7/2011 14:30	LANES	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.850 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
BRONSON, LINDA AND PAUL	10/31/2011 13:58	BRONSON - 190777	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
LOGAN, SCOTT W.	8/11/2011 14:45	LOGAN	<0.250 U	<0.250 U	<0.250 U	<0.250 U	10.67	<0.250 U	<0.250 U	TOTAL RECOVERABLE
METCALF, BOB	8/8/2011 13:25	METCALF	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
HOLAYTER BILL AND MARLENE	11/7/2011	HOLAYTER - 237622	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.74	<0.250 U	<0.250 U	TOTAL RECOVERABLE
KACHINSKY, DAN AND LORNA	8/31/2011 12:36	KACHINSKY - 246833	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
PRETE, JOSEPH	11/2/2011 12:34	PRETE - 250979	<0.250 U	<0.250 U	<0.250 U	<0.250 U	4.93	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SILZLY, ROSEMARIE	9/9/2011 14:04	SILZLY - 262839	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.450 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
MICHELS, KEITH	9/9/2011 12:59	SILZLY - 262840	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
STANDISH, NANCY	10/11/2011 15:20	STANDISH	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.530 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RUSINSKI, JOHN	11/7/2011	RUSINSKI-263724	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
VIOLETTE, ESTHER	11/16/2011 12:08	VIOLETTE-263725	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SVENDSEN, JAMES	12/15/2011 12:55	SVENDSEN	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
ELMOSE, MORRIS & MARY ANNE	3/3/2011 14:12	ELMOSE 53497	<1.3	<0.5	<1.3	<0.5	2.28	<0.5	<0.5	TOTAL RECOVERABLE
GEM BAR AND STORE INC	2/23/2011 13:03	MCGHEE-53514	<1.3	<0.5	<1.3	<0.5	3.28	<0.5	<0.5	TOTAL RECOVERABLE
EDGE KEITH	1/6/2011 14:39	EDGE-185841	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
PROBERT RAYMOND J AND CHARLOTTE D	3/3/2011 12:56	PROBERT 186594	<1.3	<0.5	<1.3	<0.5	4.78	<0.5	<0.5	TOTAL RECOVERABLE
DUNCAN RICK	2/23/2011 14:02	DUNCAN-195506	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
KIESER, FRANK	1/5/2011 14:15	KIESER-221439	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
KELLEY, JAMES	1/28/2011 13:10	KELLEY 259998	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
STAFFORD, LAURA	2/18/2011 12:41	STAFFORD-260033	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
HANSON, ROGER	2/18/2011 13:34	HANSON 260550	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
CLAWSON, CINDY	2/9/2011 13:36	CLAWSON 260555	<1.3	<0.5	<1.3	<0.5	<1.3	<0.5	<0.5	TOTAL RECOVERABLE
SEVALSTAD, MICHAEL	10/17/2011 13:03	SEVALSTED - 263360	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.260 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
MOORE ROBERT & TAMI	8/12/2011 13:12	MOORE	<0.250 U	<0.250 U	<0.250 U	<0.250 U	7.08	<0.250 U	<0.250 U	TOTAL RECOVERABLE
WHITE RUSSELL & PAT	12/27/2011 12:39	WHITE S2670	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
KINNEY, GREGG	12/20/2011 16:10	KINNEY #2	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.970 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
WOLFE, FRANK	12/27/2011 11:48	WOLFE 173106 DUP	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.340 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE

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Sample	Gwic Id	Site Name	Sample Date	Field Number	Water Temp	Fld pH	Fld SC	Lab pH	Lab SC	Ca (mg/l)	Mg (mg/l)
200703	238242	CAKA MARK	8/31/2011 13:27	CAKA - 238242	8.9	6.65	331			43.45	8.78
201062	96383	CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT - 96383	9.0	6.91	208			24.99	6.79
200337	262012	DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	7.2	7.42	295			40.64	8.34
200559	217794	BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL	13.8	8.04	419			4.42	3.31
201014	173111	RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN	8.3	8.02	479			65.39	16.62
200160	261629	CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	5.2	7.30	193			32.07	4.65
200737	204282	UELAND RYAN AND TINA	9/7/2011 14:15	UELAND	10.9	5.54	307			45.46	9.02
201135	51090	RICE, CAROL	12/21/2011 12:20	RICE 51090	7.5	6.38	167			19.92	5.53
200678	183265	DEATON LINDA	9/1/2011 15:30	DEATON	10.4	7.29	512			58.23	16.41
200923	263376	HURLEY, ROBERT	10/11/2011 16:20	HURLEY	7.4	6.72	123			13.63	2.98
201138	263916	PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916	8.7	7.19	218			27.51	7.69
201134	263947	RICE, CAROL	12/21/2011 11:50	RICE 263947	7.3	6.26	170			20.75	5.79
200616	51775	ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON	8.9	6.89	985			146.34	31.56
200997	51370	NELSON, DAVE	10/24/2011 11:30	D NELSON	8.5	5.06	67			6.15	1.45
200163	53568	JIM NICHOLES	6/9/2011 11:55	NICHOLES	8.5	7.02	344			44.91	12.54
200704	51827	MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL 51827	7.7	7.18	269			37.93	8.39
200646	262533	GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533	9.1	7.66	366			38.16	20.97
200818	51377	JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377	8.0	5.71	81			8.81	1.90
200992	150258	KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258	9.2	7.93	506			63.07	15.47
200701	201477	CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477	8.6	6.67	523			78.68	12.48
200989	263394	SIMON, STEVE	10/21/2011 10:29	SIMON 263394	8.4	6.87	252			33.03	8.19
200986	51851	HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	9.5	8.85	480			3.58	1.11
200611	184523	HILL, STEPHEN	8/12/2011 14:10	HILL	13.2	5.81	397			45.69	8.09
200644	150254	GALLIK RAY	8/23/2011 11:55	GALLIK 150254	8.8	7.08	457			46.74	21.81
200376	156183	MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY	10.2	6.74	605			74.34	16.47
200614	207694	GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.	9.9	7.16	422			45.09	11.19
200990	51755	RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755	9.3	7.18	449			51.23	22.93
200861	51241	FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241	8.8	7.03	257			32.87	8.32
200561	127075	LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2	9.9	6.97	496			51.97	21.35
200645	216793	GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793	8.4	7.16	512			58.58	21.62
200431	52149	GREEN, DELMER	8/2/2011 11:40	52149-GREEN	7.8	7.31	280			39.37	9.84
200991	263476	RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476	9.1	7.78	444			23.15	4.31
200554	200065	BROTHERS KRISTI	8/8/2011 11:45	BROTHERS	10.8	6.92	495			69.83	17.31
200745	262838	POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838	10.2	6.29	246			30.30	6.48
201076	51240	SORUM KEVIN	11/16/2011 12:59	SORUM-51240	7.6	7.77	297			39.44	9.17
200556	226847	GRAHAM RANDY	8/9/2011 13:55	GRAHAM	9.7	6.87	543			65.36	19.48
200161	53568	JIM NICHOLES	6/9/2011 11:55	NICHOLES	8.5	7.02	344	7.55	308	47.42	12.34
200741	262855	WALTER, RICHARD	9/12/2011 12:10	WALTER #2	10.0	7.05	603	7.42	688	63.08	14.11
200302	262072	BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	7.3	5.66	36	6.13	34	3.61	0.68
200995	263246	HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	8.7	6.61	607	6.89	579	81.47	16.11
200340	257556	JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	11.4	6.09	411	7.69	502	61.09	7.31
2011Q1009	223085	PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	12.8	7.21	269	7.60	277	27.10	7.05
200342	257557	JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	11.2	5.54	1,058	7.29	1,147	142.04	15.80
200994	51851	HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	9.5	8.85	480	9.32	460	3.56	1.04
200856	262840	MICHELS. KEITH	9/14/2011 14:32	SILZLY 262840	8.2	6.41	164	6.47	171	17.17	5.00
200159	261629	CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	5.2	7.30	193	7.72	170	34.68	4.61
200339	262012	DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	7.2	7.42	295	7.70	325	48.68	8.78
200208	261937	WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	11.4	7.93	414	7.48	463	58.33	11.99
200742	262859	WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	14.5	7.32	702	7.82	833	65.62	13.44
200863	263138	JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN 263138	9.8	6.01	615	6.97	602	40.74	12.50
200862	263138	JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN 263138	9.8	6.01	615			44.53	13.34
200744	262859	WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	14.5	7.32	702			70.61	14.95
200979	263447	CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	12.4	7.76	386			33.03	11.13
200978	263447	CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	12.4	7.76	386	7.64	379	32.57	11.40
201070	263447	CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE - 263447	11.1	8.31	391	7.91	370	35.07	10.98
200115	51861	ANDREOZZI, BOB	5/27/2011 10:59	51861 ANDREOZZI	7.4	7.35	533	7.09	436	67.60	14.26

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Site Name	Sample Date	Field Number	Na (mg/l)	K (mg/l)	Fe (mg/l)	Mn (mg/l)	SiO2 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)
CAKA MARK	8/31/2011 13:27	CAKA - 238242	11.54	1.11	0.209	0.004 J			
CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT - 96383	6.42	0.98	0.047	<0.003 U			
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	12.96	0.860 J	0.371	0.038			
BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL	92.12	1.59	0.047	0.004 J			
RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN	13.73	2.62	0.220	0.006 J			
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	1.25	0.59	0.031	0.6500 J			
UELAND RYAN AND TINA	9/7/2011 14:15	UELAND	4.38	1.36	0.022 J	<0.003 U			
RICE, CAROL	12/21/2011 12:20	RICE 51090	5.24	0.84	0.144	<0.003 U			
DEATON LINDA	9/1/2011 15:30	DEATON	26.75	1.26	<0.002 U	<0.001 U			
HURLEY, ROBERT	10/11/2011 16:20	HURLEY	7.48	0.39	0.751	0.004 J			
PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916	5.38	0.86	0.050	<0.003 U			
RICE, CAROL	12/21/2011 11:50	RICE 263947	6.06	0.78	0.050	<0.003 U			
ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON	6.88	2.41	0.212	0.003 J			
NELSON, DAVE	10/24/2011 11:30	D NELSON	4.61	1.27	0.080	<0.003 U			
JIM NICHOLES	6/9/2011 11:55	NICHOLES	10.47	1.14	0.039	<3.00 U			
MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL 51827	2.54	1.46	<0.005 U	<0.003 U			
GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533	5.56	1.30	0.011	0.001 J			
JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377	5.49	1.57	0.039	<0.003 U			
KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258	22.80	2.03	0.051	<0.003 U			
CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477	7.83	1.83	0.021 J	<0.003 U			
SIMON, STEVE	10/21/2011 10:29	SIMON 263394	6.62	1.11	0.042	<0.003 U			
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	100.10	1.74	6.698	0.039			
HILL, STEPHEN	8/12/2011 14:10	HILL	28.65	1.15	0.058	<0.001 U			
GALLIK RAY	8/23/2011 11:55	GALLIK 150254	11.52	1.89	0.062	<0.001 U			
MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY	22.47	4.64	0.050	0.001 J			
GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.	26.77	1.31	0.052	<0.001 U			
RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755	8.22	1.42	2.218	0.012 J			
FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241	7.34	1.40	0.100	<0.003 U			
LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2	21.58	1.53	0.056	<0.001 U			
GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793	17.07	1.56	0.054	0.002 J			
GREEN, DELMER	8/2/2011 11:40	52149-GREEN	1.94	1.24	0.118	<0.001 U			
RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476	72.71	1.29	0.059	<0.003 U			
BROTHERS KRISTI	8/8/2011 11:45	BROTHERS	11.88	1.50	0.062	<0.001 U			
POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838	11.29	1.08	0.021 J	<0.003 U			
SORUM KEVIN	11/16/2011 12:59	SORUM-51240	7.63	0.90	0.097	<0.003 U			
GRAHAM RANDY	8/9/2011 13:55	GRAHAM	18.74	1.46	0.283	0.007			
JIM NICHOLES	6/9/2011 11:55	NICHOLES	9.99	1.13	<0.50 U	<0.30 U	13.6	185.4	0.0
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	51.56	3.29	4.675	0.190	6.0	229.1	0.0
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	3.66	0.49	0.101	0.002 J	19.8	13.4	0.0
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	19.96	2.44	0.006 J	<0.001 U	14.4	192.9	0.0
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	15.77	0.31	<0.002 U	<0.001 U	17.4	155.7	0.0
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	14.50	4.95	<0.002	<0.001	37.3	123.0	0.0
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	74.09	2.80	0.170	0.011	11.8	211.6	0.0
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	98.72	1.79	0.066	0.005 J	0.5	70.9	66.6
MICHELS, KEITH	9/14/2011 14:32	SILZLY 262840	5.65	0.91	2.458	0.016	15.1	76.6	0.0
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	0.78	0.67	<0.50 U	0.1700 J	11.5	115.4	0.0
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	14.04	0.58	0.004	0.025	16.3	147.6	0.0
WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	17.79	4.70	0.003	0.011	15.6	150.5	0.0
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	86.37	8.15	1.961	0.359	7.2	240.2	0.0
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	68.21	7.36	1.275	0.119	52.5	285.1	0.0
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	70.94	7.91	1.778	0.136			
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	82.32	10.77	48.235	0.671			
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	24.24	5.45	0.059	0.007 J			
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	24.45	5.83	<0.002 U	0.006	50.6	135.7	0.0
CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE - 263447	23.86	5.62	0.020	0.001 J	49.1	134.6	0.0
ANDREOZZI, BOB	5/27/2011 10:59	51861 ANDREOZZI	29.72	2.45	0.013	0.002	14.7	192.7	0.0

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Site Name	Sample Date	Field Number	SO4 (mg/l)	Cl (mg/l)	NO3-N (mg/l)	F (mg/l)	OPO4-P (mg/l)	Ag (ug/l)	Al (ug/l)
CAKA MARK	8/31/2011 13:27	CAKA - 238242						<0.250 U	4.880 J
CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT - 96383						<0.250 U	4.090 J
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS						<1.250 U	90.51
BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL						<0.250 U	17.73
RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN						<0.250 U	52.61
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM						<1.00 U	15.90
UELAND RYAN AND TINA	9/7/2011 14:15	UELAND						<0.250 U	18.91
RICE, CAROL	12/21/2011 12:20	RICE - 51090						<0.250 U	3.550 J
DEATON LINDA	9/1/2011 15:30	DEATON						<0.100 U	23.66
HURLEY, ROBERT	10/11/2011 16:20	HURLEY						<0.250 U	7.86
PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916						<0.250 U	4.470 J
RICE, CAROL	12/21/2011 11:50	RICE - 263947						<0.250 U	3.600 J
ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON						<0.250 U	42.99
NELSON, DAVE	10/24/2011 11:30	D NELSON						<0.250 U	78.52
JIM NICHOLES	6/9/2011 11:55	NICHOLES						<1.00 U	19.96
MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL - 51827						<0.250 U	5.75
GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533						<0.250 U	32.38
JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377						<0.250 U	129.91
KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258						<0.250 U	34.79
CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477						<0.250 U	26.81
SIMON, STEVE	10/21/2011 10:29	SIMON - 263394						<0.250 U	4.870 J
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851						<0.250 U	28.15
HILL, STEPHEN	8/12/2011 14:10	HILL						<0.250 U	17.98
GALLIK RAY	8/23/2011 11:55	GALLIK 150254						<0.250 U	19.11
MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY						<1.250 U	35.00
GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.						<0.250 U	<1.000 U
RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755						<0.250 U	29.31
FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241						<0.250 U	4.550 J
LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2						<0.250 U	20.48
GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793						<0.250 U	7.56
GREEN, DELMER	8/2/2011 11:40	52149-GREEN						<0.250 U	12.13
RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476						<0.250 U	20.33
BROTHERS KRISTI	8/8/2011 11:45	BROTHERS						0.445 J	41.49
POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838						<0.250 U	8.33
SORUM KEVIN	11/16/2011 12:59	SORUM-51240						<0.250 U	15.04
GRAHAM RANDY	8/9/2011 13:55	GRAHAM						<0.250 U	124.53
JIM NICHOLES	6/9/2011 11:55	NICHOLES	12.9	2.26	3.75	0.66	<0.10 U	<0.50 U	1.0300 J
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	131.4	12.18	<0.010 U	0.69	<0.020 U	<0.100 U	19.80
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	5.8	0.51	<0.050 U	0.26	<0.100 U	<0.500 U	318.76
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	147.6	6.53	0.09	0.22	<0.020 U	<0.100 U	34.21
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	69.3	3.15	2.80	0.07	<0.100 U	<0.500 U	19.21
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	18.8	6.97	1.37	0.39	<0.1	<0.2	<2.0
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	383.9	13.43	<0.050 U	1.11	<0.100 U	<1.250 U	47.36
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	86.7	5.73	<0.010 U	0.34	<0.020 U	<0.100 U	0.982 J
MICHELS, KEITH	9/14/2011 14:32	SILZLY - 262840	14.0	1.41	0.23	0.24	<0.020 U	<0.100 U	1.030 J
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	8.9	<0.50 U	0.19	0.70	<0.10 U	<0.50 U	19.91
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	9.2	34.66	0.05	2.48	<0.100 U	<0.500 U	3.43
WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	95.5	6.00	<0.050 U	0.17	<0.100 U	<0.500 U	2.36
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	211.6	8.00	0.07	1.45	<0.020 U	<0.100 U	218.15
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	53.7	12.81	3.42	2.38	<0.020 U	<0.100 U	1616.02
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138						<0.250 U	2372.17
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98						<0.250 U	5421.63
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE						<0.250 U	25.46
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	45.9	21.71	2.05	0.53	<0.020 U	<0.100 U	0.716 J
CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE - 263447	44.4	21.37	2.01	0.48	<0.020 U	<0.100 U	22.99
ANDREOZZI, BOB	5/27/2011 10:59	51861-ANDREOZZI	97.5	6.76	1.75	0.81	<0.10 U	<0.50 U	0.4033 J

