



Department of Energy  
Office of Legacy Management

SEP 08 2008

Mr. Paul Michalak  
Fuel Cycle Licensing Branch, NMSS  
U.S. Nuclear Regulatory Commission  
Mail Stop T-8A33  
Washington, D.C. 20555-0001

Subject: Transmittal of the 2008 *Verification Monitoring Report for the Gunnison, Colorado, Processing Site*

Dear Mr. Michalak:

The purpose of this report is to present and evaluate the data collected during 2008 and to provide an annual update on the progress of the natural flushing compliance strategy. This report is based on results from the sampling event conducted at the Gunnison site during 2008.

While concentrations of manganese and uranium in ground water in the alluvial aquifer are still above the U. S. Environmental Protection Agency's drinking water equivalent level (DWEL) and the Uranium Mill Tailings Remedial Action (UMTRA) ground water standard, respectively, levels are generally decreasing, indicating that natural flushing is occurring in the aquifer. Surface water in the Valco, Inc., pond continues to be impacted as it is recharged by contaminated alluvial ground water, although the uranium concentrations were at historic low levels.

Results from domestic wells do not indicate any impacts from the Gunnison site. Concentrations of manganese and uranium in samples collected from potable domestic wells were below the DWEL and UMTRA ground water standard, respectively.

Please contact me at (970) 248-6034 or Sam Campbell at (970) 248-6654 with any questions.

Sincerely,

Joseph P. Desormeau  
Site Manager

Enclosure

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REPLY TO: Grand Junction Office

SEP 08 2008

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# 2008 Verification Monitoring Report for the Gunnison, Colorado Processing Site

August 2008



U.S. Department  
of Energy

## Office of Legacy Management

**2008 Verification Monitoring Report  
for the  
Gunnison, Colorado, Processing Site**

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## Acronyms and Abbreviations

CDPHE	Colorado Department of Public Health and Environment
CFR	United States <i>Code of Federal Regulations</i>
COPC	constituent(s) of potential concern
DOE	U.S. Department of Energy
DWEL	Drinking Water Equivalent Level
EPA	U. S. Environmental Protection Agency
ft	foot (feet)
ft/day	foot (feet) per day
GCAP	Ground Water Compliance Action Plan
GEMS	Geospatial Environmental Mapping System
IC	institutional control(s)
LM	Legacy Management
MCL	maximum concentration limit
mg/L	milligram(s) per liter
NRC	U.S. Nuclear Regulatory Commission
RRM	residual radioactive material
SOWP	Site Observational Work Plan
UMTRA	Uranium Mill Tailings Remedial Action
VMR	Verification Monitoring Report

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## 1.0 Introduction

The Gunnison, Colorado, Processing Site (Gunnison site) is located in Gunnison County, Colorado, approximately 0.5 mile southwest of the City of Gunnison, between the Gunnison River and Tomichi Creek (Figure 1). Site characterization details for the site are available in the Final Site Observational Work Plan (SOWP) (DOE 2001).

The compliance strategy for groundwater cleanup at the Gunnison site is natural flushing in conjunction with continued groundwater and surface water monitoring and institutional controls (IC). Groundwater modeling predicts that natural flushing of the alluvial aquifer will be completed within the 100-year timeframe specified in Subpart B of Title 40 *Code of Federal Regulations*, Section 192 (40 CFR 192). The U.S. Department of Energy (DOE) and the Colorado Department of Public Health and Environment (CDPHE) funded an alternate domestic water supply system in 1994, with upgrades in 2005, to service existing groundwater users in the area of potentially contaminated groundwater and to provide a potable water source for future development within the IC area.

Detailed information for the Gunnison site and water quality data through 1999 are found in the SOWP (DOE 2001). Water quality data from 2000 through 2007 are found in previous Verification Monitoring Reports (VMR) (DOE 2003, 2004b, 2005b, 2006, and 2007). Water quality data for 2008 are provided in Appendices A through C of this report. All water quality data for the Gunnison site are archived in the SEEPro database at the DOE Office of Legacy Management (LM) in Grand Junction, Colorado. Water quality data also are available for viewing with dynamic mapping via the Geospatial Environmental Mapping System (GEMS) website at [http://gems.lm.doe.gov/imf/sites/gems\\_continental\\_us/jsp/launch.jsp](http://gems.lm.doe.gov/imf/sites/gems_continental_us/jsp/launch.jsp).

The purpose of this VMR is to present and evaluate groundwater and surface water monitoring data collected during the annual 2008 sampling event at the Gunnison site and to provide an update on the progress of the natural flushing compliance strategy.

## 2.0 Site Conditions

### 2.1 Hydrogeology

Groundwater occurs under unconfined conditions in the alluvial (uppermost) aquifer, with an average depth to the water table of 5 feet (ft). The alluvium is composed of poorly sorted sediments ranging from clay-sized material to gravel, with cobbles and a few boulders. It ranges in thickness from 70 to 130 ft. Groundwater in the alluvial aquifer generally flows to the southwest, with an average gradient of 0.005 ft/ft. Hydraulic conductivity ranges from 100 to 170 feet per day (ft/day). The average linear groundwater velocity ranges from 1.9 to 3.2 ft/day (DOE 2001).

Groundwater in the alluvial aquifer system is recharged by groundwater underflow, adjacent streams, precipitation, flood irrigation of the pasture downgradient from the site, and irrigation of the golf course and residential areas southwest of the site. Groundwater is discharged naturally to adjacent streams and by evapotranspiration. Groundwater also is discharged via dewatering operations at the Valco, Inc., gravel pit located south of the site.