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Appendix E

Site Name	Sample Date	Field Number	As (ug/l)	B (ug/l)	Ba (ug/l)	Be (ug/l)	Br (ug/l)	Cd (ug/l)	Co (ug/l)	Cr (ug/l)	Cu (ug/l)
CAKA MARK	8/31/2011 13:27	CAKA 238242	0.300 J		16.97	<0.250 U		<0.250 U	<0.250 U	<0.250 U	17.45
CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT 96383	0.330 J		27.73	<0.250 U		<0.250 U	<0.250 U	0.490 J	5.49
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	0.330 J		21.62	<5.000 U		0.670 J	<1.250 U	0.720 J	11.77
BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL	0.350 J		38.85	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.600 J
RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN	0.360 J		46.42	<0.250 U		<0.250 U	<0.250 U	0.280 J	1.98
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	0.3900 J		5.46	<1.00 U		<1.00 U	<1.00 U	<1.00 U	2.78
UELAND RYAN AND TINA	9/7/2011 14:15	UELAND	0.400 J		16.09	<0.250 U		<0.250 U	<0.250 U	0.440 J	<0.250 U
RICE, CAROL	12/21/2011 12:20	RICE 51090	0.410 J		40.34	<0.250 U		<0.250 U	<0.250 U	<0.250 U	27.05
DEATON LINDA	9/1/2011 15:30	DEATON	0.420 J		60.84	<0.100 U		<0.100 U	<0.100 U	0.280 J	1.93
HURLEY, ROBERT	10/11/2011 16:20	HURLEY	0.420 J		75.34	<0.250 U		<0.250 U	<0.250 U	0.470 J	3.34
PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916	0.430 J		46.14	<0.250 U		<0.250 U	<0.250 U	<0.250 U	6.01
RICE, CAROL	12/21/2011 11:50	RICE 263947	0.440 J		39.04	<0.250 U		<0.250 U	<0.250 U	<0.250 U	42.35
ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON	0.460 J		44.14	<0.250 U		<0.250 U	<0.250 U	<0.250 U	2.17
NELSON, DAVE	10/24/2011 11:30	D NELSON	0.500 J		16.60	<0.250 U		<0.250 U	<0.250 U	0.290 J	28.26
JIM NICHOLES	6/9/2011 11:55	NICHOLES	0.5000 J		39.09	<1.00 U		<1.00 U	<1.00 U	<1.00 U	2.85
MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL 51827	0.550 J		43.26	<0.250 U		<0.250 U	<0.250 U	0.320 J	0.370 J
GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533	0.550 J		142.07	<0.250 U		<0.250 U	<0.250 U	0.450 J	<0.250 U
JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377	0.580 J		43.10	<0.250 U		<0.250 U	<0.250 U	0.320 J	5.89
KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258	0.590 J		41.37	<0.250 U		<0.250 U	<0.250 U	0.470 J	2.80
CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477	0.630 J		51.66	<0.250 U		<0.250 U	<0.250 U	0.280 J	0.380 J
SIMON, STEVE	10/21/2011 10:29	SIMON 263394	0.650 J		26.16	<0.250 U		<0.250 U	<0.250 U	0.460 J	3.05
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	0.700 J		8.28	<0.250 U		<0.250 U	<0.250 U	0.270 J	0.690 J
HILL, STEPHEN	8/12/2011 14:10	HILL	0.750 J		126.51	<0.250 U		<0.250 U	<0.250 U	0.340 J	1.44
GALLIK RAY	8/23/2011 11:55	GALLIK 150254	0.790 J		110.85	<0.250 U		<0.250 U	<0.250 U	<0.250 U	5.62
MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY	0.790 J		80.00	<1.250 U		<1.250 U	<1.250 U	<1.250 U	4.08
GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.	0.840 J		89.26	<0.250 U		<0.250 U	<0.250 U	0.420 J	1.010 J
RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755	0.900 J		136.45	<0.250 U		<0.250 U	<0.250 U	0.530 J	59.76
FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241	0.910 J		24.95	<0.250 U		<0.250 U	<0.250 U	0.430 J	2.41
LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2	0.970 J		101.02	<0.250 U		<0.250 U	<0.250 U	<0.250 U	1.28
GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793	1.010 J		97.08	<0.250 U		<0.250 U	<0.250 U	0.280 J	2.87
GREEN, DELMER	8/2/2011 11:40	52149-GREEN	1.140 J		25.85	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.970 J
RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476	1.150 J		65.86	<0.250 U		<0.250 U	<0.250 U	0.380 J	4.24
BROTHERS KRISTI	8/8/2011 11:45	BROTHERS	1.170 J		169.45	<0.250 U		<0.250 U	<0.250 U	<0.250 U	0.940 J
POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838	1.190 J		29.42	<0.250 U		<0.250 U	<0.250 U	<0.250 U	81.29
SORUM KEVIN	11/16/2011 12:59	SORUM-51240	1.230 J		19.47	<0.250 U		<0.250 U	<0.250 U	0.420 J	1.90
GRAHAM RANDY	8/9/2011 13:55	GRAHAM	1.240 J		147.47	<0.250 U		<0.250 U	<0.250 U	1.190 J	4.71
JIM NICHOLES	6/9/2011 11:55	NICHOLES	0.55	27.80	38.90	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	0.51
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	1.05	26.43	87.59	<0.100 U	109.00	<0.100 U	0.180 J	0.160 J	0.420 J
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	1.85	2.02	7.29	0.380 J	<50.000 U	0.120 J	0.260 J	0.160 J	3.60
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	2.01	5.53	60.47	<0.100 U	<10.000 U	<0.100 U	<0.100 U	0.160 J	1.88
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	2.83	14.98	12.59	<0.500 U	<50.000 U	<0.500 U	0.150 J	0.460 J	0.60
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	5.14	22.20	37.10	<0.2	64.00	<0.2	<0.2	1.27	0.69
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	53.75	31.27	11.73	<1.250 U	91.00	<1.250 U	0.280 J	0.390 J	2.38
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	0.340 J	33.68	6.46	<0.100 U	<10.000 U	<0.100 U	<0.100 U	0.200 J	<0.100 U
MICHELS, KEITH	9/14/2011 14:32	SILZLY 262840	0.340 J	3.93	32.57	<0.100 U	<10.000 U	<0.100 U	0.140 J	0.150 J	0.140 J
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	0.3400 J	0.7900 J	5.85	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	32.85
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	0.350 J	0.580 J	26.73	<0.500 U	5660.00	<0.500 U	<0.500 U	0.63	10.15
WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	24.59	18.05	56.70	<0.500 U	<50.000 U	<0.500 U	0.310 J	<0.500 U	6.30
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	2.06	57.60	135.74	<0.100 U	81.00	<0.100 U	2.11	0.490 J	1.14
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	6.91	73.97	80.73	<0.100 U	109.00	<0.100 U	0.93	0.80	2.22
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	8.70		89.97	<0.250 U		<0.250 U	1.200 J	1.35	3.46
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	10.81		306.44	0.910 J		<0.250 U	10.22	12.21	23.63
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	13.87		58.90	<0.250 U		<0.250 U	<0.250 U	0.520 J	0.920 J
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	14.67	39.47	56.97	<0.100 U	196.00	<0.100 U	<0.100 U	0.370 J	0.430 J
CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE 263447	17.61	37.11	55.73	<0.100 U	193.00	<0.100 U	<0.100 U	0.52	7.19
ANDREOZZI, BOB	5/27/2011 10:59	51861 ANDREOZZI	3.01	21.13	51.77	<0.50 U	<50.00 U	<0.50 U	<0.50 U	0.1488 J	10.52

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Site Name	Sample Date	Field Number	Li (ug/l)	Mo (ug/l)	Ni (ug/l)	Pb (ug/l)	Sb (ug/l)	Se (ug/l)	Sn (ug/l)	Sr (ug/l)	Ti (ug/l)
CAKA MARK	8/31/2011 13:27	CAKA - 238242	9.67	2.76	<0.250 U	0.460 J	<0.250 U	<0.250 U	<0.250 U	308.39	0.480 J
CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT - 96383	2.050 J	0.870 J	<0.250 U	<0.100 U	<0.250 U	0.500 J	<0.250 U	116.44	<0.250 U
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	12.48	499.96	1.41	6.21	<1.250 U	<1.250 U	6.00	296.27	3.20
BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL	50.29	7.54	<0.250 U	0.130 J	<0.250 U	<0.250 U	<0.250 U	599.66	2.05
RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN	4.970 J	1.55	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	366.01	1.74
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	<4.00 U	5.75	<1.00 U	0.5000 J	<1.00 U	<1.00 U	<1.00 U	24.25	0.5800 J
UELAND RYAN AND TINA	9/7/2011 14:15	UELAND	6.56	2.66	0.290 J	<0.100 U	<0.250 U	<0.250 U	<0.250 U	83.82	<0.250 U
RICE, CAROL	12/21/2011 12:20	RICE - 51090	1.940 J	1.76	<0.250 U	<0.100 U	0.360 J	<0.250 U	<0.250 U	97.30	<0.250 U
DEATON LINDA	9/1/2011 15:30	DEATON	8.77	2.62	0.270 J	0.060 J	<0.100 U	1.12	0.120 J	723.31	0.76
HURLEY, ROBERT	10/11/2011 16:20	HURLEY	<1.000 U	<0.250 U	<0.250 U	0.290 J	<0.250 U	<0.250 U	<0.250 U	106.96	<0.250 U
PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916	1.950 J	3.98	2.22	1.39	<0.250 U	<0.250 U	<0.250 U	130.74	<0.250 U
RICE, CAROL	12/21/2011 11:50	RICE 263947	2.160 J	1.96	<0.250 U	<0.100 U	0.280 J	<0.250 U	<0.250 U	99.54	<0.250 U
ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON	4.560 J	3.53	<0.250 U	0.300 J	<0.250 U	<0.250 U	<0.250 U	525.42	4.15
NELSON, DAVE	10/24/2011 11:30	D NELSON	<1.000 U	<0.250 U	0.460 J	<0.100 U	<0.250 U	<0.250 U	<0.250 U	63.10	1.50
JIM NICHOLES	6/9/2011 11:55	NICHOLES	<4.00 U	8.44	<1.00 U	<1.00 U	<1.00 U	0.2200 J	<1.00 U	236.41	0.3100 J
MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL - 51827	5.95	2.90	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	89.65	<0.250 U
GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533	10.50	4.18	0.410 J	<0.100 U	<0.250 U	<0.250 U	<0.250 U	191.19	1.100 J
JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377	<1.000 U	<0.250 U	0.580 J	0.210 J	<0.250 U	<0.250 U	<0.250 U	83.60	2.38
KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258	8.03	4.24	<0.250 U	<0.100 U	<0.250 U	0.740 J	<0.250 U	294.36	0.600 J
CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477	10.96	2.33	0.420 J	<0.100 U	0.480 J	0.710 J	<0.250 U	176.04	1.010 J
SIMON, STEVE	10/21/2011 10:29	SIMON 263394	5.62	1.42	<0.250 U	1.70	<0.250 U	<0.250 U	<0.250 U	170.67	<0.250 U
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	84.12	0.720 J	0.640 J	1.05	<0.250 U	<0.250 U	<0.250 U	177.89	1.240 J
HILL, STEPHEN	8/12/2011 14:10	HILL	5.08	2.72	<0.250 U	0.68	<0.250 U	0.920 J	<0.250 U	542.90	1.37
GALLIK RAY	8/23/2011 11:55	GALLIK 150254	10.16	5.14	0.440 J	0.72	0.290 J	<0.250 U	<0.250 U	284.19	0.260 J
MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY	9.35	2.22	1.240 J	<0.500 U	<1.250 U	0.380 J	4.53	622.66	3.78
GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.	5.35	2.96	<0.250 U	<0.100 U	<0.250 U	0.730 J	<0.250 U	530.00	0.250 J
RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755	6.39	5.42	0.810 J	7.11	<0.250 U	0.710 J	2.11	295.09	1.45
FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241	6.25	1.52	<0.250 U	<0.100 U	<0.250 U	<0.250 U	<0.250 U	177.75	0.370 J
LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2	8.39	2.31	<0.250 U	0.59	<0.250 U	0.270 J	<0.250 U	256.92	<0.250 U
GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793	11.41	2.53	0.350 J	0.220 J	<0.250 U	0.420 J	<0.250 U	267.08	0.510 J
GREEN, DELMER	8/2/2011 11:40	52149-GREEN	2.620 J	2.63	0.870 J	1.88	<0.250 U	<0.250 U	<0.250 U	78.77	<0.250 U
RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476	32.42	3.56	<0.250 U	0.62	<0.250 U	0.290 J	<0.250 U	749.35	0.340 J
BROTHERS KRISTI	8/8/2011 11:45	BROTHERS	5.63	1.89	1.060 J	<0.100 U	<0.250 U	0.320 J	<0.250 U	340.34	1.25
POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838	15.79	0.250 J	0.330 J	0.160 J	<0.250 U	<0.250 U	<0.250 U	395.22	0.600 J
SORUM KEVIN	11/16/2011 12:59	SORUM-51240	7.56	1.44	<0.250 U	1.73	<0.250 U	<0.250 U	0.360 J	198.82	0.850 J
GRAHAM RANDY	8/9/2011 13:55	GRAHAM	8.01	0.310 J	0.450 J	1.08	<0.250 U	0.520 J	<0.250 U	264.68	6.25
JIM NICHOLES	6/9/2011 11:55	NICHOLES	<2.00 U	8.31	<0.50 U	<0.20 U	<0.50 U	0.1300 J	<0.50 U	235.79	<0.50 U
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	45.60	0.90	0.51	<0.040 U	<0.100 U	0.63	<0.100 U	1699.81	1.35
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	<2.000 U	2.18	0.220 J	0.27	0.260 J	<0.500 U	<0.500 U	38.72	4.88
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	17.74	0.94	<0.100 U	<0.040 U	0.240 J	0.77	<0.100 U	1103.32	1.18
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	3.69	0.130 J	0.360 J	<0.200 U	<0.500 U	0.340 J	<0.500 U	677.43	1.37
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	4.29	1.22	<0.2	<0.2	<0.2	0.43	<0.5	204.00	0.26
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	60.27	0.690 J	0.820 J	<0.500 U	5.17	<1.250 U	<1.250 U	5079.02	7.92
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	84.06	0.76	<0.100 U	<0.040 U	<0.100 U	0.450 J	<0.100 U	162.04	0.78
MICHELS, KEITH	9/14/2011 14:32	SILZLY 262840	0.410 J	0.190 J	0.91	0.120 J	<0.100 U	0.80	<0.100 U	83.19	<0.100 U
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	<2.00 U	5.98	0.1300 J	0.31	<0.50 U	<0.50 U	<0.50 U	24.64	<0.50 U
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	17.45	567.70	0.450 J	0.180 J	<0.500 U	<0.500 U	<0.500 U	341.50	0.130 J
WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	13.19	1.38	0.80	<0.200 U	0.77	0.82	<0.500 U	766.88	1.54
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	195.94	9.83	4.06	0.51	0.86	0.360 J	0.81	3032.79	5.67
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	80.25	5.79	2.22	0.94	0.400 J	0.64	<0.100 U	380.23	51.36
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	83.90	7.66	2.93	1.01	0.480 J	0.680 J	<0.250 U	410.52	84.56
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	204.16	13.62	16.47	15.19	0.940 J	0.340 J	0.440 J	3188.71	88.69
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	8.05	2.67	0.300 J	<0.100 U	<0.250 U	1.46	<0.250 U	349.25	2.70
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	9.36	2.93	0.120 J	<0.040 U	<0.100 U	1.21	<0.100 U	344.41	0.140 J
CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE - 263447	8.01	2.55	<0.100 U	1.14	<0.100 U	1.29	<0.100 U	338.55	0.390 J
ANDREOZZI, BOB	5/27/2011 10:59	51861 ANDREOZZI	40.27	1.69	<0.50 U	<0.50 U	0.3267 J	0.76	<0.50 U	950.10	1.30

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Site Name	Sample Date	Field Number	Tl (ug/l)	U (ug/l)	V (ug/l)	Zn (ug/l)	Zr (ug/l)	Ce (ug/l)	Cs (ug/l)	Ga (ug/l)	La (ug/l)
CAKA MARK	8/31/2011 13:27	CAKA - 238242	<0.250 U	4.28	2.28	3.42	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT - 96383	<0.250 U	1.26	0.400 J	2.66	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	<1.250 U	35.29	<1.250 U	35.72	<1.250 U	0.47	0.890 J	<1.250 U	<1.250 U
BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL	<0.250 U	<0.250 U	<0.250 U	<0.500 U	<0.250 U	<0.250 U	0.500 J	<0.250 U	<0.250 U
RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN	<0.250 U	12.59	2.51	5.33	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	<1.00 U	1.06	0.6400 J	2.50	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<1.00 U
UELAND RYAN AND TINA	9/7/2011 14:15	UELAND	<0.250 U	4.25	0.970 J	6.94	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RICE, CAROL	12/21/2011 12:20	RICE - 51090	<0.250 U	3.08	0.490 J	3.83	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
DEATON LINDA	9/1/2011 15:30	DEATON	<0.100 U	9.44	0.87	4.08	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
HURLEY, ROBERT	10/11/2011 16:20	HURLEY	<0.250 U	<0.250 U	0.970 J	3.78	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916	<0.250 U	5.88	0.680 J	6.77	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RICE, CAROL	12/21/2011 11:50	RICE 263947	<0.250 U	3.11	0.590 J	<0.500 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON	<0.250 U	18.53	0.770 J	0.560 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
NELSON, DAVE	10/24/2011 11:30	D NELSON	<0.250 U	<0.250 U	0.380 J	10.92	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
JIM NICHOLES	6/9/2011 11:55	NICHOLES	<1.00 U	69.40	1.12	31.54	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<1.00 U
MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL - 51827	<0.250 U	3.69	0.620 J	5.44	<0.250 U	<0.250 U	0.340 J	<0.250 U	<0.250 U
GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533	<0.250 U	8.13	0.520 J	0.910 J	<0.250 U	<0.250 U	0.340 J	<0.250 U	<0.250 U
JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377	<0.250 U	<0.250 U	0.390 J	1.000 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.260 J
KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258	<0.250 U	7.61	0.820 J	1.180 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477	<0.250 U	0.800 J	0.550 J	5.15	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
SIMON, STEVE	10/21/2011 10:29	SIMON 263394	<0.250 U	6.58	2.18	7.19	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	<0.250 U	<0.250 U	<0.250 U	<0.500 U	<0.250 U	<0.250 U	0.890 J	<0.250 U	<0.250 U
HILL, STEPHEN	8/12/2011 14:10	HILL	<0.250 U	8.83	2.38	69.20	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
GALLIK RAY	8/23/2011 11:55	GALLIK 150254	<0.250 U	8.53	0.360 J	2.63	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY	<1.250 U	17.47	3.45	9.33	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U
GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.	<0.250 U	9.80	1.85	<0.500 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755	<0.250 U	13.85	2.05	52.82	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241	<0.250 U	6.35	2.85	2.120 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2	<0.250 U	7.59	0.900 J	16.58	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793	<0.250 U	8.18	1.170 J	5.72	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
GREEN, DELMER	8/2/2011 11:40	52149-GREEN	<0.250 U	1.130 J	0.410 J	14.09	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476	<0.250 U	8.04	1.38	10.89	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
BROTHERS KRISTI	8/8/2011 11:45	BROTHERS	<0.250 U	9.73	1.47	0.550 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838	<0.250 U	<0.250 U	0.380 J	2.96	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
SORUM KEVIN	11/16/2011 12:59	SORUM-51240	<0.250 U	8.22	2.66	6.87	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
GRAHAM RANDY	8/9/2011 13:55	GRAHAM	<0.250 U	7.78	1.50	0.810 J	<0.250 U	0.280 J	<0.250 U	<0.250 U	<0.250 U
JIM NICHOLES	6/9/2011 11:55	NICHOLES	<0.50 U	67.57	0.3800 J	12.23	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	<0.100 U	<0.100 U	<0.100 U	0.670 J	<0.100 U	<0.100 U	2.67	<0.100 U	<0.100 U
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	<0.500 U	1.29	0.260 J	3.50	0.240 J	1.08	<0.500 U	0.130 J	0.87
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	<0.100 U	0.94	<0.100 U	1.20	<0.100 U	<0.100 U	0.50	<0.100 U	<0.100 U
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	<0.500 U	3.17	4.52	0.340 J	<0.500 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	<0.2	1.67	5.30	3.07	<0.2	<0.2	<0.5	<0.2	<0.2
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	<1.250 U	0.520 J	<1.250 U	1.670 J	<1.250 U	<1.250 U	1.79	<1.250 U	<1.250 U
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	<0.100 U	<0.100 U	<0.100 U	<0.200 U	<0.100 U	<0.100 U	0.77	<0.100 U	<0.100 U
MICHELS, KEITH	9/14/2011 14:32	SILZLY 262840	<0.100 U	0.350 J	<0.100 U	20.14	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	<0.50 U	1.00	0.1400 J	8.00	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	<0.500 U	35.13	<0.500 U	39.19	<0.250 U	<0.500 U	1.00	<0.500 U	<0.500 U
WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	0.120 J	0.490 J	0.250 J	4.11	<0.500 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	<0.100 U	1.55	0.430 J	1.62	0.200 J	1.16	1.84	<0.100 U	0.53
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	<0.100 U	6.90	8.21	4.01	2.36	3.97	2.19	0.480 J	2.09
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	<0.250 U	7.86	10.96	5.19	3.73	4.50	2.91	0.790 J	2.43
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	<0.250 U	2.00	10.71	30.65	2.10	31.43	24.82	2.12	14.45
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	<0.250 U	2.04	16.38	<0.500 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	<0.100 U	1.86	14.23	1.55	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE - 263447	<0.100 U	1.87	15.30	68.67	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
ANDREOZZI, BOB	5/27/2011 10:59	51861 ANDREOZZI	<0.50 U	0.65	0.2153 J	15.92	<0.50 U	<0.50 U	0.2414 J	<0.50 U	<0.50 U

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Site Name	Sample Date	Field Number	Nb (ug/l)	Nd (ug/l)	Pd (ug/l)	Pr (ug/l)	Rb (ug/l)	Th (ug/l)	W (ug/l)	Procedure
CAKA MARK	8/31/2011 13:27	CAKA 238242	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.35	<0.250 U	<0.250 U	TOTAL RECOVERABLE
CORTRIGHT, DALE	10/28/2011 13:29	CORTRIGHT 96383	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.280 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	<1.250 U	0.27	<1.250 U	<1.250 U	5.41	<1.250 U	2.55	TOTAL RECOVERABLE
BARDWELL, BARBARA A.	8/10/2011 15:15	BARDWELL	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.66	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RITZMAN, ROBERT	11/3/2011 14:25	RITZMAN	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	<1.00 U	<1.00 U	<1.00 U	<1.00 U	1.68	<1.00 U	0.3600 J	TOTAL RECOVERABLE
UELAND RYAN AND TINA	9/7/2011 14:15	UELAND	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.71	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RICE, CAROL	12/21/2011 12:20	RICE 51090	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
DEATON LINDA	9/1/2011 15:30	DEATON	<0.100 U	<0.100 U	0.400 J	<0.100 U	1.68	<0.100 U	<0.100 U	TOTAL RECOVERABLE
HURLEY, ROBERT	10/11/2011 16:20	HURLEY	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.590 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
PAMENTER, RUTH	12/19/2011 11:59	PAMENTER 263916	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.360 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RICE, CAROL	12/21/2011 11:50	RICE 263947	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
ARWWS * JOHNSON RONALD * MW 61	8/19/2011 11:20	JOHNSON	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.630 J	<0.250 U	0.660 J	TOTAL RECOVERABLE
NELSON, DAVE	10/24/2011 11:30	D NELSON	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
JIM NICHOLES	6/9/2011 11:55	NICHOLES	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<1.00 U	TOTAL RECOVERABLE
MCDOWELL HAROLD	9/7/2011 13:49	MCDOWELL 51827	<0.250 U	<0.250 U	<0.250 U	<0.250 U	2.31	<0.250 U	0.510 J	TOTAL RECOVERABLE
GALLIK, RAY	8/23/2011 12:15	GALLIK SPRING- 262533	<0.250 U	<0.250 U	<0.250 U	<0.250 U	3.13	<0.250 U	<0.250 U	TOTAL RECOVERABLE
JOHNSON, RONALD	9/22/2011 13:20	JOHNSON 51377	<0.250 U	0.290 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
KESSLER, DAVID	10/24/2011 13:42	KESLER - 150258	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.090 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
CURRAN, JANET	8/29/2011 13:25	CURRAN - 201477	<0.250 U	<0.250 U	<0.250 U	<0.250 U	2.66	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SIMON, STEVE	10/21/2011 10:29	SIMON 263394	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.95	TOTAL RECOVERABLE
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	<0.250 U	<0.250 U	<0.250 U	<0.250 U	3.40	<0.250 U	<0.250 U	TOTAL RECOVERABLE
HILL, STEPHEN	8/12/2011 14:10	HILL	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
GALLIK RAY	8/23/2011 11:55	GALLIK 150254	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.010 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
MULCAHY, PAT	7/20/2011 12:37	156183-MULCAHY	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U	<1.250 U	0.960 J	TOTAL RECOVERABLE
GRIFFIS HAROLD P	8/15/2011 15:20	GRIFFIS H.	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RILEY, WESLEY & SHEILA	10/21/2011 12:18	RILEY - 51755	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
FIELD, WILLIAM AND CHRIS	9/28/2011 12:57	FIELD - 51241	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	3.22	TOTAL RECOVERABLE
LOGAN, SCOTT W.	8/11/2011 16:00	LOGAN 2	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.630 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
GALLIK RAYMOND D & BIGGS-GALLIK LORRAINE C	8/23/2011 13:00	GALLIK- 216793	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.840 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
GREEN, DELMER	8/2/2011 11:40	52149-GREEN	<0.250 U	<0.250 U	<0.250 U	<0.250 U	1.30	<0.250 U	<0.250 U	TOTAL RECOVERABLE
RILEY, BRIAN	10/24/2011 12:53	RILEY - 263476	<0.250 U	<0.250 U	0.380 J	<0.250 U	0.310 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
BROTHERS KRISTI	8/8/2011 11:45	BROTHERS	<0.250 U	<0.250 U	0.740 J	<0.250 U	<0.250 U	<0.250 U	<0.250 U	TOTAL RECOVERABLE
POLAND, DAN AND ANOLA	9/15/2011 10:40	POLAND- 262838	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.330 J	<0.250 U	<0.250 U	TOTAL RECOVERABLE
SORUM KEVIN	11/16/2011 12:59	SORUM-51240	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U	4.47	TOTAL RECOVERABLE
GRAHAM RANDY	8/9/2011 13:55	GRAHAM	<0.250 U	<0.250 U	<0.250 U	<0.250 U	0.590 J	<0.250 U	1.45	TOTAL RECOVERABLE
JIM NICHOLES	6/9/2011 11:55	NICHOLES	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	DISSOLVED
WALTER, RICHARD	9/12/2011 12:10	WALTER #2	<0.100 U	<0.100 U	0.99	<0.100 U	6.17	<0.100 U	<0.100 U	DISSOLVED
BROWN, DEAN	7/7/2011 12:00	DEAN BROWN	<0.500 U	0.95	<0.500 U	0.240 J	0.50	0.150 J	0.72	DISSOLVED
HANSEN, RONALD * HANSEN SPRING	10/12/2011 14:40	HANSEN - 263246	<0.100 U	<0.100 U	0.190 J	<0.100 U	1.70	<0.100 U	<0.100 U	DISSOLVED
JAMISON, SHERRI * WELL #3	7/12/2011 13:37	WELL #3	<0.500 U	<0.500 U	0.180 J	<0.500 U	0.400 J	<0.500 U	0.100 J	DISSOLVED
PETERSON, HENRY	3/17/2011 15:15	PETERSON HOUSE 223085	<0.5	<0.2	<0.5	<0.2	12.10	<0.2	2.66	DISSOLVED
JAMISON SHERRI * WELL #4	7/12/2011 16:00	WELL #4	<1.250 U	<1.250 U	1.29	<1.250 U	4.12	<1.250 U	<1.250 U	DISSOLVED
HANSEN, RON	10/12/2011 15:00	HANSEN - 51851	<0.100 U	<0.100 U	<0.100 U	<0.100 U	3.36	<0.100 U	<0.100 U	DISSOLVED
MICHELS, KEITH	9/14/2011 14:32	SILZLY 262840	<0.100 U	<0.100 U	<0.100 U	<0.100 U	0.220 J	<0.100 U	<0.100 U	DISSOLVED
CHISHOLM, DAVID AND SALLY ANN	6/10/2011 13:00	CHISHOLM	<0.50 U	<0.50 U	<0.50 U	<0.50 U	1.66	<0.50 U	0.2600 J	DISSOLVED
DEAS, GRIZ	7/13/2011 12:25	GRIZ DEAS	<0.500 U	<0.500 U	<0.500 U	<0.500 U	4.58	<0.500 U	3.50	DISSOLVED
WALTER, RICHARD	6/22/2011 15:00	WALTER DITCH	<0.500 U	<0.500 U	<0.500 U	<0.500 U	0.64	<0.500 U	<0.500 U	DISSOLVED
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	<0.100 U	0.61	0.87	0.130 J	7.68	0.190 J	0.59	DISSOLVED
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	<0.100 U	1.80	<0.100 U	0.410 J	7.78	1.07	19.34	DISSOLVED
JONES, EVERETTE J	9/30/2011 11:35	SCHERMAN - 263138	0.290 J	1.93	<0.250 U	0.460 J	10.03	1.050 J	28.77	TOTAL RECOVERABLE
WALTER, RICHARD	9/14/2011 15:00	WALTER- 98	0.530 J	15.87	1.90	3.63	29.03	4.85	5.74	TOTAL RECOVERABLE
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	<0.250 U	<0.250 U	<0.250 U	<0.250 U	7.56	<0.250 U	1.190 J	TOTAL RECOVERABLE
CHOQUETTE, WALTER	10/20/2011 15:10	CHOQUETTE	<0.100 U	<0.100 U	<0.100 U	<0.100 U	7.93	<0.100 U	1.06	DISSOLVED
CHOQUETTE, WALTER	11/14/2011 12:36	CHOQUETTE 263447	<0.100 U	<0.100 U	<0.100 U	<0.100 U	8.06	<0.100 U	0.97	DISSOLVED
ANDREOZZI, BOB	5/27/2011 10:59	51861 ANDREOZZI	<0.50 U	<0.50 U	0.4597 J	<0.50 U	1.14	<0.50 U	<0.50 U	DISSOLVED

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Sample	Gwic Id	Site Name	Sample Date	Field Number	Water Temp	Fld pH	Fld SC	Lab pH	Lab SC	Ca (mg/l)	Mg (mg/l)
200114	51861	ANDREOZZI, BOB	5/24/2011 10:59	51861-ANDREOZZI	7.4	7.35	533			62.58	14.24
200123	51790	GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	8.9	6.76	226			30.92	6.67
200122	51790	GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	8.9	6.76	226	7.33	239	35.89	7.16
200080	256622	STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	13.4	7.21	389			42.56	6.16
200118	5377	GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE RESAMPLE	7.7	6.89	246	7.48	263	42.34	6.62
200081	256622	STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	13.4	7.21	389	7.66	337	43.97	6.30
200120	230299	GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	10.3	7.03	378	7.48	362	56.31	12.68
200119	5377	GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE RESAMPLE	7.7	6.89	246			37.60	6.23
200121	230299	GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	10.3	7.03	378			53.00	12.58
200074	51327	FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	9.9	7.69	608			54.62	15.76
200075	51327	FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	9.9	7.69	608	7.59	519	51.74	14.95
200300	5330	SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	10.5	6.83	573	7.15	581	28.42	8.32
200299	5330	SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	10.5	6.83	573			29.12	8.58
200448	153592	CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	14.3	7.21	300			33.45	3.47
200449	153592	CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	14.3	7.21	300	7.77	312	32.64	3.27
200112	258964	SALLE, RON	5/24/2011 11:42	SALLE-258964	13.9	6.77	1,062			102.63	30.30
200073	252926	JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	9.7	7.05	589	6.92	509	31.04	8.94
200113	258964	SALLE, RON	5/24/2011 11:42	SALLE-258964	13.9	6.77	1,062	6.67	976	108.55	29.89
200077	254433	BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	9.5	7.20	455			27.67	8.27
200072	252926	JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926	9.7	7.05	589			39.89	11.39
200078	254433	BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	9.5	7.20	455	7.11	434	28.49	8.46
200137	221430	KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	10.3	6.81	672	7.33	701	44.44	14.22
200206	51874	WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	13.0	7.37	773	7.04	812	77.82	20.39
2011Q0976	53591	RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	11.0	7.23	538			29.90	4.26
200138	221430	KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE	10.3	6.81	672			41.12	14.51
200140	51328	SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	11.6	7.09	504			16.67	3.9800 J
200295	246960	CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	13.3	7.19	638			66.65	17.25
200079	252623	MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	11.2	7.13	1,025	7.62	916	53.55	17.60
200076	252623	MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	11.2	7.13	1,025			53.77	17.51
2011Q0975	53591	RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	11.0	7.23	538	7.51	563	30.80	4.46
200296	246960	CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	13.3	7.19	638	7.46	594	60.17	16.80
200139	51328	SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL - RESAMPLE	11.6	7.09	504	7.36	530	17.48	4.25
200298	244470	LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	13.6	6.96	768	7.14	755	72.72	21.03
200297	244470	LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	13.6	6.96	768			76.20	20.44
201073	256447	SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	13.8	7.42	689	7.74	674	49.10	3.62
200083	226130	SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	11.6	7.30	589	7.78	560	14.31	3.20
200082	226130	SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	11.6	7.30	589			14.45	3.26
200450	256874	SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	15.8	7.03	786			99.10	18.90
200207	51874	WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	13.0	7.37	773			79.83	21.47
200451	256874	SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	15.8	7.03	786	7.14	763	93.70	17.42
200374	51333	FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	20.2	6.95	157	6.99	143	1.61	0.46
200674	260551	UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	21.4	5.08	238	6.46	174	2.77	1.17
200648	158784	BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	20.4	6.39	100	6.74	18	0.67	0.25
200676	163204	THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	21.0	4.94	130	6.21	21	0.19	0.11
200673	196975	GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	21.4	5.59	55	6.91	25	0.36	0.38
200675	259577	IETTE, JOE	8/31/2011 11:15	IETTE RO	19.3	5.06	85	5.82	31	4.16	0.46
200647	258258	BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	21.7	6.09	22	6.60	16	0.41	0.24
201067	256874	SHYBA, LORI	11/14/2011 10:35	SHYBA - 256874 - RO	15.3	6.61	56	6.24	51	2.72	0.42
200615	252623	MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	21.4	5.77	94	6.47	74	1.67	0.54
201069	256874	SHYBA, LORI	11/14/2011 11:06	SHYBA - 256874	15.1	7.42	706	7.17	665	83.69	15.58
2011Q1011	144729	PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	9.6	6.72	396	7.78	432	36.70	10.00
2011Q1012	144730	PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	9.7	6.69	726	7.31	825	86.50	19.60