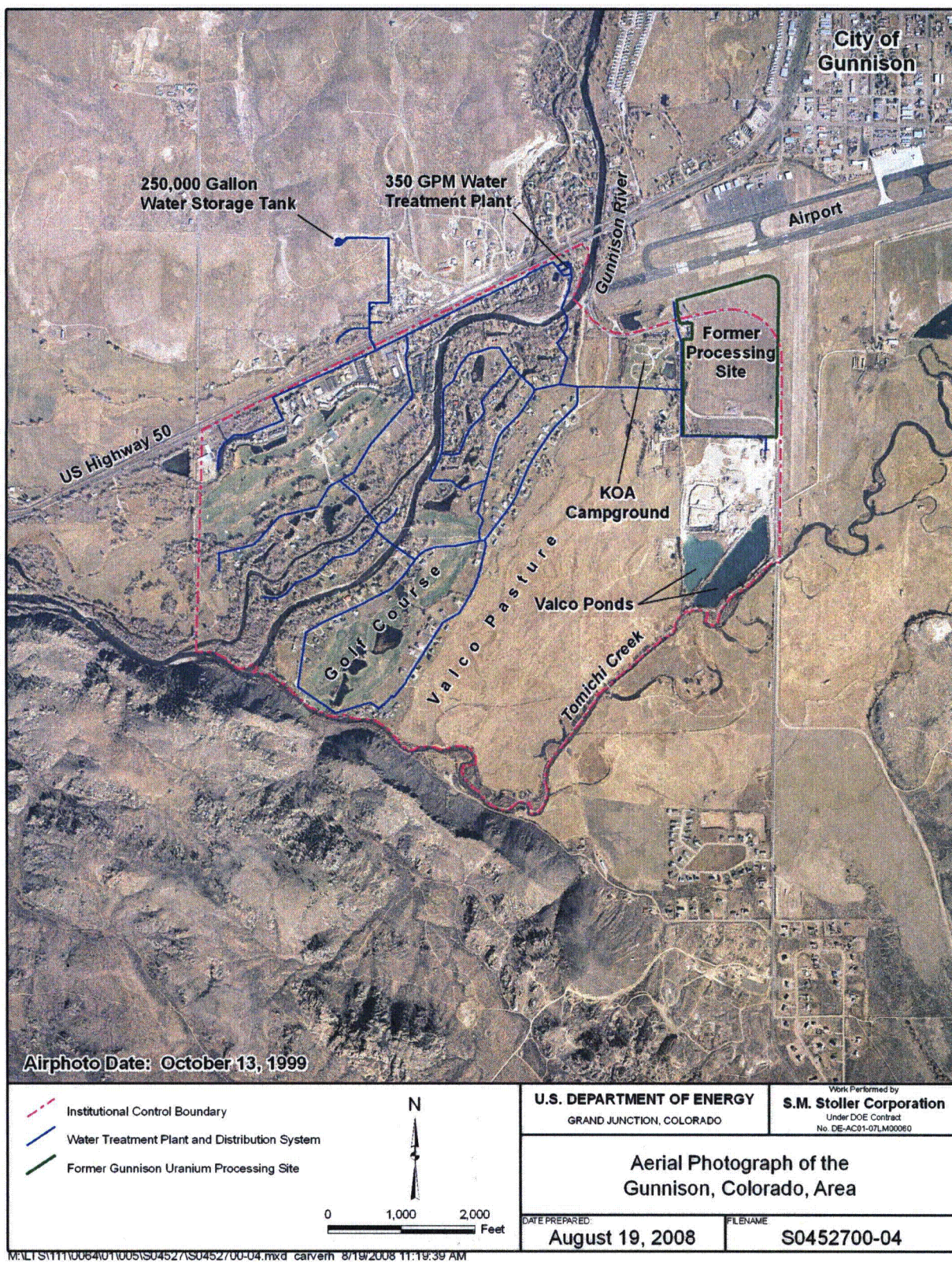


Figure 1. Aerial Photograph of the Gunnison, Colorado, Area



## 2.2 Water Quality

Groundwater in the alluvial aquifer beneath and downgradient from the Gunnison site was contaminated by uranium processing activities. A variety of tailings-related contaminants in the subsurface and groundwater at the site were evaluated and the potential risks to human health and the environment were assessed in the SOWP (DOE 2001). Only uranium and manganese were identified as constituents of potential concern (COPC) because they exceeded a groundwater standard and risk-based benchmark, respectively.

Uranium is the primary COPC in groundwater, with concentrations measured up to 1.5 milligrams per liter (mg/L) beneath the site in the past, and currently exceeding the U.S. Environmental Protection Agency (EPA) Uranium Mill Tailings Remedial Action (UMTRA) maximum concentration limit (MCL) of 0.044 mg/L for groundwater in several monitor wells on and adjacent to the former millsite and one monitor well (0183) more than 4,000 ft downgradient from the site boundary. Concentrations of uranium in groundwater below the MCL, but above background, extend approximately 7,000 ft downgradient from the site boundary and have migrated beneath the Gunnison River just beyond the confluence with Tomichi Creek. The zone of contamination attenuates and migrates deeper into the aquifer as it progresses laterally in a southwesterly direction.

Manganese is also a COPC in groundwater, with concentrations measured up to 77 mg/L beneath the site in the past. There is no MCL for manganese. The EPA Drinking Water Equivalent Level (DWEL) for manganese is 1.6 mg/L (EPA 2004). The DWEL is a lifetime-exposure concentration protective of adverse, non-cancer health effects that assumes all of the exposure to a contaminant is from drinking water. Concentrations of manganese are above the DWEL beneath the site and in one downgradient monitor well (0135). Manganese does not appear to be widespread in the aquifer, and concentrations beneath the site are decreasing.

## 2.3 Surface Remediation Activities

Uranium mill tailings and other residual radioactive material (RRM) were removed from the former millsite from 1992 through 1995 and stabilized in a disposal cell 6 miles east of the city of Gunnison. RRM beneath the site was cleaned up to just below the water table, with some contaminated material left in place per application of supplemental standards. The site was backfilled with clean fill and revegetated after RRM removal.

## 2.4 Institutional Controls

ICs in effect in the vicinity of the Gunnison site were finalized in 2004 and consist of deed restrictions on the original millsite property (specified in a Quit Claim Deed transferring the property from the State of Colorado to Gunnison County), a Gunnison County Resolution (Gunnison County 2004) establishing the New Domestic Well Constraint Area, and construction of a domestic water supply system. The Quit Claim Deed specifies restrictions on and approvals needed for excavation, groundwater use, and construction of habitable structures. The New Domestic Well Constraint Area is delineated by the IC boundary (Figure 1), and the Gunnison County Resolution specifies that no new wells can be constructed within the constraint area. In 2004, DOE entered into a cooperative agreement with Gunnison County, approved by the U.S. Nuclear Regulatory Commission (NRC) (DOE 2004a), in which DOE (along with CDPHE)



agreed to fund an extension of the domestic water supply system to account for potential future growth within the IC boundary (Figure 1). Domestic wells within the IC boundary that are not connected to the water system are monitored to ensure COPC concentrations remain low and below the MCL and DWEL for uranium and manganese, respectively.

### **3.0 Monitoring Program**

Verification monitoring is currently being performed on an annual basis, and will continue annually for the first 5 years after NRC concurrence with the Ground Water Compliance Action Plan (GCAP) (DOE 2005a), to ascertain that natural flushing is progressing as predicted by groundwater flow and transport modeling (DOE 2001). The GCAP is currently in review with NRC. A review of the monitoring program will be conducted after the first 5 years to determine if a change in the monitoring program is warranted. Ongoing monitoring requirements will be evaluated in subsequent VMRs and modified as determined by DOE and NRC.

The monitoring network during 2008 included sampling of 29 DOE monitor wells, 5 surface water locations, and 8 domestic wells (Figure 2 and Table 1). Two domestic wells—0468 and 0478—were scheduled for sampling in 2008 but were not sampled. The homeowner built a deck over domestic well 0468 (well is no longer used), and the home at domestic well 0478 is not occupied with the pump turned off. Damaged monitor well 0012 was replaced with monitor well 0012R, which was sampled in 2008. Samples collected from all monitoring locations were analyzed for the COPCs, uranium and manganese. Field measurements of alkalinity, oxidation-reduction potential, pH, specific conductance, temperature, and turbidity were made at each location.

### **4.0 Results of 2008 Monitoring**

Analytical data for uranium and manganese along with field measurements from DOE monitor wells, domestic wells, and surface water for 2008 are provided in Appendices A through C, respectively. Water level data collected in 2008 is provided in Appendix D. The distributions of uranium and manganese in groundwater in the alluvial aquifer, based on the 2008 sampling event, are shown in Figure 3 and Figure 4, respectively. Time versus concentration plots for uranium and manganese in DOE monitor wells, domestic wells, and surface water, from 1997 (post-remedial action) through 2008, are also shown in this Section.

#### **4.1 DOE Monitor Wells**

Though not separated lithologically, the alluvial aquifer (up to 130 ft thick) has been divided into three approximate depth zones to facilitate monitoring (wells screened to monitor these zones separately) and discussion of vertical contaminant migration: (1) shallow zone from 10 to 25 ft; (2) intermediate zone from 35 to 60 ft; and (3) deep zone from 90 to 100 ft (Table 1). Time-concentration plots for uranium and manganese in DOE monitor wells have been grouped by monitor wells on-site, and in three downgradient sectors, to show the relationship between distance downgradient from the site and depth in the aquifer.



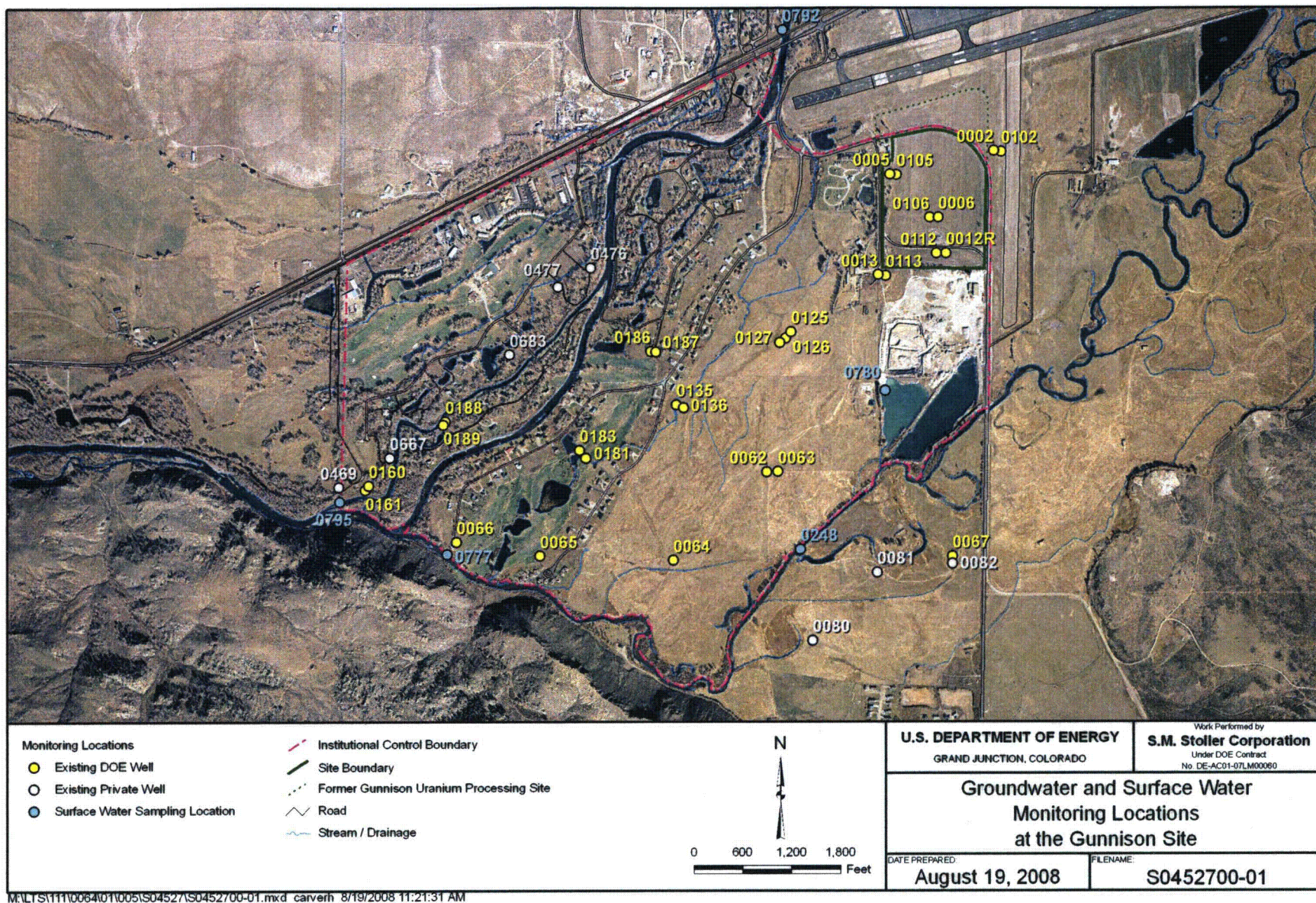


Figure 2. Groundwater and Surface Water Monitoring Locations at the Gunnison Site