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Site Name	Sample Date	Field Number	Na (mg/l)	K (mg/l)	Fe (mg/l)	Mn (mg/l)	SiO2 (mg/l)	HCO3 (mg/l)	CO3 (mg/l)
ANDREOZZI, BOB	5/24/2011 10:59	51861 ANDREOZZI	30.07	2.3400 J	0.306	2.1800 J			
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	3.18	1.33	0.034	<3.00 U			
GALLE TYKE	5/24/2011 15:25	TYKE GALLE - RESAMPLE	3.81	1.38	<2.00 U	<0.30 U	11.0	125.9	0.0
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART RESAMPLE	20.47	10.07	0.073	<3.75 U			
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE-RESAMPLE	2.55	1.27	<2.00 U	<0.30 U	10.1	138.5	0.0
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	21.85	10.39	<10.00 U	<1.50 U	52.5	157.1	0.0
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	8.99	2.47	0.221	0.051	7.3	163.4	0.0
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	2.87	1.13	0.076	<3.75 U			
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	9.71	2.52	0.490	0.054			
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	56.70	6.33	0.093	<3.75 U			
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	54.17	5.77	<2.00 U	<1.50 U	44.8	276.4	0.0
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	76.62	5.21	<0.004 U	<0.002 U	44.0	228.0	0.0
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	79.31	5.49	0.079	<0.005 U			
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	20.72	9.21	0.082	<0.001 U			
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	19.60	8.82	<0.000 U	<0.001 U	56.0	137.9	0.0
SALLE, RON	5/24/2011 11:42	SALLE 258964	113.55	6.58	0.643	0.014			
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	53.97	5.29	<2.00 U	0.3700 J	36.7	243.3	0.0
SALLE, RON	5/24/2011 11:42	SALLE 258964	112.00	6.02	0.501	0.016	41.1	640.4	0.0
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	55.10	6.17	0.110	<3.75 U			
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926	70.57	6.70	0.084	<3.75 U			
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY 254433	56.67	6.44	<2.00 U	<1.50 U	40.6	191.7	0.0
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	86.94	5.87	0.263	0.010	41.3	276.1	0.0
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	70.88	4.03	0.657	0.022	16.0	413.6	0.0
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER 53591	60.20	8.70	0.117	<0.003	56.7		
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE	86.42	6.12	4.505	0.036			
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	87.41	5.60	0.413	0.029			
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	55.56	3.17	0.339	0.017			
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	168.68	6.79	0.013	0.002	26.9	413.4	0.0
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	166.97	6.75	0.067	1.1800 J			
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	63.60	8.85	0.002	<0.001	55.2	137.2	0.0
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	51.97	2.89	0.297	0.014	7.9	283.9	0.0
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL - RESAMPLE	92.05	5.94	0.050	0.035	37.2	213.3	0.0
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	69.76	3.82	0.457	0.015	15.3	395.8	0.0
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	71.51	3.86	0.474	0.016			
SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	77.27	17.14	0.020	<0.001 U	56.3	160.6	0.0
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	113.85	5.26	0.086	0.004	31.0	172.4	0.0
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	115.43	5.28	0.747	3.0800 J			
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	40.53	3.24	0.059	0.001 J	43.8		
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	74.75	4.19	2.943	0.029			
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	37.54	2.94	0.001 J	0.001 J	41.3	150.4	0.0
FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	29.35	1.09	<0.002 U	0.001 J	7.6	35.7	0.0
UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	22.19	2.06	0.014	0.003 J	7.2	28.6	0.0
BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	2.34	0.43	0.008	0.001 J	4.7	11.0	0.0
THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	11.07	0.220 J	0.003 J	0.002 J	4.7	30.7	0.0
GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	4.82	0.67	<0.002 U	<0.001 U	3.6	18.6	0.0
JETTE, JOE	8/31/2011 11:15	JETTE RO	1.84	0.48	0.005 J	<0.001 U	1.7	19.1	0.0
BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	2.12	0.54	<0.002 U	0.002 J	5.2	10.1	0.0
SHYBA, LORI	11/14/2011 10:35	SHYBA - 256874 - RO	7.70	0.85	<0.002 U	0.002 J	2.7	20.4	0.0
MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	13.32	0.48	0.010	0.003	2.0	26.9	0.0
SHYBA, LORI	11/14/2011 11:06	SHYBA - 256874	35.18	2.72	<0.002 U	0.001 J	40.1	158.2	0.0
PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	28.90	5.33	<0.002	<0.001	47.7	165.7	0.0
PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	33.10	7.77	0.004	0.003	50.5	237.8	0.0

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Site Name	Sample Date	Field Number	SO4 (mg/l)	Cl (mg/l)	NO3-N (mg/l)	F (mg/l)	OPO4-P (mg/l)	Ag (ug/l)	Al (ug/l)
ANDREOZZI, BOB	5/24/2011 10:59	51861 ANDREOZZI						<1.25 U	3.04
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE						<1.00 U	6.19
GALLE TYKE	5/24/2011 15:25	TYKE GALLE - RESAMPLE	10.7	0.94	0.10	0.27	<0.10 U	<0.50 U	17.78
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART RESAMPLE						<1.25 U	30.39
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE-RESAMPLE	11.1	0.93	0.16	0.34	<0.10 U	<0.50 U	20.49
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	24.6	18.29	2.34	0.21	<0.10 U	<2.50 U	<10.00 U
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	49.6	1.20	<0.05 U	3.28	<0.10 U	<0.50 U	18.23
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE						<1.25 U	9.16
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE						<1.25 U	60.85
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327						<1.25 U	9.33
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	47.4	7.96	4.64	0.79	<0.10 U	<0.50 U	<2.00 U
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	57.1	18.76	1.67	3.62	<0.100 U	<0.500 U	1.590 J
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON						<1.250 U	7.64
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE						<0.250 U	30.82
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	18.7	6.48	0.86	0.33	<0.020 U	<0.100 U	<0.400 U
SALLE, RON	5/24/2011 11:42	SALLE 258964						<1.25 U	14.40
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	56.9	13.76	2.04	2.00	<0.10 U	<0.50 U	<2.00 U
SALLE, RON	5/24/2011 11:42	SALLE 258964	57.5	4.46	<0.05 U	2.42	<0.10 U	<0.50 U	0.9641 J
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433						<1.25 U	6.64
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926						<1.25 U	7.23
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY 254433	39.8	10.28	0.88	2.23	<0.10 U	<0.50 U	<2.00 U
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	71.1	21.65	3.17	2.03	<0.10 U	<0.50 U	4.17
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	67.8	5.02	<0.050 U	2.14	<0.100 U	<0.500 U	19.48
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER 53591						<0.5	27.70
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE						<1.00 U	1540.90
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE						<2.00 U	25.92
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE						<1.250 U	25.79
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	126.1	34.86	2.64	4.44	<0.10 U	<2.50 U	<10.00 U
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE						<1.25 U	9.56
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	44.1	53.52	2.14	0.52	<0.1	<0.2	<2.0
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	96.3	4.84	<0.050 U	2.15	<0.100 U	<0.500 U	21.19
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL - RESAMPLE	47.4	15.66	0.56	2.48	<0.10 U	<0.50 U	0.7800 J
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	73.7	5.02	<0.050 U	2.07	<0.100 U	<0.500 U	25.89
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE						<1.250 U	28.36
SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	84.2	72.60	2.04	0.46	<0.010 U	<0.100 U	56.09
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	100.2	16.28	0.27	8.41	<0.10 U	<2.50 U	<10.00 U
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE						<1.25 U	8.91
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE						<0.180 U	42.35
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE						<1.250 U	394.54
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	181.7	53.96	1.02	0.45	0.21	<0.100 U	19.95
FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	5.3	18.87	2.25	1.02	<0.100 U	<0.500 U	<2.000 U
UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	<0.500 U	27.77	0.17	0.09	<0.020 U	<0.100 U	<0.400 U
BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	<0.500 U	0.72	0.09	0.06	<0.020 U	<0.100 U	0.488 J
THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	<0.500 U	0.74	<0.010 U	0.09	<0.020 U	<0.100 U	<0.400 U
GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	<0.500 U	0.58	<0.010 U	0.07	<0.020 U	<0.100 U	1.010 J
JETTE, JOE	8/31/2011 11:15	JETTE RO	<0.500 U	<0.100 U	0.15	0.10	<0.020 U	<0.100 U	0.488 J
BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	<0.500 U	0.52	0.19	0.08	<0.020 U	<0.100 U	1.370 J
SHYBA, LORI	11/14/2011 10:35	SHYBA - 256874 - RO	<0.500 U	5.50	0.10	0.08	0.11	<0.100 U	0.871 J
MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	4.2	4.35	0.83	0.33	<0.020 U	<0.100 U	0.838 J
SHYBA, LORI	11/14/2011 11:06	SHYBA - 256874	151.4	48.69	0.80	0.41	0.23	<0.100 U	24.95
PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	37.0	10.02	3.12	0.47	<0.1	<0.2	<2.0
PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	111.6	35.68	3.07	0.28	<0.1	<0.2	<2.0

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Site Name	Sample Date	Field Number	As (ug/l)	B (ug/l)	Ba (ug/l)	Be (ug/l)	Br (ug/l)	Cd (ug/l)	Co (ug/l)	Cr (ug/l)	Cu (ug/l)
ANDREOZZI, BOB	5/24/2011 10:59	51861 ANDREOZZI	3.40		51.11	<5.00 U		<1.25 U	<1.25 U	<1.25 U	4.64
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	4.45		4.47	<1.00 U		<1.00 U	<1.00 U	<1.00 U	2.23
GALLE TYKE	5/24/2011 15:25	TYKE GALLE - RESAMPLE	5.02	1.2900 J	4.16	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	2.92
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART RESAMPLE	5.62		78.35	<1.25 U		<1.25 U	<1.25 U	<1.25 U	<1.25 U
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE-RESAMPLE	5.72	1.3000 J	12.37	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	1.51
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	6.17	32.01	77.35	<2.50 U	154.00	<2.50 U	<2.50 U	<2.50 U	2.75
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	6.21	20.40	28.66	<0.50 U	<50.00 U	<0.50 U	<0.50 U	<0.50 U	0.1500 J
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	6.51		11.62	<1.25 U		<1.25 U	<1.25 U	0.2500 J	0.6300 J
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	7.15		29.48	<1.25 U		<1.25 U	<1.25 U	<1.25 U	<1.25 U
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	7.50		71.16	<1.25 U		<1.25 U	1.82	<1.25 U	0.8700 J
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	7.51	70.63	65.88	<0.50 U	<50.00 U	<0.50 U	1.44	<0.50 U	1.09
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	7.59	103.56	33.25	<0.500 U	112.00	<0.500 U	<0.500 U	<0.500 U	3.52
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	7.79		26.17	<5.000 U		<1.250 U	0.250 J	0.400 J	2.82
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	8.04	40.96	81.03	<0.250 U		<0.250 U	<0.250 U	<0.250 U	2.22
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	8.18	35.81	75.96	<0.100 U	86.00	<0.100 U	<0.100 U	0.180 J	1.52
SALLE, RON	5/24/2011 11:42	SALLE 258964	8.30		54.19	<5.00 U		<1.25 U	<1.25 U	<1.25 U	<1.25 U
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	8.34	51.90	46.48	<0.50 U	98.00	<0.50 U	<0.50 U	<0.50 U	2.88
SALLE, RON	5/24/2011 11:42	SALLE 258964	8.35	82.45	51.34	1.06	<50.00 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	8.37		41.86	<1.25 U		<1.25 U	1.49	<1.25 U	3.41
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926	8.74		57.12	<1.25 U		<1.25 U	<1.25 U	<1.25 U	1.72
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY 254433	9.83	42.31	44.38	<0.50 U	73.00	<0.50 U	0.65	<0.50 U	1.16
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	10.13	112.07	53.76	<0.50 U	124.00	<0.50 U	1.30	<0.50 U	1.48
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	11.20	63.35	34.73	0.160 J	<50.000 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER 53591	11.40	54.80	21.40	<0.5			<0.5	<0.5	3.27
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE	12.00		70.71	<1.00 U		<1.00 U	1.71	0.6500 J	3.23
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	12.52		5.48	<1.00 U		<0.02 U	<1.00 U	<1.00 U	<1.00 U
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	12.90		29.53	<5.000 U		<1.250 U	<1.250 U	0.360 J	1.34
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	12.99	218.85	40.93	<2.50 U	228.00	<2.50 U	<2.50 U	<2.50 U	2.4100 J
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	13.22		56.93	<1.25 U		<1.25 U	<1.25 U	<1.25 U	<1.25 U
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	14.30	45.50	20.30	<0.2	516.00	<0.2	<0.2	<0.2	0.56
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	14.49	46.06	27.11	<0.500 U	<50.000 U	<0.500 U	<0.500 U	<0.500 U	0.420 J
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL - RESAMPLE	14.74	115.75	5.09	<0.50 U	101.00	<0.50 U	<0.50 U	<0.50 U	0.54
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	14.90	54.78	34.72	0.300 J	<50.000 U	<0.500 U	<0.500 U	<0.500 U	0.220 J
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	15.58		36.92	<5.000 U		<1.250 U	<1.250 U	0.320 J	1.34
SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	19.20	39.04	30.13	<0.100 U	650.00	<0.100 U	<0.100 U	0.320 J	0.390 J
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	26.88	215.42	1.3700 J	<2.50 U	88.00	<2.50 U	<2.50 U	<2.50 U	0.7300 J
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	28.73		2.96	<1.25 U		<1.25 U	<1.25 U	<1.25 U	<1.25 U
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	30.61	22.88	34.61	<0.180 U		<0.180 U	<0.180 U	<0.180 U	5.62
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	32.38		41.20	0.790 J		<1.250 U	0.590 J	4.37	<1.250 U
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	37.65	27.41	30.67	<0.100 U	229.00	<0.100 U	0.120 J	0.150 J	2.86
FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	0.61	237.71	1.44	<0.500 U	180.00	<0.500 U	<0.500 U	1.52	0.60
UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	0.77	13.87	6.76	<0.100 U	240.00	<0.100 U	0.450 J	0.160 J	0.55
BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	<0.100 U	15.09	0.66	<0.100 U	<10.000 U	<0.100 U	<0.100 U	0.160 J	<0.100 U
THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	<0.100 U	10.94	0.370 J	<0.100 U	<10.000 U	<0.100 U	0.220 J	0.150 J	0.95
GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	<0.100 U	2.82	0.260 J	<0.100 U	<10.000 U	<0.100 U	<0.100 U	0.160 J	0.95
JETTE, JOE	8/31/2011 11:15	JETTE RO	<0.100 U	2.31	3.41	<0.100 U	<10.000 U	<0.100 U	<0.100 U	0.160 J	3.98
BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	0.120 J	34.81	0.390 J	<0.100 U	<10.000 U	<0.100 U	0.64	0.160 J	0.77
SHYBA, LORI	11/14/2011 10:35	SHYBA - 256874 - RO	0.410 J	6.59	1.72	<0.100 U	<10.000 U	<0.100 U	<0.100 U	0.150 J	1.51
MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	0.420 J	178.75	1.98	<0.100 U	<10.000 U	<0.100 U	0.180 J	0.200 J	0.72
SHYBA, LORI	11/14/2011 11:06	SHYBA - 256874	29.74	22.60	26.53	<0.100 U	204.00	<0.100 U	<0.100 U	0.150 J	3.24
PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	13.80	18.20	51.90	<0.2	64.00	<0.2	0.28	0.38	1.15
PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	3.52	28.80	181.00	<0.2	149.00	<0.2	0.29	<0.2	0.90

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Site Name	Sample Date	Field Number	Li (ug/l)	Mo (ug/l)	Ni (ug/l)	Pb (ug/l)	Sb (ug/l)	Se (ug/l)	Sn (ug/l)	Sr (ug/l)	Ti (ug/l)
ANDREOZZI, BOB	5/24/2011 10:59	51861 ANDREOZZI	22.34	1.69	<1.25 U	0.3500 J	0.3400 J	0.7100 J	<1.25 U	915.51	0.7700 J
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	<4.00 U	1.72	<1.00 U	<1.00 U	0.3700 J	<1.00 U	<1.00 U	65.27	0.3000 J
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	0.8000 J	1.66	<0.50 U	<0.20 U	0.3600 J	<0.50 U	<0.50 U	69.46	<0.50 U
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART RESAMPLE	12.39	1.73	<1.25 U	0.2500 J	<1.25 U	1.38	<1.25 U	198.83	1.0600 J
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	0.4900 J	2.09	0.1000 J	<0.20 U	0.61	<0.50 U	<0.50 U	74.70	<0.50 U
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	15.70	1.5400 J	<2.50 U	<1.00 U	<2.50 U	1.5600 J	<2.50 U	184.26	<2.50 U
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	34.46	23.40	<0.50 U	<0.20 U	<0.50 U	<0.50 U	<0.50 U	523.56	0.88
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	1.2800 J	2.12	<1.25 U	<1.25 U	0.6000 J	<1.25 U	<1.25 U	69.02	0.2600 J
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	35.16	25.19	<1.25 U	<1.25 U	<1.25 U	<1.25 U	<1.25 U	544.15	0.48
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	28.69	4.47	<1.25 U	<1.25 U	<1.25 U	0.7000 J	0.2800 J	493.27	0.4400 J
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	32.63	3.84	<0.50 U	<0.50 U	<0.50 U	0.62	<0.50 U	439.19	0.3200 J
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	180.98	11.75	<0.500 U	0.050 J	0.470 J	0.430 J	<0.500 U	276.58	0.85
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	182.41	11.62	0.530 J	<1.250 U	0.580 J	0.730 J	4.50	307.59	1.090 J
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	8.04	2.09	0.630 J	0.100 J	<0.250 U	0.390 J	<0.250 U	131.46	<0.250 U
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	7.70	2.16	<0.100 U	0.040 J	<0.100 U	0.430 J	<0.100 U	129.20	0.160 J
SALLE, RON	5/24/2011 11:42	SALLE 258964	207.51	8.32	<1.25 U	<1.25 U	0.4700 J	<1.25 U	<1.25 U	1419.85	0.5400 J
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	74.78	6.15	<0.50 U	<0.50 U	0.3300 J	0.55	<0.50 U	290.50	0.4200 J
SALLE, RON	5/24/2011 11:42	SALLE 258964	187.84	7.94	<0.50 U	0.1153 J	0.4526 J	<0.50 U	<0.50 U	1356.60	0.87
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	39.45	15.44	0.4400 J	0.3300 J	0.3500 J	0.4400 J	<1.25 U	228.99	0.3300 J
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926	94.61	7.32	<1.25 U	<1.25 U	0.3600 J	0.5800 J	<1.25 U	373.30	0.52
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY 254433	26.66	16.28	<0.50 U	0.33	0.3500 J	0.56	<0.50 U	233.17	0.28
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	141.69	5.85	0.3100 J	<0.20 U	0.3500 J	1.29	<0.50 U	544.58	1.04
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	143.50	3.80	0.340 J	<0.200 U	<0.500 U	<0.500 U	<0.500 U	2434.12	1.04
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER 53591	7.52	7.23	<0.5	<0.5	<0.5	2.77	<1.3	148.00	1.64
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE	139.04	5.69	1.72	0.5900 J	0.4200 J	1.13	<1.00 U	552.15	44.11
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	85.12	9.52	0.17	<1.00 U	<1.00 U	0.6600 J	0.3000 J	91.39	1.67
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	60.26	4.79	0.750 J	<1.250 U	<1.250 U	<1.250 U	<1.250 U	2925.32	2.10
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	478.63	11.70	<2.50 U	<1.00 U	<2.50 U	1.4800 J	<2.50 U	621.69	0.9500 J
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	497.63	13.13	<1.25 U	<1.25 U	<1.25 U	1.66	<1.25 U	668.26	1.1700 J
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	6.46	7.03	<0.2	<0.2	<0.2	4.13	<0.5	142.00	0.48
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	110.09	4.30	0.150 J	<0.200 U	0.160 J	<0.500 U	<0.500 U	2580.16	1.47
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	91.50	9.92	<0.50 U	<0.20 U	<0.50 U	0.62	<0.50 U	94.01	0.2900 J
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	140.46	4.25	<0.500 U	0.130 J	0.350 J	<0.500 U	<0.500 U	2501.15	1.06
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	75.60	4.65	0.790 J	<1.250 U	0.370 J	<1.250 U	<1.250 U	2676.93	1.62
SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	53.46	5.77	<0.100 U	<0.040 U	<0.100 U	8.21	<0.100 U	166.96	1.88
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	257.83	22.61	<2.50 U	<1.00 U	<2.50 U	<2.50 U	<2.50 U	79.80	1.2700 J
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	284.03	24.37	<1.25 U	<1.25 U	<1.25 U	0.4500 J	<1.25 U	82.11	1.75
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	38.42	0.720 J	7.12	0.150 J	0.670 J	1.80	<0.180 U	1424.71	4.60
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	141.58	4.24	1.37	1.45	0.650 J	<1.250 U	<1.250 U	2492.22	7.37
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	35.38	0.67	5.52	0.22	0.83	2.51	0.250 J	1284.31	1.91
FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	113.28	0.160 J	<0.500 U	<0.200 U	0.440 J	0.58	<0.500 U	14.99	0.120 J
UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	7.75	<0.100 U	0.89	0.050 J	<0.100 U	0.77	<0.100 U	26.01	<0.100 U
BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	2.20	<0.100 U	<0.100 U	<0.040 U	<0.100 U	<0.100 U	<0.100 U	5.29	<0.100 U
THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	<0.400 U	<0.100 U	<0.100 U	<0.040 U	0.140 J	<0.100 U	<0.100 U	1.42	<0.100 U
GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	0.440 J	<0.100 U	<0.100 U	<0.040 U	0.170 J	<0.100 U	<0.100 U	2.77	<0.100 U
JETTE, JOE	8/31/2011 11:15	JETTE RO	<0.400 U	<0.100 U	<0.100 U	0.26	<0.100 U	<0.100 U	<0.100 U	16.22	<0.100 U
BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	3.13	<0.100 U	<0.100 U	<0.040 U	<0.100 U	<0.100 U	<0.100 U	3.86	<0.100 U
SHYBA, LORI	11/14/2011 10:35	SHYBA 256874 RO	5.82	<0.100 U	0.100 J	<0.040 U	<0.100 U	<0.100 U	<0.100 U	32.70	<0.100 U
MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	43.16	<0.100 U	0.53	0.070 J	0.480 J	<0.100 U	<0.100 U	16.63	<0.100 U
SHYBA, LORI	11/14/2011 11:06	SHYBA 256874	32.82	0.58	4.36	<0.040 U	0.84	1.79	<0.100 U	1131.47	1.19
PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	7.57	0.89	0.31	<0.2	<0.2	0.45	<0.5	287.00	0.44
PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	11.00	2.10	0.22	<0.2	<0.2	0.77	<0.5	732.00	1.15

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Site Name	Sample Date	Field Number	Tl (ug/l)	U (ug/l)	V (ug/l)	Zn (ug/l)	Zr (ug/l)	Ce (ug/l)	Cs (ug/l)	Ga (ug/l)	La (ug/l)
ANDREOZZI, BOB	5/24/2011 10:59	51861 ANDREOZZI	<1.25 U	0.6600 J	0.5500 J	15.21	<1.25 U	<0.02 U	0.2600 J	<1.25 U	<5.00 U
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	<1.00 U	1.07	1.16	2.94	<1.00 U	<1.00 U	<1.00 U	<1.00 U	<1.00 U
GALLE TYKE	5/24/2011 15:25	TYKE GALLE - RESAMPLE	<0.50 U	1.08	0.4300 J	4.74	<2.00 U	<0.50 U	<0.50 U	<2.00 U	<0.50 U
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART RESAMPLE	<1.25 U	2.14	5.60	2.1500 J	<1.25 U	<1.25 U	<1.25 U	<1.25 U	<1.25 U
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	<0.50 U	1.43	0.4400 J	2.26	<2.00 U	<0.50 U	<0.50 U	<2.00 U	<0.50 U
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	<2.50 U	1.8300 J	4.62	4.9400 J	<2.50 U	<2.50 U	<2.50 U	<2.50 U	<2.50 U
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	<0.50 U	1.63	<0.50 U	14.71	<2.00 U	<0.50 U	2.84	<2.00 U	<0.50 U
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	<1.25 U	1.39	1.31	28.30	<1.25 U	<1.25 U	<1.25 U	<1.25 U	<1.25 U
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	<1.25 U	1.76	0.44	13.41	<1.25 U	<1.25 U	3.05	<1.25 U	<0.25 U
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	<1.25 U	19.52	13.18	1.01	<1.25 U	<1.25 U	5.41	<1.25 U	<1.25 U
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	<0.50 U	16.10	10.27	1.31	<0.50 U	<0.50 U	4.50	<0.50 U	<0.50 U
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	<0.500 U	2.85	6.59	7.11	<0.500 U	<0.500 U	8.30	<0.500 U	<0.500 U
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	<1.250 U	2.95	7.55	4.62	<1.250 U	0.000 J	8.34	<1.250 U	<5.000 U
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	<0.250 U	0.910 J	7.68	7.51	<0.250 U	<0.250 U	<0.250 U	<0.250 U	<0.250 U
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	<0.100 U	1.22	7.53	6.15	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
SALLE, RON	5/24/2011 11:42	SALLE 258964	<1.25 U	1.33	0.4400 J	<1.25 U	<1.25 U	<0.02 U	17.04	<1.25 U	<5.00 U
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	<0.50 U	3.80	8.90	15.39	<0.50 U	<0.50 U	1.77	<0.50 U	<0.50 U
SALLE, RON	5/24/2011 11:42	SALLE 258964	0.1049 J	0.65	<0.50 U	<1.00 U	<0.50 U	<0.50 U	15.68	<0.50 U	<0.50 U
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	<1.25 U	2.97	8.16	1.82	<1.25 U	<1.25 U	3.50	<1.25 U	<1.25 U
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926	<1.25 U	4.91	12.22	11.49	<1.25 U	<1.25 U	2.27	<1.25 U	<1.25 U
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY 254433	<0.50 U	2.99	7.53	2.44	<0.50 U	<0.50 U	3.68	<0.50 U	<0.50 U
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	0.2400 J	12.03	10.46	2.40	<2.00 U	<0.50 U	2.41	<2.00 U	<0.50 U
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	<0.500 U	0.51	<0.500 U	1.05	<0.500 U	<0.500 U	5.11	<0.500 U	<0.500 U
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER 53591	<0.5	1.38	11.40	1.55	<0.5	<0.5	<1.3	<0.5	<0.5
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE	0.3900 J	12.11	17.05	1.6500 J	3.19	2.74	3.71	<1.00 U	1.71
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	0.2900 J	4.19	10.30	2.27	<1.00 U	<1.00 U	<1.00 U	<4.00 U	<0.10 U
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	<1.250 U	0.570 J	<1.250 U	1.37	<1.250 U	<0.020 U	3.30	<1.250 U	<5.000 U
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	<2.50 U	25.39	10.54	13.69	<2.50 U	<2.50 U	<2.50 U	<2.50 U	<2.50 U
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	0.4500 J	30.11	12.55	9.71	<1.25 U	<1.25 U	<1.25 U	<1.25 U	<1.25 U
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	<0.2	1.40	9.06	2.00	<0.2	<0.2	<0.5	<0.2	<0.2
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	<0.500 U	0.56	<0.500 U	1.24	<0.500 U	<0.500 U	3.11	<0.500 U	<0.500 U
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL - RESAMPLE	0.2000 J	4.18	9.51	2.63	<2.00 U	<0.50 U	0.1500 J	<2.00 U	<0.50 U
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	<0.500 U	0.80	<0.500 U	1.41	<0.500 U	<0.500 U	5.89	<0.500 U	<0.500 U
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	<1.250 U	0.770 J	<1.250 U	0.340 J	<1.250 U	<0.020 U	5.90	<1.250 U	<5.000 U
SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	<0.100 U	1.33	6.32	7.61	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	<2.50 U	2.80	9.79	6.14	<2.50 U	<2.50 U	<2.50 U	<2.50 U	<2.50 U
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	<1.25 U	3.08	12.94	3.58	<1.25 U	<1.25 U	<1.25 U	<1.25 U	<1.25 U
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	0.500 J	8.50	5.41	48.91	0.240 J	<0.180 U	38.62	<0.180 U	<0.180 U
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	<1.250 U	0.550 J	1.39	<2.500 U	<1.250 U	1.210 J	7.68	<1.250 U	0.520 J
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	0.65	10.47	5.90	37.38	<0.100 U	<0.100 U	44.42	<0.100 U	<0.100 U
FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	<0.500 U	<0.500 U	<0.500 U	1.57	<0.500 U	<0.500 U	<0.500 U	<0.500 U	<0.500 U
UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	<0.100 U	<0.100 U	0.400 J	6.20	<0.100 U	<0.100 U	3.82	<0.100 U	<0.100 U
BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	<0.100 U	<0.100 U	<0.100 U	0.930 J	<0.100 U	<0.100 U	0.100 J	<0.100 U	<0.100 U
THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	<0.100 U	<0.100 U	<0.100 U	0.860 J	<0.100 U	<0.100 U	0.50	<0.100 U	<0.100 U
GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	<0.100 U	<0.100 U	<0.100 U	<0.200 U	<0.100 U	<0.100 U	0.350 J	<0.100 U	<0.100 U
JETTE, JOE	8/31/2011 11:15	JETTE RO	<0.100 U	<0.100 U	<0.100 U	4.23	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	<0.100 U	<0.100 U	<0.100 U	1.82	<0.100 U	<0.100 U	0.150 J	<0.100 U	<0.100 U
SHYBA, LORI	11/14/2011 10:35	SHYBA - 256874 - RO	<0.100 U	<0.100 U	<0.100 U	3.88	<0.100 U	<0.100 U	11.24	<0.100 U	<0.100 U
MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	<0.100 U	<0.100 U	<0.100 U	3.56	<0.100 U	<0.100 U	<0.100 U	<0.100 U	<0.100 U
SHYBA, LORI	11/14/2011 11:06	SHYBA - 256874	0.62	9.57	5.16	54.57	<0.100 U	<0.100 U	41.23	<0.100 U	<0.100 U
PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	<0.2	3.92	8.30	3.00	<0.2	<0.2	<0.5	<0.2	<0.2
PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	<0.2	24.20	3.98	3.06	<0.2	<0.2	<0.5	<0.2	<0.2