Table 1. Groundwater and Surface Water Monitoring at the Gunnison Site

Monitor Well	Aquifer Zone	Screened Interval (ft)	Location	Rationale (Uranium)
<b>Groundwater</b>				
0002	Shallow	10–15	Airport	Upgradient
0102	Intermediate	42–47	Airport	Upgradient
0005	Shallow	10–15	On-site	Origin of plume
0105	Intermediate	42–47	On-site	Origin of plume
0006	Shallow	10–15	On-site	Origin of plume
0106	Intermediate	34–39	On-site	Origin of plume
0012R	Shallow	6–16	On-site	Origin of plume
0112	Intermediate	40–45	On-site	Monitor plume migration
0013	Shallow	11–16	Just off-site to southwest	Monitor plume migration
0113	Intermediate	41–46	Just off-site to southwest	Monitor plume migration
0125	Shallow	18–23	Valco pasture	Monitor plume migration
0126	Intermediate	54–59	Valco pasture	Monitor plume migration
0127	Deep	94–99	Valco pasture	Monitor plume migration
0135	Shallow	18–23	Valco pasture	Monitor plume migration
0136	Intermediate	53–58	Valco pasture	Monitor plume migration
0064	Deep	87–97	Valco pasture	Monitor plume migration
0062	Intermediate	48–58	Valco pasture	Monitor plume migration
0063	Deep	88–98	Valco pasture	Monitor plume migration
0181	Shallow	18–23	Golf course	Monitor plume migration
0183	Deep	93–98	Golf course	Monitor plume migration
0065	Intermediate	50–60	Golf course	Monitor plume migration
0066	Intermediate	40–50	End of Tomichi Trail	Monitor plume migration
0186	Intermediate	53–58	End of Monte Vista Dr.	Monitor plume migration
0187	Deep	93–98	End of Monte Vista Dr.	Monitor plume migration
0188	Intermediate	53–58	West of Gunnison River	Monitor plume migration
0189	Deep	93–98	West of Gunnison River	Monitor plume migration
0160	Intermediate	51–56	West of Gunnison River	Adjacent to IC boundary
0161	Deep	93–98	West of Gunnison River	Adjacent to IC boundary
0067	Intermediate	40–50	South of Tomichi Creek	Confirm results in domestic well 0082
<b>Surface Water</b>				
0248	NA		Tomichi Creek	Downstream of Valco pond
0777	NA		Tomichi Creek	Downstream – potential aquifer discharge
0780	NA		Valco, Inc., gravel pit	Gravel pit discharge
0792	NA		Gunnison River	Upstream of IC boundary
0795	NA		Gunnison River	Downstream of IC boundary
<b>Domestic Wells</b>		<b>Use</b>		
0080	Intermediate	Potable	South of Tomichi Creek	Verify plume not beyond IC boundary
0081	Intermediate	Not in use	South of Tomichi Creek	Verify plume not beyond IC boundary
0082	Intermediate	Not in use	South of Tomichi Creek	Verify plume not beyond IC boundary
0469	Shallow	Potable	West of Gunnison River	Verify low COPC concentrations
0476	Shallow	Potable	West of Gunnison River	Verify low COPC concentrations
0477	Shallow	Potable	West of Gunnison River	Verify low COPC concentrations
0667	Shallow	Potable	West of Gunnison River	Verify low COPC concentrations
0683	Shallow	Potable	West of Gunnison River	Verify low COPC concentrations



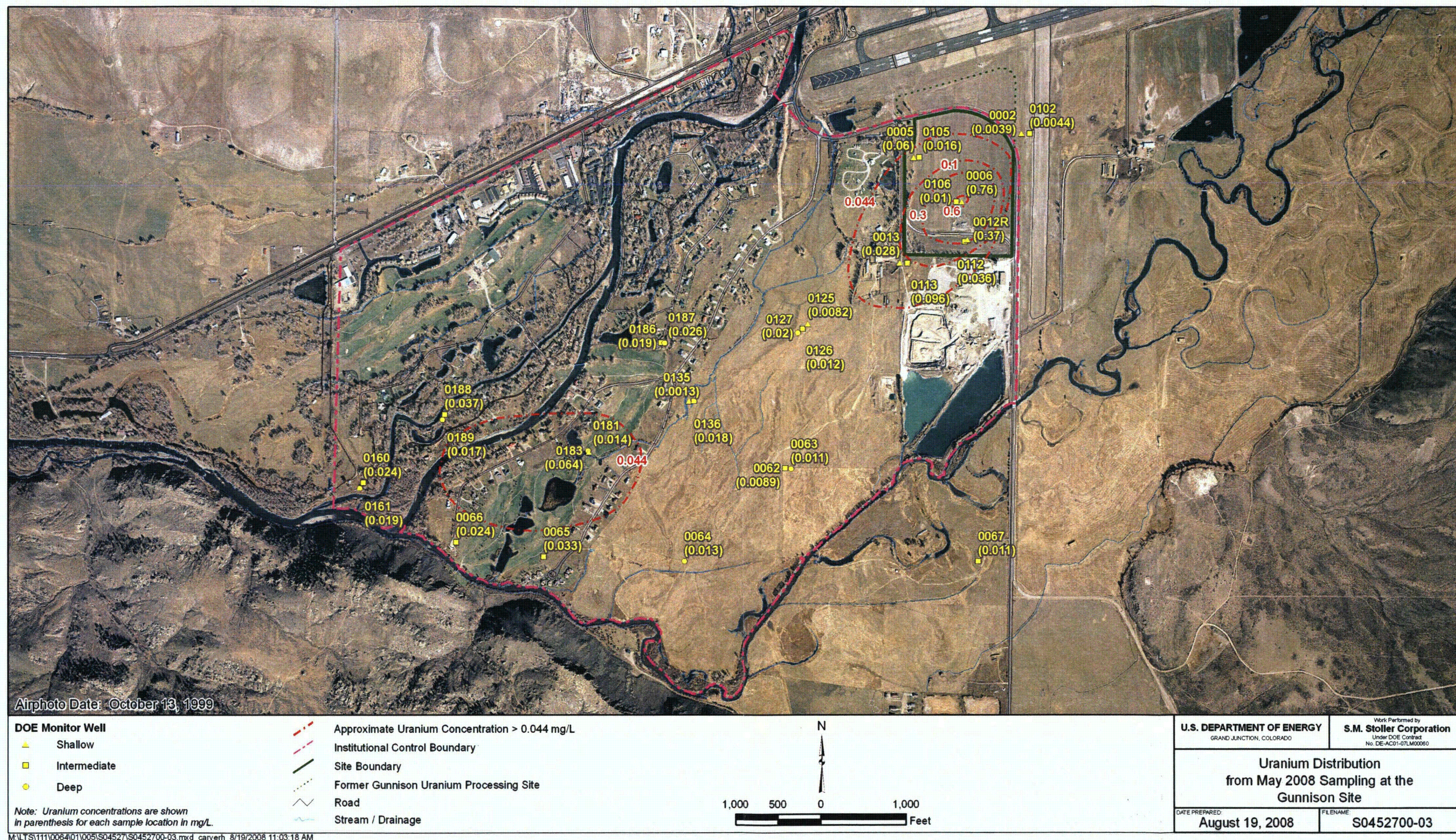
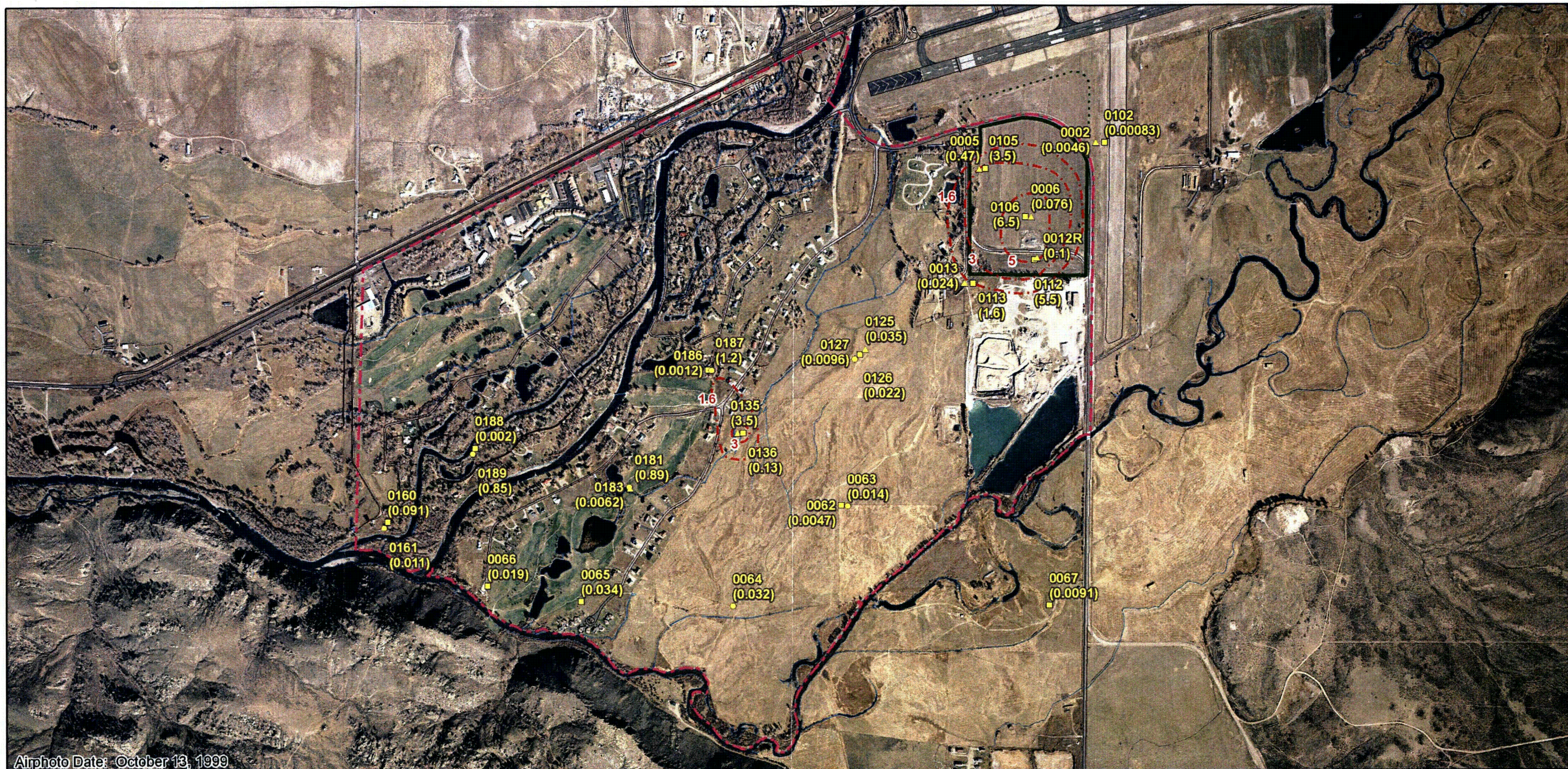