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Site Name	Sample Date	Field Number	Nb (ug/l)	Nd (ug/l)	Pd (ug/l)	Pr (ug/l)	Rb (ug/l)	Th (ug/l)	W (ug/l)	Procedure
ANDREOZZI, BOB	5/24/2011 10:59	51861 ANDREOZZI	<1.25 U	<1.25 U	0.4600 J	<1.25 U	1.1600 J	<1.25 U	<1.25 U	TOTAL RECOVERABLE
GALLE TYKE	5/24/2011 15:25	TYKE GALLE- RESAMPLE	<1.00 U	<1.00 U	<1.00 U	<1.00 U	1.48	<1.00 U	<1.00 U	TOTAL RECOVERABLE
GALLE TYKE	5/24/2011 15:25	TYKE GALLE - RESAMPLE	<2.00 U	<2.00 U	<0.50 U	<0.50 U	1.50	<0.50 U	<0.50 U	DISSOLVED
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART RESAMPLE	<1.25 U	<1.25 U	<1.25 U	<1.25 U	5.54	<1.25 U	<1.25 U	TOTAL RECOVERABLE
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	<2.00 U	<2.00 U	<0.50 U	<0.50 U	0.71	<0.50 U	0.2000 J	DISSOLVED
STEWART JOHN & PHYLLIS	5/18/2011 14:22	STEWART-RESAMPLE	<2.50 U	<2.50 U	<2.50 U	<2.50 U	5.00	<2.50 U	<2.50 U	DISSOLVED
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	<2.00 U	<2.00 U	<0.50 U	<0.50 U	12.69	<0.50 U	<0.50 U	DISSOLVED
GALLE CLIFF JR	5/24/2011 14:55	CLIFF GALLE- RESAMPLE	<1.25 U	<1.25 U	<1.25 U	<1.25 U	0.6900 J	<1.25 U	<1.25 U	TOTAL RECOVERABLE
GALLE JEFF AND ANGELLA	5/24/2011 16:30	JEFF GALLE- RESAMPLE	<1.25 U	<1.25 U	0.28	<1.25 U	13.74	<1.25 U	<1.25 U	TOTAL RECOVERABLE
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	<1.25 U	<1.25 U	0.2600 J	<1.25 U	12.88	<1.25 U	16.62	TOTAL RECOVERABLE
FAUGHT, STANLEY	5/18/2011 11:48	FAUGHT 51327	<0.50 U	<0.50 U	<0.50 U	<0.50 U	10.90	<0.50 U	15.89	DISSOLVED
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	<0.500 U	<0.500 U	<0.500 U	<0.500 U	8.58	<0.500 U	63.86	DISSOLVED
SWANSON, MARK	7/7/2011 10:20	5330 SWANSON	<1.250 U	<0.050 U	<1.250 U	<1.250 U	9.06	<1.250 U	54.78	TOTAL RECOVERABLE
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	<0.250 U	<0.250 U	<0.250 U	<0.250 U	5.20	<0.250 U	<0.250 U	TOTAL RECOVERABLE
CHARLENE STOCK JONES	8/3/2011 13:55	STOCK JONES RESAMPLE	<0.100 U	<0.100 U	<0.100 U	<0.100 U	6.08	<0.100 U	<0.100 U	DISSOLVED
SALLE, RON	5/24/2011 11:42	SALLE 258964	<1.25 U	<1.25 U	0.72	<1.25 U	34.09	<1.25 U	5.81	TOTAL RECOVERABLE
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENICH-252926	<0.50 U	<0.50 U	0.1600 J	<0.50 U	5.16	<0.50 U	18.87	DISSOLVED
SALLE, RON	5/24/2011 11:42	SALLE 258964	<0.50 U	<0.50 U	0.67	<0.50 U	32.14	<0.10 U	5.54	DISSOLVED
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY-254433	<1.25 U	<1.25 U	<1.25 U	<1.25 U	2.82	<1.25 U	5.19	TOTAL RECOVERABLE
JENRICH, TROY AND TRACY	5/18/2011 12:42	JENRICH-252926	<1.25 U	<1.25 U	<1.25 U	<1.25 U	6.67	<1.25 U	19.29	TOTAL RECOVERABLE
BAILEY, DON & DEBRAH	5/19/2011 10:24	BAILEY 254433	<0.50 U	<0.50 U	<0.50 U	<0.50 U	2.95	<0.50 U	5.98	DISSOLVED
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE-RESAMPLE	<2.00 U	<2.00 U	<0.50 U	<0.50 U	7.78	<0.50 U	47.12	DISSOLVED
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	<0.500 U	<0.500 U	0.70	<0.500 U	13.45	<0.500 U	3.94	DISSOLVED
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER 53591	<1.3	<0.5	<1.3	<0.5	6.51	<0.5	1.21	TOTAL RECOVERABLE
KEELE, DON - SHOP	6/1/2011 10:40	DON KEELE- RESAMPLE	<1.00 U	1.36	0.3000 J	0.3200 J	11.09	1.07	44.40	TOTAL RECOVERABLE
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL- RESAMPLE	<1.00 U	<1.00 U	<1.00 U	<1.00 U	6.84	<1.00 U	28.85	TOTAL RECOVERABLE
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	<1.250 U	<0.050 U	1.54	<1.250 U	10.94	<1.250 U	3.99	TOTAL RECOVERABLE
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	<2.50 U	<2.50 U	<2.50 U	<2.50 U	2.2900 J	<2.50 U	86.73	DISSOLVED
MACCIOLI JOE & PATTI	5/19/2011 14:50	MACCIOLI-RESAMPLE	<1.25 U	<1.25 U	<1.25 U	<1.25 U	2.57	<1.25 U	88.10	TOTAL RECOVERABLE
RUEGAMER, ANTHONY	2/9/2011 15:27	RUEGAMER-53591	<0.5	<0.2	<0.5	<0.2	5.99	<0.2	0.92	DISSOLVED
CONNORS KEN	7/1/2011 11:45	CONNORS RESAMPLE	<0.500 U	<0.500 U	1.53	<0.500 U	9.09	<0.500 U	4.21	DISSOLVED
SCHERMAN, RUSS- RENTAL	6/1/2011 11:52	SCHERMAN RENTAL - RESAMPLE	<2.00 U	<2.00 U	<0.50 U	<0.50 U	7.07	<0.50 U	31.85	DISSOLVED
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	<0.500 U	<0.500 U	1.46	<0.500 U	14.08	<0.500 U	4.29	DISSOLVED
LUSSY JERRY	7/1/2011 10:30	LUSSY RESAMPLE	<1.250 U	<0.050 U	0.720 J	<1.250 U	16.08	<1.250 U	3.76	TOTAL RECOVERABLE
SMITH MONTY & JULIE	11/18/2011 11:40	MONTE SMITH 256447	<0.100 U	<0.100 U	<0.100 U	<0.100 U	9.18	<0.100 U	<0.100 U	DISSOLVED
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	<2.50 U	<2.50 U	<2.50 U	<2.50 U	5.72	<2.50 U	230.15	DISSOLVED
SCHERMAN, RUSS	5/19/2011 11:40	SCHERMAN-RESAMPLE	<1.25 U	<1.25 U	<1.25 U	<1.25 U	6.37	<1.25 U	196.12	TOTAL RECOVERABLE
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	<0.180 U	<0.180 U	1.07	<0.180 U	13.58	<0.180 U	1.53	TOTAL RECOVERABLE
WALTER RICHARD	6/22/2011 14:45	WALTER RESAMPLE	<1.250 U	<1.250 U	1.41	<1.250 U	14.93	<1.250 U	5.03	TOTAL RECOVERABLE
SHYBA, LORI	8/2/2011 11:25	SHYBA RESAMPLE	<0.100 U	<0.100 U	0.61	<0.100 U	14.89	<0.100 U	1.88	DISSOLVED
FRESH, JEAN AND ELDEN	7/18/2011 10:56	51333-FRESH	<0.500 U	<0.500 U	<0.500 U	<0.500 U	0.59	<0.500 U	1.94	DISSOLVED
UPRIGHT, KELLY	8/31/2011 8:15	UPRIGHT RO	<0.100 U	<0.100 U	<0.100 U	<0.100 U	6.80	<0.100 U	<0.100 U	DISSOLVED
BOITNOTT, STEVE	8/10/2011 11:10	158784- BOITNOTT	<0.100 U	<0.100 U	<0.100 U	<0.100 U	1.88	<0.100 U	<0.100 U	DISSOLVED
THOMPSON, DAN & TAMMY	8/31/2011 14:30	THOMPSON RO	<0.100 U	<0.100 U	<0.100 U	<0.100 U	1.33	<0.100 U	<0.100 U	DISSOLVED
GRAVES RUSSEL	8/29/2011 16:30	GRAVES RO	<0.100 U	<0.100 U	<0.100 U	<0.100 U	5.83	<0.100 U	<0.100 U	DISSOLVED
JETTE, JOE	8/31/2011 11:15	JETTE RO	<0.100 U	<0.100 U	<0.100 U	<0.100 U	0.190 J	<0.100 U	<0.100 U	DISSOLVED
BRACKETT, JOSH	8/9/2011 10:25	258258- BRACKETT	<0.100 U	<0.100 U	<0.100 U	<0.100 U	2.35	<0.100 U	<0.100 U	DISSOLVED
SHYBA, LORI	11/14/2011 10:35	SHYBA - 256874 - RO	<0.100 U	<0.100 U	<0.100 U	<0.100 U	3.96	<0.100 U	<0.100 U	DISSOLVED
MACCIOLI JOE & PATTI	8/17/2011 15:22	MACCIOLI- RO	<0.100 U	<0.100 U	<0.100 U	<0.100 U	0.290 J	<0.100 U	0.200 J	DISSOLVED
SHYBA, LORI	11/14/2011 11:06	SHYBA - 256874	<0.100 U	<0.100 U	0.170 J	<0.100 U	13.10	<0.100 U	1.56	DISSOLVED
PETERSON, HENRY (HANK)	3/18/2011 15:15	FAIRMONT RANCH 144729	<0.5	<0.2	<0.5	<0.2	13.20	<0.2	5.76	DISSOLVED
PETERSON, HENRY (HANK)	3/17/2011 13:15	PETERSON STOCK 144730	<0.5	<0.2	<0.5	<0.2	9.96	<0.2	1.03	DISSOLVED

Appendix F: Domestic Well Confirmation Water Sample Results, 2011

Ground-Water Information Center Water Quality Report

Site Name: CHOQUETTE, WALTER

Report Date: 12/6/2012

Compare to Water Quality Standards

Location Information

Sample Id/Site Id:	201561 / 263447	Sample Date:	4/11/2012 1:40:00 PM
Location (TRS):	04N 09W 31 DCCA	Agency/Sampler:	MBMG / SMITH, M. GARRETT
Latitude/Longitude:	46° 2' 58" N 112° 45' 55" W	Field Number:	CHOQUETTE- 263447
Datum:	NAD83	Lab Date:	6/18/2012 6:49:41 AM
Altitude:	5116	Lab/Analyst:	MBMG / MCGRATH, STEVE
County/State:	SILVER BOW / MT	Sample Method/Handling:	PUMPED / ru:1 ra:0 fu:3 fa:2
Site Type:	WELL	Procedure Type:	**DISSOLVED**
Geology:		Total Depth (ft):	110
USGS 7.5' Quad:	OPPORTUNITY	SWL-MP (ft):	59.15
PWS Id:		Depth Water Enters (ft):	90
Project:	ARWWS-DOM, ARWWS-ARSENICSTUDY		

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	33.910	1.692	Bicarbonate (HCO3)	123.260	2.020
Magnesium (Mg)	11.860	0.976	Carbonate (CO3)	0.000	0.000
Sodium (Na)	25.380	1.104	Chloride (Cl)	23.390	0.660
Potassium (K)	6.160	0.158	Sulfate (SO4)	45.540	0.949
Iron (Fe)	0.005 J	0.000	Nitrate (as N)	2.020	0.144
Manganese (Mn)	<0.002 U	0.000	Fluoride (F)	0.480	0.025
Silica (SiO2)	51.960		Orthophosphate (as P)	<0.020 U	0.000
Total Cations		3.943	**Total Anions**		3.798

Trace Element Results (µg/L)

Aluminum (Al):	15.060	Cesium (Cs):	<0.100 U	Molybdenum (Mo):	2.400	Strontium (Sr):	346.580
Antimony (Sb):	<0.100 U	Chromium (Cr):	0.650	Nickel (Ni):	0.560	Thallium (Tl):	<0.100 U
Arsenic (As):	15.600	Cobalt (Co):	<0.100 U	Niobium (Nb):	<0.100 U	Thorium (Th):	<0.100 U
Barium (Ba):	56.990	Copper (Cu):	0.530	Neodymium (Nd):	<0.100 U	Tin (Sn):	<0.100 U
Beryllium (Be):	<0.100 U	Gallium (Ga):	<0.100 U	Palladium (Pd):	<0.100 U	Titanium (Ti):	0.380 J
Boron (B):	38.040	Lanthanum (La):	<0.100 U	Praseodymium (Pr):	<0.100 U	Tungsten (W):	0.880
Bromide (Br):	209.000	Lead (Pb):	0.080 J	Rubidium (Rb):	8.470	Uranium (U):	1.380
Cadmium (Cd):	<0.100 U	Lithium (Li):	10.760	Silver (Ag):	<0.100 U	Vanadium (V):	19.210
Cerium (Ce):	<0.100 U	Mercury (Hg):	NR	Selenium (Se):	1.290	Zinc (Zn):	11.260
						Zirconium (Zr):	<0.100 U

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	260.39	Field Hardness as CaCO3 (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	322.8	Hardness as CaCO3:	133.49	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	382.5	Field Alkalinity as CaCO3 (mg/L):	111	PCP (µg/L):	NR
Lab Conductivity (µmhos):	435	Alkalinity as CaCO3 (mg/L):	100.88	Phosphate, TD (mg/L as P):	<0.030 U
Field pH:	7.59	Ryznar Stability Index:	8.192	Field Nitrate (mg/L):	NR
Lab pH:	7.74	Sodium Adsorption Ratio:	0.9416	Field Dissolved O2 (mg/L):	9.570
Water Temp (°C):	11.64	Langlier Saturation Index:	-0.226	Field Chloride (mg/L):	NR
Air Temp (°C):	17.7	Nitrite (mg/L as N):	<0.010 U	Field Redox (mV):	295
Nitrate + Nitrite (mg/L as N)	1.940	Hydroxide (mg/L as OH):	0.000	Lab, Dissolved Organic Carbon (mg/L):	0.650
Total Kjeldahl Nitrogen (mg/L as N)	NR	Lab, Dissolved Inorganic Carbon (mg/L):	NR	Lab, Total Organic Carbon (mg/L):	NR
Total Nitrogen (mg/L as N)	1.940	Acidity to 4.5	NR	Acidity to 8.3	NR
As(III) (ug/L)	<0.250 U	As(V) (ug/L)	19.240		

Sample Condition: CLEAR

Field Remarks:

Lab Remarks:

Notes

Explanation: **mg/L** = milligrams per Liter; **µg/L** = micrograms per Liter; **ft** = feet; **NR** = No Reading in GWIC

Qualifiers: **A** = Hydride atomic absorption; **E** = Estimated due to interference; **H** = Exceeded holding time; **J** = Estimated quantity above detection limit but below reporting limit; **K** = Na+K combined; **N** = Spiked sample recovery not within control limits; **P** = Preserved sample; **S** =

Method of standard additions; **U** = Undetected quantity below detection limit; ***** = Duplicate analysis not within control limits; ****** = Sum of Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO3, CO3, SO4, Cl, SiO2, NO3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Ground-Water Information Center Water Quality Report

Site Name: SCHERMAN, RUSS RENTAL - REPLACEMENT WELL

Report Date: 12/6/2012

Compare to Water Quality Standards

Location Information

Sample Id/Site Id:	201702 / 263138	Sample Date:	5/14/2012 3:00:00 PM
Location (TRS):	04N 10W 36 ABCD	Agency/Sampler:	MBMG / DUAIME, TED
Latitude/Longitude:	46° 3' 35" N 112° 47' 7" W	Field Number:	SCHERM-RENTAL
Datum:	NAD83	Lab Date:	8/14/2012 12:12:30 PM
Altitude:	5066	Lab/Analyst:	MBMG / MCGRATH, STEVE
County/State:	DEER LODGE / MT	Sample Method/Handling:	PUMPED / ru:1 ra:0 fu:1 fa:1
Site Type:	WELL	Procedure Type:	**DISSOLVED**
Geology:		Total Depth (ft):	100
USGS 7.5' Quad:	OPPORTUNITY	SWL-MP (ft):	65.24
PWS Id:		Depth Water Enters (ft):	78
Project:	ARWWS-DOM		

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	41.220	2.057	Bicarbonate (HCO3)	280.250	4.593
Magnesium (Mg)	12.980	1.068	Carbonate (CO3)	0.000	0.000
Sodium (Na)	77.520	3.372	Chloride (Cl)	12.800	0.361
Potassium (K)	7.640	0.195	Sulfate (SO4)	53.080	1.106
Iron (Fe)	0.046	0.002	Nitrate (as N)	3.550	0.253
Manganese (Mn)	0.085	0.003	Fluoride (F)	2.260	0.119
Silica (SiO2)	47.840		Orthophosphate (as P)	0.060 J	0.000
Total Cations		6.720	**Total Anions**		6.432

Trace Element Results (µg/L)

Aluminum (Al):	67.230	Cesium (Cs):	1.430	Molybdenum (Mo):	7.070	Strontium (Sr):	390.030
Antimony (Sb):	0.350 J	Chromium (Cr):	0.180 J	Nickel (Ni):	1.820	Thallium (Tl):	<0.100 U
Arsenic (As):	9.560	Cobalt (Co):	0.430 J	Niobium (Nb):	<0.100 U	Thorium (Th):	<0.100 U
Barium (Ba):	59.850	Copper (Cu):	1.410	Neodymium (Nd):	<0.100 U	Tin (Sn):	<0.100 U
Beryllium (Be):	<0.100 U	Gallium (Ga):	<0.100 U	Palladium (Pd):	0.150 J	Titanium (Ti):	3.270
Boron (B):	70.990	Lanthanum (La):	<0.100 U	Praseodymium (Pr):	<0.100 U	Tungsten (W):	21.690
Bromide (Br):	109.000	Lead (Pb):	<0.040 U	Rubidium (Rb):	5.070	Uranium (U):	5.940
Cadmium (Cd):	<0.100 U	Lithium (Li):	89.220	Silver (Ag):	<0.100 U	Vanadium (V):	9.800
Cerium (Ce):	0.180 J	Mercury (Hg):	NR	Selenium (Se):	0.190 J	Zinc (Zn):	3.390
						Zirconium (Zr):	0.130 J

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	398.2	Field Hardness as CaCO3 (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	540.27	Hardness as CaCO3:	156.35	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	615	Field Alkalinity as CaCO3 (mg/L):	NR	PCP (µg/L):	NR
Lab Conductivity (µmhos):	675.6	Alkalinity as CaCO3 (mg/L):	229.65	Phosphate, TD (mg/L as P):	0.050 J
Field pH:	6.46	Ryznar Stability Index:	8.028	Field Nitrate (mg/L):	NR
Lab pH:	7.02	Sodium Adsorption Ratio:	2.7144	Field Dissolved O2 (mg/L):	3.600
Water Temp (°C):	12.1	Langlier Saturation Index:	-0.504	Field Chloride (mg/L):	NR
Air Temp (°C):	NR	Nitrite (mg/L as N):	0.080	Field Redox (mV):	336
Nitrate + Nitrite (mg/L as N)	NR	Hydroxide (mg/L as OH):	0.000	Lab, Dissolved Organic Carbon (mg/L):	NR
Total Kjeldahl Nitrogen (mg/L as N)	NR	Lab, Dissolved Inorganic Carbon (mg/L):	NR	Lab, Total Organic Carbon (mg/L):	NR
Total Nitrogen (mg/L as N)	NR	Acidity to 4.5	NR	Acidity to 8.3	NR
As(III) (ug/L)	NR	As(V) (ug/L)	NR		

Sample Condition: CLOUDY

Field Remarks: PUMPED 60 MINUTES PRIOR TO SAMPLING

Lab Remarks:

Notes

Explanation: **mg/L** = milligrams per Liter; **µg/L** = micrograms per Liter; **ft** = feet; **NR** = No Reading in GWIC

Qualifiers: **A** = Hydride atomic absorption; **E** = Estimated due to interference; **H** = Exceeded holding time; **J** = Estimated quantity above detection limit but below reporting limit; **K** = Na+K combined; **N** = Spiked sample recovery not within control limits; **P** = Preserved sample; **S** = Method of standard additions; **U** = Undetected quantity below detection limit; ***** = Duplicate analysis not within control limits; ****** = Sum of

Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO3, CO3, SO4, Cl, SiO2, NO3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Ground-Water Information Center Water Quality Report

Site Name: SCHERMAN, RUSS - REPLACEMENT WELL

Report Date: 12/6/2012

Compare to Water Quality Standards

Location Information

Sample Id/Site Id:	201559 / 264405	Sample Date:	4/11/2012 10:50:00 AM
Location (TRS):	04N 10W 36 ABB	Agency/Sampler:	MBMG / SMITH, M. GARRETT
Latitude/Longitude:	46° 3' 42" N 112° 47' 7" W	Field Number:	SCHERMAN- 264405
Datum:	NAD83	Lab Date:	6/18/2012 6:49:41 AM
Altitude:	5060	Lab/Analyst:	MBMG / MCGRATH, STEVE
County/State:	DEER LODGE / MT	Sample Method/Handling:	PUMPED / ru:1 ra:0 fu:3 fa:2
Site Type:	WELL	Procedure Type:	**DISSOLVED**
Geology:		Total Depth (ft):	100
USGS 7.5' Quad:	OPPORTUNITY	SWL-MP (ft):	64.02
PWS Id:		Depth Water Enters (ft):	78
Project:	ARWWS-DOM, ARWWS-ARSENICSTUDY		

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	47.040	2.347	Bicarbonate (HCO3)	242.580	3.976
Magnesium (Mg)	15.340	1.262	Carbonate (CO3)	0.000	0.000
Sodium (Na)	53.000	2.306	Chloride (Cl)	13.550	0.382
Potassium (K)	6.490	0.166	Sulfate (SO4)	53.500	1.114
Iron (Fe)	0.011 J	0.000	Nitrate (as N)	3.000	0.214
Manganese (Mn)	0.004 J	0.000	Fluoride (F)	1.670	0.088
Silica (SiO2)	44.460		Orthophosphate (as P)	0.040 J	0.000
Total Cations		6.101	**Total Anions**		5.775

Trace Element Results (µg/L)

Aluminum (Al):	28.480	Cesium (Cs):	1.080	Molybdenum (Mo):	6.360	Strontium (Sr):	416.320
Antimony (Sb):	0.100 J	Chromium (Cr):	0.220 J	Nickel (Ni):	1.220	Thallium (Tl):	<0.100 U
Arsenic (As):	9.150	Cobalt (Co):	1.120	Niobium (Nb):	<0.100 U	Thorium (Th):	<0.100 U
Barium (Ba):	71.720	Copper (Cu):	0.380 J	Neodymium (Nd):	<0.100 U	Tin (Sn):	<0.100 U
Beryllium (Be):	<0.100 U	Gallium (Ga):	<0.100 U	Palladium (Pd):	<0.100 U	Titanium (Ti):	0.230 J
Boron (B):	76.700	Lanthanum (La):	<0.100 U	Praseodymium (Pr):	<0.100 U	Tungsten (W):	12.510
Bromide (Br):	115.000	Lead (Pb):	<0.040 U	Rubidium (Rb):	2.190	Uranium (U):	5.500
Cadmium (Cd):	<0.100 U	Lithium (Li):	56.650	Silver (Ag):	<0.100 U	Vanadium (V):	18.530
Cerium (Ce):	<0.100 U	Mercury (Hg):	NR	Selenium (Se):	0.790	Zinc (Zn):	2.540
						Zirconium (Zr):	<0.100 U

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	358.12	Field Hardness as CaCO3 (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	481.41	Hardness as CaCO3:	180.6	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	562.3	Field Alkalinity as CaCO3 (mg/L):	220	PCP (µg/L):	NR
Lab Conductivity (µmhos):	652.2	Alkalinity as CaCO3 (mg/L):	199.3	Phosphate, TD (mg/L as P):	0.060 J
Field pH:	6.63	Ryznar Stability Index:	7.976	Field Nitrate (mg/L):	NR
Lab pH:	7.08	Sodium Adsorption Ratio:	1.7161	Field Dissolved O2 (mg/L):	4.900
Water Temp (°C):	10.73	Langlier Saturation Index:	-0.448	Field Chloride (mg/L):	NR
Air Temp (°C):	17.7	Nitrite (mg/L as N):	<0.010 U	Field Redox (mV):	298
Nitrate + Nitrite (mg/L as N)	2.890	Hydroxide (mg/L as OH):	0.000	Lab, Dissolved Organic Carbon (mg/L):	0.880
Total Kjeldahl Nitrogen (mg/L as N)	NR	Lab, Dissolved Inorganic Carbon (mg/L):	NR	Lab, Total Organic Carbon (mg/L):	NR
Total Nitrogen (mg/L as N)	2.940	Acidity to 4.5	NR	Acidity to 8.3	NR
As(III) (ug/L)	<0.250 U	As(V) (ug/L)	10.680		

Sample Condition: CLEAR

Field Remarks:

Lab Remarks:

Notes

Explanation: **mg/L** = milligrams per Liter; **µg/L** = micrograms per Liter; **ft** = feet; **NR** = No Reading in GWIC

Qualifiers: **A** = Hydride atomic absorption; **E** = Estimated due to interference; **H** = Exceeded holding time; **J** = Estimated quantity above detection limit but below reporting limit; **K** = Na+K combined; **N** = Spiked sample recovery not within control limits; **P** = Preserved sample; **S** =

Method of standard additions; **U** = Undetected quantity below detection limit; ***** = Duplicate analysis not within control limits; ****** = Sum of Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO3, CO3, SO4, Cl, SiO2, NO3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Ground-Water Information Center Water Quality Report

Site Name: WALTER, RICHARD

Report Date: 12/6/2012

Compare to Water Quality Standards

Location Information

Sample Id/Site Id:	200742 / 262859	Sample Date:	9/14/2011 3:00:00 PM
Location (TRS):	05N 11W 29 DAD	Agency/Sampler:	MBMG / SMITH, M. GARRETT
Latitude/Longitude:	46° 9' 18" N 112° 59' 44" W	Field Number:	WALTER- 98
Datum:	NAD83	Lab Date:	12/19/2011 7:45:53 AM
Altitude:		Lab/Analyst:	MBMG / MCGRATH, STEVE
County/State:	DEER LODGE / MT	Sample Method/Handling:	PUMPED / ru:1 ra:0 fu:1 fa:1
Site Type:	WELL	Procedure Type:	**DISSOLVED**
Geology:		Total Depth (ft):	98
USGS 7.5' Quad:		SWL-MP (ft):	10.86
PWS Id:		Depth Water Enters (ft):	68
Project:	ARWWS-DOM		

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	65.620	3.274	Bicarbonate (HCO3)	240.160	3.936
Magnesium (Mg)	13.440	1.106	Carbonate (CO3)	0.000	0.000
Sodium (Na)	86.370	3.757	Chloride (Cl)	8.000	0.226
Potassium (K)	8.150	0.208	Sulfate (SO4)	211.600	4.408
Iron (Fe)	1.961	0.070	Nitrate (as N)	0.070	0.005
Manganese (Mn)	0.359	0.013	Fluoride (F)	1.450	0.076
Silica (SiO2)	7.210		Orthophosphate (as P)	<0.020 U	0.000
Total Cations		8.528	**Total Anions**		8.651

Trace Element Results (µg/L)

Aluminum (Al):	218.150	Cesium (Cs):	1.840	Molybdenum (Mo):	9.830	Strontium (Sr):	3,032.790
Antimony (Sb):	0.860	Chromium (Cr):	0.490 J	Nickel (Ni):	4.060	Thallium (Tl):	<0.100 U
Arsenic (As):	2.060	Cobalt (Co):	2.110	Niobium (Nb):	<0.100 U	Thorium (Th):	0.190 J
Barium (Ba):	135.740	Copper (Cu):	1.140	Neodymium (Nd):	0.610	Tin (Sn):	0.810
Beryllium (Be):	<0.100 U	Gallium (Ga):	<0.100 U	Palladium (Pd):	0.870	Titanium (Ti):	5.620
Boron (B):	57.600	Lanthanum (La):	0.530	Praseodymium (Pr):	0.130 J	Tungsten (W):	0.590
Bromide (Br):	81.000	Lead (Pb):	0.510	Rubidium (Rb):	7.680	Uranium (U):	1.550
Cadmium (Cd):	<0.100 U	Lithium (Li):	195.940	Silver (Ag):	<0.100 U	Vanadium (V):	0.430 J
Cerium (Ce):	1.160	Mercury (Hg):	NR	Selenium (Se):	0.360 J	Zinc (Zn):	1.620
						Zirconium (Zr):	0.200 J

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	521.51	Field Hardness as CaCO3 (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	643.28	Hardness as CaCO3:	219.17	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	702.4	Field Alkalinity as CaCO3 (mg/L):	NR	PCP (µg/L):	NR
Lab Conductivity (µmhos):	833	Alkalinity as CaCO3 (mg/L):	196.84	Phosphate, TD (mg/L as P):	<0.010 U
Field pH:	7.32	Ryznar Stability Index:	6.958	Field Nitrate (mg/L):	NR
Lab pH:	7.82	Sodium Adsorption Ratio:	2.5278	Field Dissolved O2 (mg/L):	4.690
Water Temp (°C):	14.45	Langlier Saturation Index:	0.431	Field Chloride (mg/L):	NR
Air Temp (°C):	NR	Nitrite (mg/L as N):	<0.010 U	Field Redox (mV):	430
Nitrate + Nitrite (mg/L as N)	NR	Hydroxide (mg/L as OH):	0.000	Lab, Dissolved Organic Carbon (mg/L):	NR
Total Kjeldahl Nitrogen (mg/L as N)	NR	Lab, Dissolved Inorganic Carbon (mg/L):	NR	Lab, Total Organic Carbon (mg/L):	NR
Total Nitrogen (mg/L as N)	NR	Acidity to 4.5	NR	Acidity to 8.3	NR
As(III) (ug/L)	NR	As(V) (ug/L)	NR		

Sample Condition:

Field Remarks:

Lab Remarks:

Notes

Explanation: **mg/L** = milligrams per Liter; **µg/L** = micrograms per Liter; **ft** = feet; **NR** = No Reading in GWIC

Qualifiers: **A** = Hydride atomic absorption; **E** = Estimated due to interference; **H** = Exceeded holding time; **J** = Estimated quantity above detection limit but below reporting limit; **K** = Na+K combined; **N** = Spiked sample recovery not within control limits; **P** = Preserved sample; **S** = Method of standard additions; **U** = Undetected quantity below detection limit; ***** = Duplicate analysis not within control limits; ****** = Sum of

Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO3, CO3, SO4, Cl, SiO2, NO3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Ground-Water Information Center Water Quality Report

Site Name: WALTER, RICHARD

Report Date: 12/6/2012

Compare to Water Quality Standards

Location Information

Sample Id/Site Id:	200744 / 262859	Sample Date:	9/14/2011 3:00:00 PM
Location (TRS):	05N 11W 29 DAD	Agency/Sampler:	MBMG / SMITH, M. GARRETT
Latitude/Longitude:	46° 9' 18" N 112° 59' 44" W	Field Number:	WALTER- 98
Datum:	NAD83	Lab Date:	12/19/2011 7:45:55 AM
Altitude:		Lab/Analyst:	MBMG / MCGRATH, STEVE
County/State:	DEER LODGE / MT	Sample Method/Handling:	PUMPED / ru:0 ra:1 fu:0 fa:0
Site Type:	WELL	Procedure Type:	**TOTAL RECOVERABLE**
Geology:		Total Depth (ft):	98
USGS 7.5' Quad:		SWL-MP (ft):	10.86
PWS Id:		Depth Water Enters (ft):	68
Project:	ARWWS-DOM		

Major Ion Results

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca)	70.610	3.523	Bicarbonate (HCO3)	NR	0.000
Magnesium (Mg)	14.950	1.230	Carbonate (CO3)	NR	0.000
Sodium (Na)	82.320	3.581	Chloride (Cl)	NR	0.000
Potassium (K)	10.770	0.275	Sulfate (SO4)	NR	0.000
Iron (Fe)	48.235	1.727	Nitrate (as N)	NR	0.000
Manganese (Mn)	0.671	0.024	Fluoride (F)	NR	0.000
Silica (SiO2)	NR		Orthophosphate (as P)	NR	0.000
Total Cations		11.039	**Total Anions**		0.000

Trace Element Results (µg/L)

Aluminum (Al):	5,421.630	Cesium (Cs):	24.820	Molybdenum (Mo):	13.620	Strontium (Sr):	3,188.710
Antimony (Sb):	0.940 J	Chromium (Cr):	12.210	Nickel (Ni):	16.470	Thallium (Tl):	<0.250 U
Arsenic (As):	10.810	Cobalt (Co):	10.220	Niobium (Nb):	0.530 J	Thorium (Th):	4.850
Barium (Ba):	306.440	Copper (Cu):	23.630	Neodymium (Nd):	15.870	Tin (Sn):	0.440 J
Beryllium (Be):	0.910 J	Gallium (Ga):	2.120	Palladium (Pd):	1.900	Titanium (Ti):	88.690
Boron (B):	NR	Lanthanum (La):	14.450	Praseodymium (Pr):	3.630	Tungsten (W):	5.740
Bromide (Br):	NR	Lead (Pb):	15.190	Rubidium (Rb):	29.030	Uranium (U):	2.000
Cadmium (Cd):	<0.250 U	Lithium (Li):	204.160	Silver (Ag):	<0.250 U	Vanadium (V):	10.710
Cerium (Ce):	31.430	Mercury (Hg):	NR	Selenium (Se):	0.340 J	Zinc (Zn):	30.650
						Zirconium (Zr):	2.100

Field Chemistry and Other Analytical Results

**Total Dissolved Solids (mg/L):	NR	Field Hardness as CaCO3 (mg/L):	NR	Ammonia (mg/L):	NR
**Sum of Diss. Constituents (mg/L):	NR	Hardness as CaCO3:	237.85	T.P. Hydrocarbons (µg/L):	NR
Field Conductivity (µmhos):	702.4	Field Alkalinity as CaCO3 (mg/L):	NR	PCP (µg/L):	NR
Lab Conductivity (µmhos):	NR	Alkalinity as CaCO3 (mg/L):	NR	Phosphate, TD (mg/L as P):	NR
Field pH:	7.32	Ryznar Stability Index:	19.202	Field Nitrate (mg/L):	NR
Lab pH:	NR	Sodium Adsorption Ratio:	2.3137	Field Dissolved O2 (mg/L):	4.690
Water Temp (°C):	14.45	Langlier Saturation Index:	-9.601	Field Chloride (mg/L):	NR
Air Temp (°C):	NR	Nitrite (mg/L as N):	NR	Field Redox (mV):	430
Nitrate + Nitrite (mg/L as N)	NR	Hydroxide (mg/L as OH):	NR	Lab, Dissolved Organic Carbon (mg/L):	NR
Total Kjeldahl Nitrogen (mg/L as N)	NR	Lab, Dissolved Inorganic Carbon (mg/L):	NR	Lab, Total Organic Carbon (mg/L):	NR
Total Nitrogen (mg/L as N)	NR	Acidity to 4.5	NR	Acidity to 8.3	NR
As(III) (ug/L)	NR	As(V) (ug/L)	NR		

Sample Condition:

Field Remarks:

Lab Remarks:

Notes

Explanation: **mg/L** = milligrams per Liter; **µg/L** = micrograms per Liter; **ft** = feet; **NR** = No Reading in GWIC

Qualifiers: **A** = Hydride atomic absorption; **E** = Estimated due to interference; **H** = Exceeded holding time; **J** = Estimated quantity above detection limit but below reporting limit; **K** = Na+K combined; **N** = Spiked sample recovery not within control limits; **P** = Preserved sample; **S** = Method of standard additions; **U** = Undetected quantity below detection limit; ***** = Duplicate analysis not within control limits; ****** = Sum of

Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO3, CO3, SO4, Cl, SiO2, NO3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