Figure 3. Uranium Distribution from May 2008 Sampling at the Gunnison Site





Airphoto Date: October 13, 1999

DOE Monitor Well

- Shallow
- Intermediate
- Deep

Note: Manganese concentrations are shown in parenthesis for each sample location in mg/L.

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Approximate Manganese Concentration > 1.6 mg/L

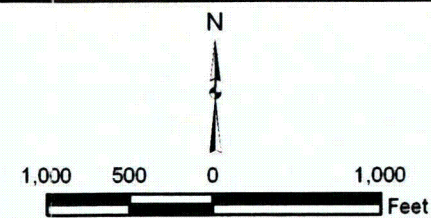
Institutional Control Boundary

Site Boundary

Former Gunnison Uranium Processing Site

Road

Stream / Drainage



U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO	Work Performed by <b>S.M. Stoller Corporation</b> Under DOE Contract No. DE-AC01-07LM00060	
	<b>Manganese Distribution from May 2008 Sampling at the Gunnison Site</b>	
DATE PREPARED: August 19, 2008	FILENAME:	S0452700-02

Figure 4. Manganese Distribution from May 2008 Sampling at the Gunnison Site



Results from the 2008 sampling event indicate that uranium in groundwater is still generally decreasing and migrating deeper in the alluvial sequence while progressing downgradient from the former millsite, which is consistent with historical data and model predictions. Concentrations of uranium in groundwater beneath the former millsite are still above the MCL of 0.044 mg/L in all three wells in the shallow zone (Figure 5), but the MCL was not exceeded at any of the intermediate zone wells. The MCL was exceeded in intermediate-zone monitor well 0113 immediately downgradient from the site, but not exceeded in any other intermediate zone well (Figures 6 and 7). The MCL was exceeded in the deep zone (well 0183) 4,400 ft downgradient from the site (Figure 7). In wells farthest downgradient, uranium concentrations are above background levels (upper range of background 0.009 mg/L), but the MCL was not exceeded (Figure 8). The distribution of uranium throughout the alluvial aquifer in each of the three zones is summarized in Table 2.

*Table 2. Summary of 2008 Uranium Distribution at the Gunnison Site*

Area	Zone	Wells	Uranium Concentration <sup>a</sup> (mg/L)
Upgradient	Shallow	0002	0.0039
	Intermediate	0102	0.0043
On-site and Just Off-Site	Shallow	0005, 0006, 0012R	0.397
	Intermediate	0105, 0106, 0112, 0113	0.039
Downgradient (Before Gunnison River)	Shallow	0125, 0135, 0181	0.008
	Intermediate	0062, 0065, 0066, 0126, 0136, 0186	0.019
	Deep	0063, 0064, 0127, 0183, 0187	0.027
Downgradient (Beyond Gunnison River)	Intermediate	0160, 0188	0.031
	Deep	0161, 0189	0.018

<sup>a</sup>Uranium concentrations from 2008 sampling event. If more than one well is listed, the concentration is the 2008 mean value.