Appendix G: Well Logs for Replacement Domestic Wells, 2011

Site Name: CHOQUETTE, WALTER
GWIC Id: 263447

Section 1: Well Owner

Owner Name		
WALTER CHOQUETTE		
Mailing Address		
3600 FAIRMONT RD.		
City	**State**	**Zip Code**
GREGSON	MT	59711

Section 2: Location

Township	Range	Section	Quarter Sections
04N	09W	31	NE¼ SW¼ SW¼ SE¼
County			**Geocode**
SILVER BOW			01128831101010000
Latitude	**Longitude**	**Geomethod**	**Datum**
46.049518	112.765504	NAV-GPS	NAD83
Ground Surface Altitude		**Method**	**Datum**	**Date**
5116		NAV-GPS	NAVD88	10/31/2011
Addition			**Block**	**Lot**

Section 3: Proposed Use of Water
DOMESTIC (1)

Section 4: Type of Work
Drilling Method: ROTARY

Section 5: Well Completion Date
Date well completed: Friday, October 14, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	110	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	78	8	0.25		WELDED	STEEL
10	110	4			THREADED	PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
90	110	4		.020	SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
10	85	BENTONITE CHIPS	Y
85	100	10-20 GRAVEL	

Section 7: Well Test Data

Total Depth: 110
Static Water Level: 35
Water Temperature:

Air Test *

50 gpm with drill stem set at 80 feet for 1 hours.
Time of recovery 1 hours.
Recovery water level 35 feet.
Pumping water level feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	4	TOPSOIL
4	20	HARD VOLCANIC ROCK, GREY BLACK
20	25	VOLCANIC ROCK BUT FINER
25	31	SIMILAR FINES
31	47	VOLCANICS RED/BROWN
47	51	VOLCANICS TAN/BROWN
51	53	VOLCANICS RED/BROWN
53	60	VOLCANICS RED/BROWN/SANDY
60	80	ROUNDED SMALL GRAVELS AND WITH STRINGERS OF BROWN CLAY
80	100	SAND AND GRAVEL
100	110	SAND AND GRAVEL WITH QUARTZ

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: BILL MAXWELL
Company: DIAMOND M DRILLING INC
License No: WWC-597
Date Completed: 10/14/2011

Site Name: SCHERMAN, RUSS RENTAL - REPLACEMENT WELL
GWIC Id: 263138

Section 1: Well Owner

Owner Name		
SCHERMAN, RUSS		
Mailing Address		
3576 BOSSARD RD		
City	**State**	**Zip Code**
ANACONDA	MT	59711

Section 2: Location

Township	Range	Section	Quarter Sections
04N	10W	36	SE¼ SW¼ NW¼ NE¼
County			**Geocode**
DEER LODGE			30128636102040000
Latitude	**Longitude**	**Geomethod**	**Datum**
46.059927	112.785347	NAV-GPS	NAD83
Ground Surface Altitude		**Method**	**Datum**	**Date**
5066		NAV-GPS	NAVD88	9/30/2011
Addition		**Block**	**Lot**

Section 3: Proposed Use of Water
DOMESTIC (1)

Section 4: Type of Work
Drilling Method: ROTARY

Section 5: Well Completion Date
Date well completed: Friday, September 23, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	98	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	60	8	0.25		WELDED	STEEL
20	98	4			THREADED	PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
78	98	4		.020	SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
10	68	BENTONITE CHIPS	Y
68	98	10-20 GRAVEL	

Section 7: Well Test Data

Total Depth: 100
Static Water Level: 63.6
Water Temperature:

Air Test *

15 gpm with drill stem set at 90 feet for 1 hours.
Time of recovery 1 hours.
Recovery water level 68 feet.
Pumping water level feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	10	TOPSOIL-SANDS-MIXED GRAVELS
10	12	BOULDERS
12	15	BROWN SAND
15	25	SAND, GRAVEL SOME CLAY
25	35	CLAYBOUND SAND AND GRAVEL
35	40	BROWN CLAY
40	50	CLAYBOUND GRAVEL
50	58	SAND AND GRAVEL
58	76	CLAYBOUND SAND AND GRAVEL
76	99	SAND AND GRAVEL WITH SOME CLAY

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: BILL MAXWELL
Company: DIAMOND M DRILLING INC
License No: WWC-597
Date Completed: 9/23/2011

Site Name: SCHERMAN, RUSS - REPLACEMENT WELL
GWIC Id: 264405

Section 1: Well Owner

Owner Name		
RUSS SCHERMAN		
Mailing Address		
186 SMELTER VIEW DR.		
City	**State**	**Zip Code**
ANACONDA	MT	59711

Section 2: Location

Township	Range	Section	Quarter Sections
04N	10W	36	NW¼ NW¼ NE¼
County		**Geocode**	
DEER LODGE		30128636103030000	
Latitude	**Longitude**	**Geomethod**	**Datum**
46.061911	112.785442	NAV-GPS	NAD83
Ground Surface Altitude	**Method**	**Datum**	**Date**
5060	NAV-GPS	NAVD88	12/21/2011
Addition		**Block**	**Lot**

Section 3: Proposed Use of Water
DOMESTIC (1)

Section 4: Type of Work
Drilling Method: ROTARY

Section 5: Well Completion Date
Date well completed: Wednesday, December 21, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	98	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	60	8	0.25		WELDED	STEEL
20	98	4			THREADED	PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
78	98	4		.020	SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
10	68	BENTONITE CHIPS	Y
68	98	10-20 GRAVEL	

Section 7: Well Test Data

Total Depth: 100
Static Water Level: 68
Water Temperature:

Air Test *

15 gpm with drill stem set at 90 feet for 1 hours.
Time of recovery 1 hours.
Recovery water level 68 feet.
Pumping water level feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	10	TOPSOIL SANDS MIXED GRAVELS
10	12	BOULDERS
12	15	BROWN SAND
15	25	SAND GRAVEL SOME CLAY
25	35	CLAYBOUND SAND AND GRAVEL
35	40	BROWN CLAY
40	50	CLAYBOUND GRAVEL
50	58	SAND AND GRAVEL
58	76	CLAYBOUND SAND AND GRAVEL
76	99	SAND AND GRAVEL WITH SOME CLAY

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: BILL MAXWELL
Company: DIAMOND M DRILLING INC
License No: WWC-597
Date Completed: 12/21/2011

Site Name: WALTER, RICHARD
GWIC Id: 262859

Section 1: Well Owner

Owner Name		
WALTER, RICHARD		
Mailing Address		
46 ENGLIISH GULCH ROAD		
City	**State**	**Zip Code**
ANACONDA	MT	59711

Section 2: Location

Township	Range	Section	Quarter Sections
05N	11W	29	SE¼ NE¼ SE¼
County		**Geocode**	
DEER LODGE		30137729403140000	
Latitude	**Longitude**	**Geomethod**	**Datum**
46.155121	112.995648	NAV-GPS	NAD83
Ground Surface Altitude		**Method**	**Datum** **Date**
Addition		**Block**	**Lot**

Section 3: Proposed Use of Water
DOMESTIC (1)

Section 4: Type of Work
Drilling Method: ROTARY

Section 5: Well Completion Date
Date well completed: Monday, September 12, 2011

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	98	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	40	8	0.25		WELDED	STEEL
10	98	4			THREADED	PVC-SCHED 40

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
68	98	4		.020	SCREEN-CONTINUOUS-PVC

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
10	60	BENTONITE CHIPS	Y
60	98	10-20 GRAVEL	

Section 7: Well Test Data

Total Depth: 98
Static Water Level: 10.86
Water Temperature:

Air Test *

0.25 gpm with drill stem set at 80 feet for 2 hours.
Time of recovery _ hours.
Recovery water level _ feet.
Pumping water level _ feet.

Pump Test *

Depth pump set for test 84.48 feet.
1 gpm pump rate with _ feet of drawdown after 3 hours of pumping.
Time of recovery _ hours.
Recovery water level _ feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source

Unassigned

From	To	Description
0	5	TOPSOIL
5	15	STICKY, MOIST CLAY BALLS
15	20	MINOR CLAY, DRIER SANDS AND GRAVELS
20	25	TAN/BROWN CLAY, WITH MIXED GRAVELS
25	30	TRANSITION TO RED CLAY AND GRAVELS
30	40	GRAVELS/SAND IN RED CLAY MATRIX
40	60	SAME AS ABOVE
60	70	SLIGHTLY LARGER GRAVELS, GRAY CLAY
70	80	GRAY/WHITE CLAY AND GRAVELS
80	98	LESS CLAY/CEMENT- MORE GRAVELS

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: BILL MAXWELL
Company: DIAMOND M DRILLING INC
License No: WWC-597
Date Completed: 9/12/2011

Plate1

Anaconda Regional Water, Waste, and Soils
Non 5 Year Review Monitoring Sites, 2010

MW-26
MW-26M
NW-1-OPd
NW-1-OPs
MW-214
MW-82
MW-82M
NW-2-OPs
NW-2-OPd
MW-85
MW-85M
NW-3-OPs
NW-3-OPd
MW-251
MW-252
MW-209
MW-242
MW-90
MW-90M
MW-241
MW-208
MW-255
MW-212
NW-4-OPs
NW-4-OPd
MW-31
MW-31M
IW-01
MW-213
MW-206
MW-206D
MW-204
MW-240
MW-207
MW-256
MW-216
MW-5S
NW-6S
LTW-4-SOD
LTW-4-SOS
MW-9
LTW-1-SOS
LTW-1-SOD
LTW-3-SOD
LTW-3-SOS

Legend

Monitoring wells

- Point of compliance
- Potential point of compliance
- Monitoring well

0 0.25 0.5 0.75 1 Miles

N
W E
S

Air photo base: NAIP, 2005
Roads: ITSD Transportation Geodatabase, 2008

D:\stuff\Tedl\non-5-yr-wells_mural.mxd

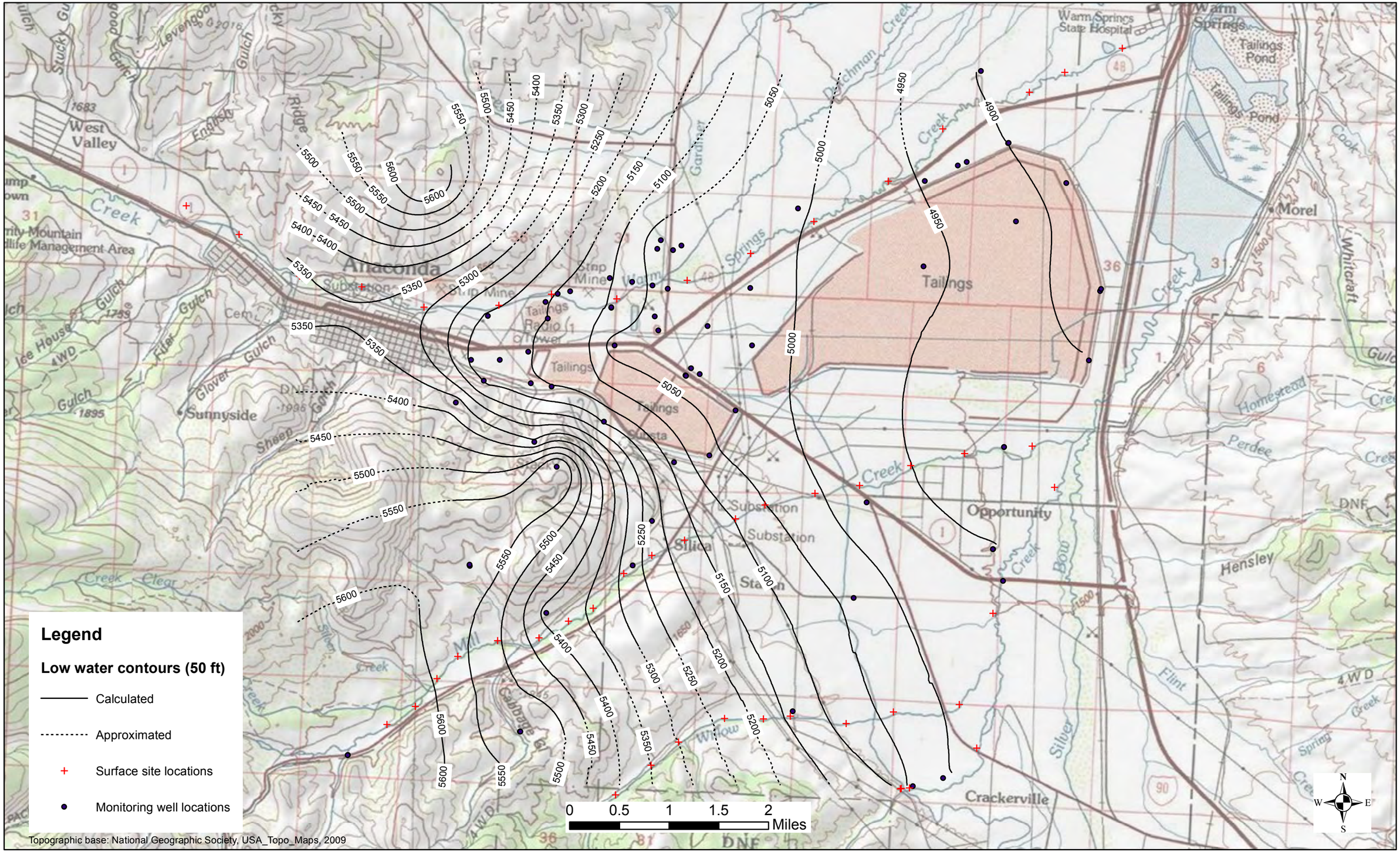

Plate 2. ARWWS low-water potentiometric map, 2009.

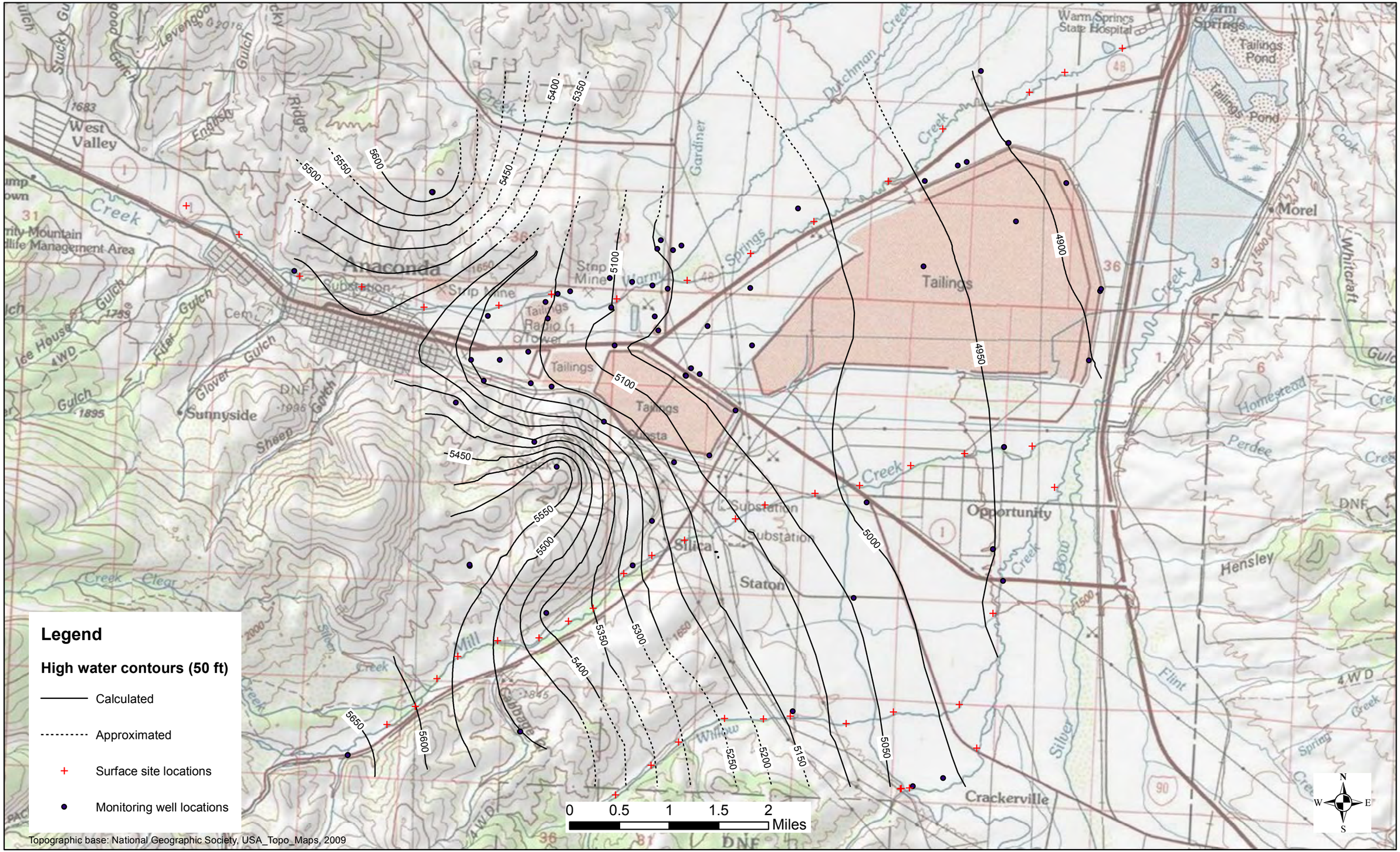

Plate 3. ARWWS high-water potentiometric map, 2009.