Concentrations of manganese in groundwater beneath the Gunnison site are above the DWEL of 1.6 mg/L in wells in the intermediate zone, with concentrations below the DWEL in the shallow zone (Figure 9). Manganese concentrations above the DWEL in on-site wells in the intermediate zone are generally decreasing over time. Downgradient from the site, the sample collected from monitor well 0135 in the shallow zone had the only manganese concentration that exceeded the DWEL (Figure 10 and Figure 11). Manganese does not appear to be widespread farther downgradient in the alluvial aquifer (Figure 12).

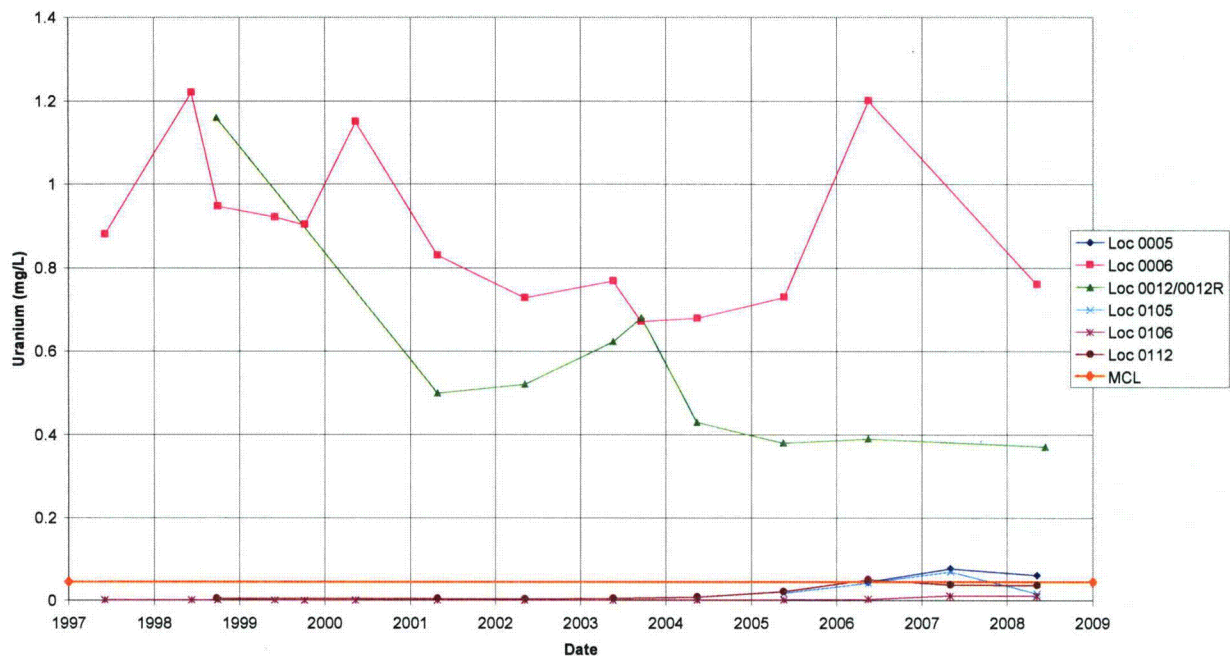


Figure 5. Uranium Concentrations in Groundwater – On-Site DOE Monitor Wells at the Gunnison Site

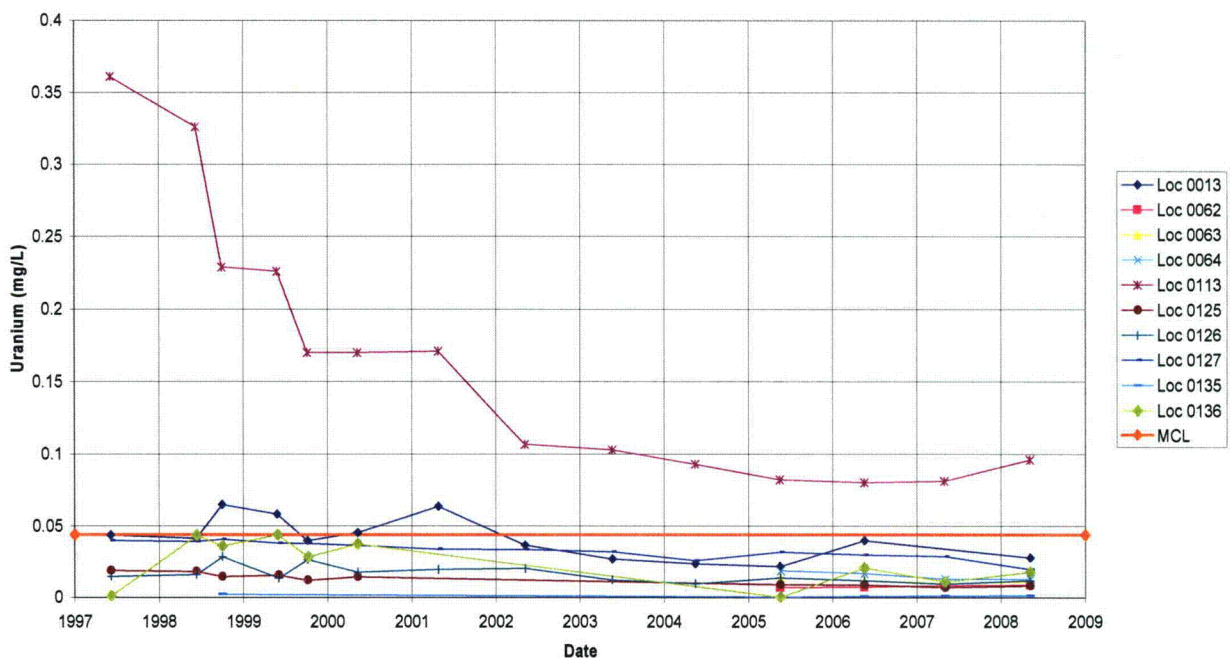


Figure 6. Uranium Concentrations in Groundwater – Downgradient DOE Monitor Wells – Pasture, Near the Gunnison Site

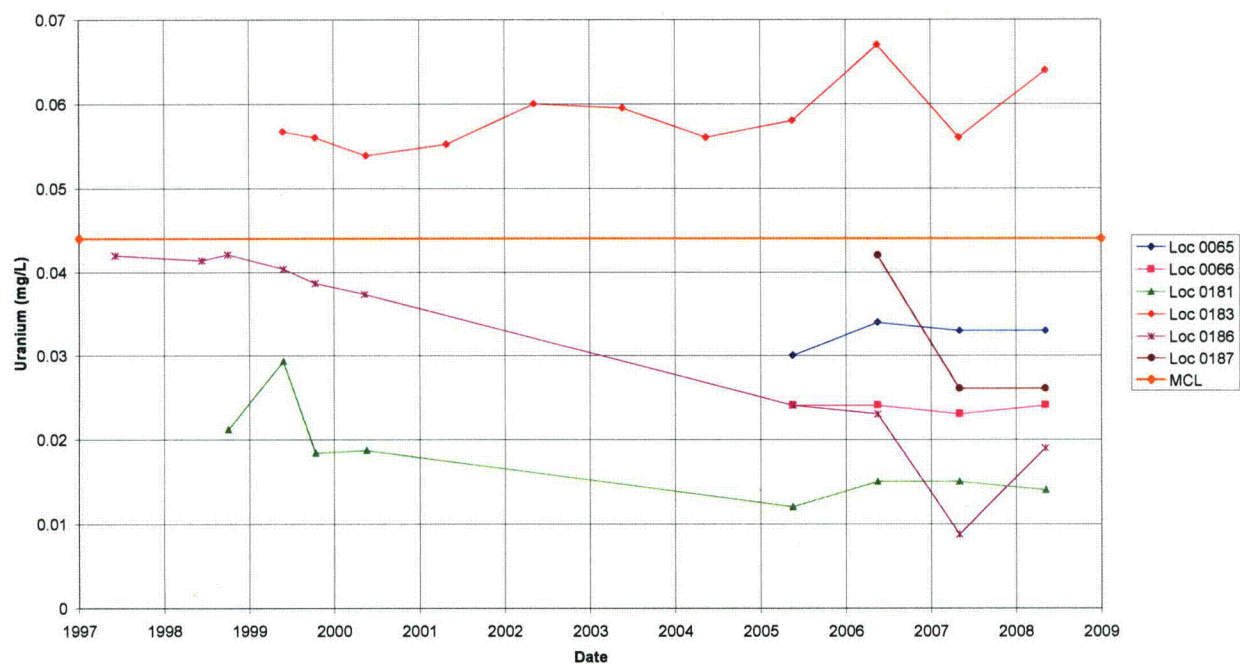


Figure 7. Uranium Concentrations in Groundwater – Downgradient DOE Monitor Wells – Golf Course and Residential, Near the Gunnison Site



Figure 8. Uranium Concentrations in Groundwater – Downgradient DOE Monitor Wells – West of the Gunnison River, Near the Gunnison Site



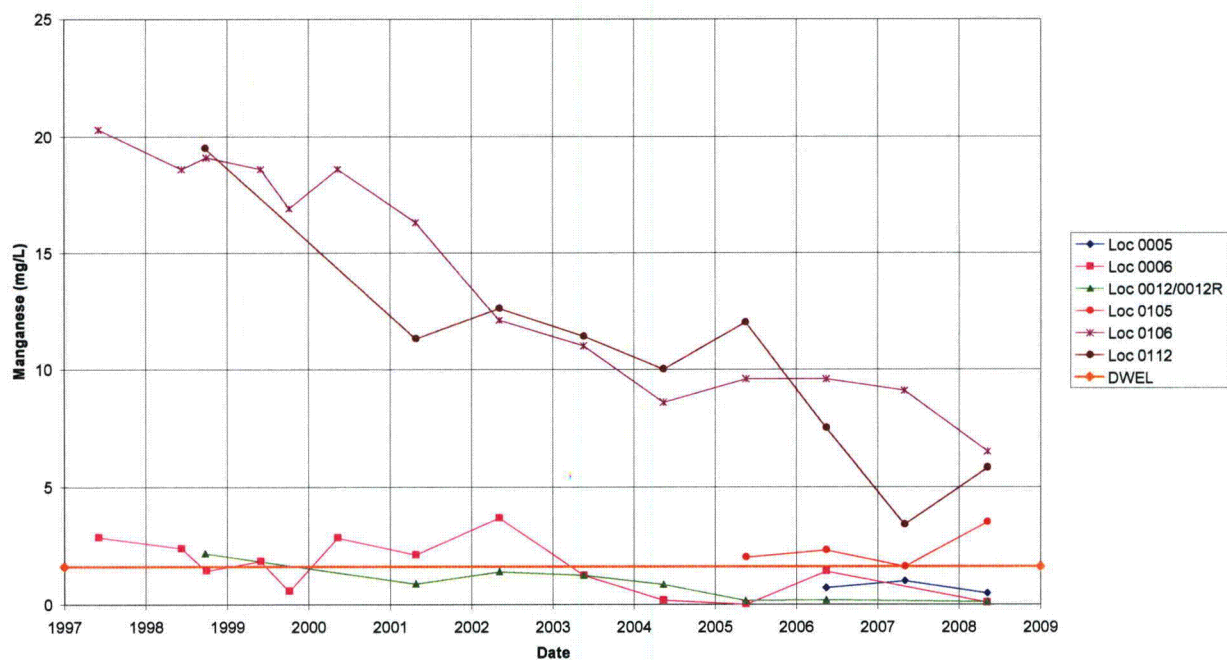


Figure 9. Manganese Concentrations in Groundwater – On-Site DOE Monitor Wells at the Gunnison Site

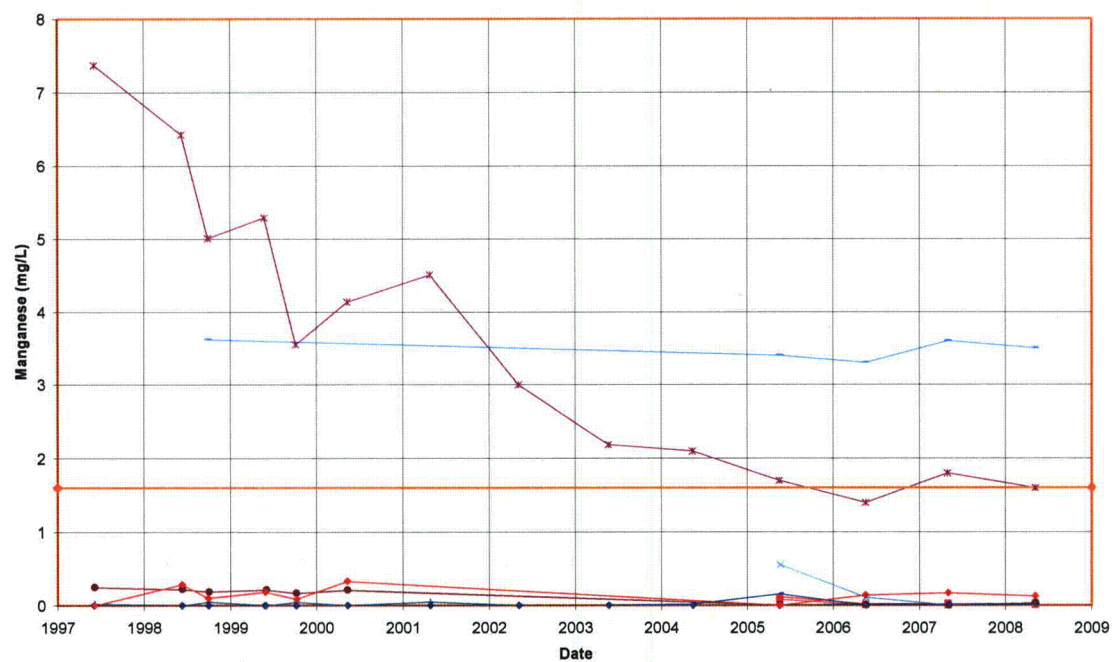


Figure 10. Manganese Concentrations in Groundwater – Downgradient DOE Monitor Wells – Pasture, Near the Gunnison Site

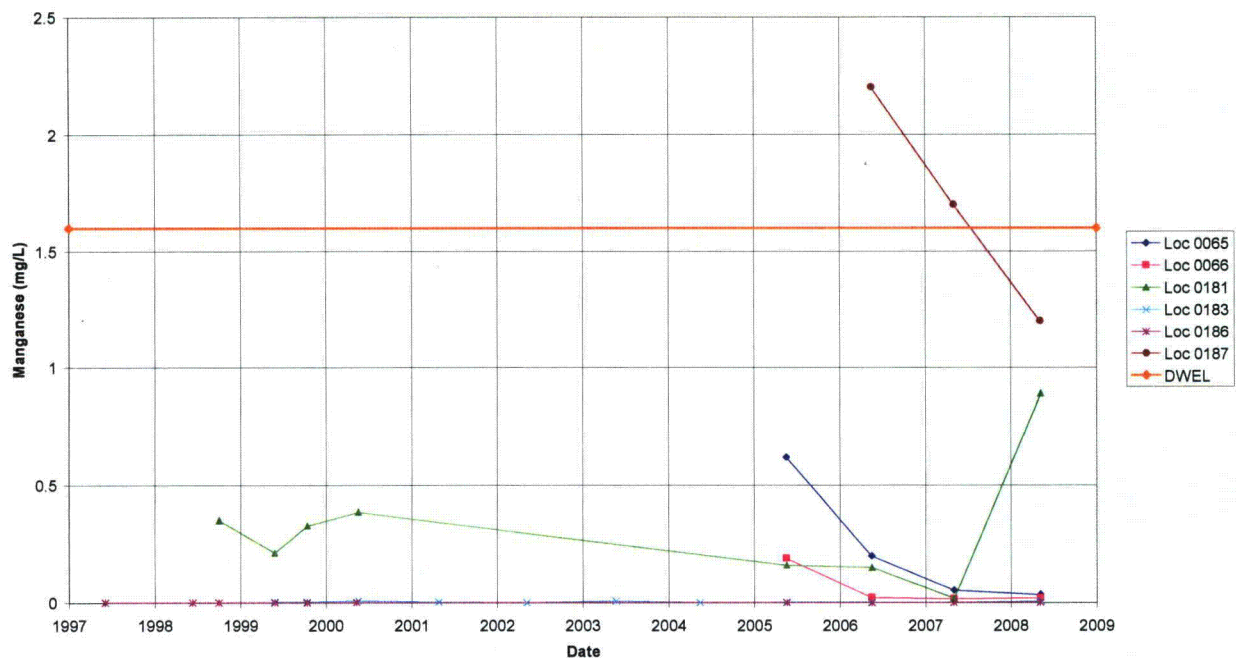


Figure 11. Manganese Concentrations in Groundwater – Downgradient DOE Monitor Wells – Golf Course and Residential, Near the Gunnison Site

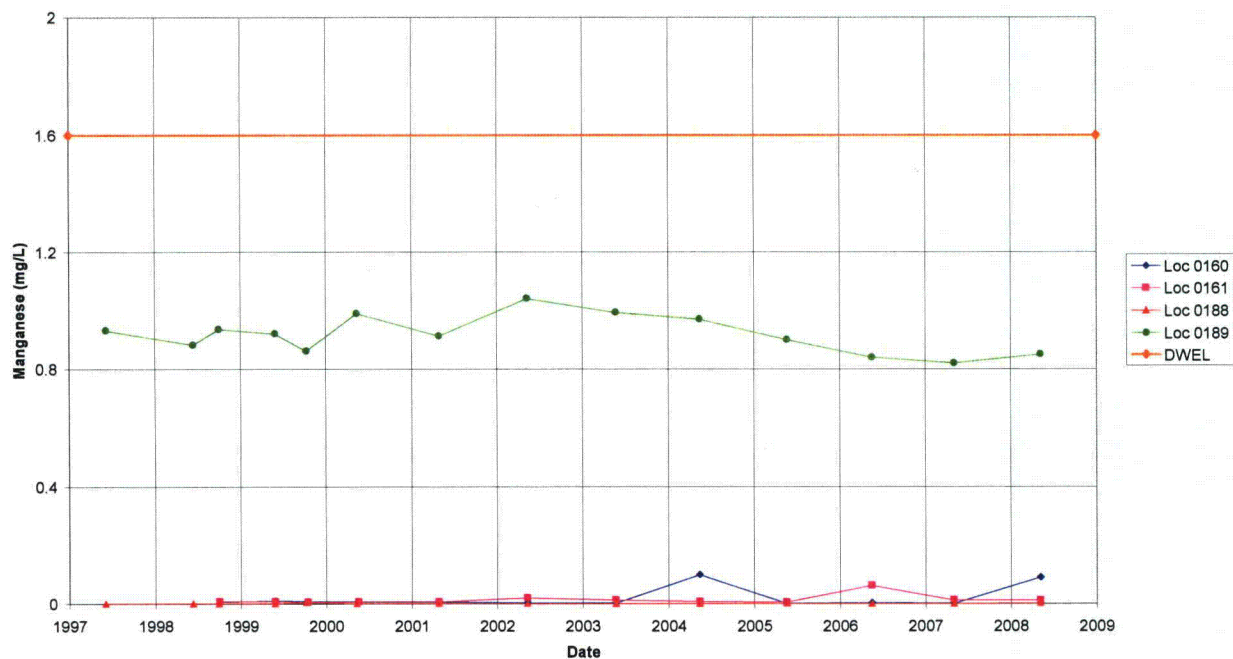


Figure 12. Manganese Concentrations in Groundwater – Downgradient DOE Monitor Wells – West of the Gunnison River, Near the Gunnison Site

## 4.2 Domestic Wells

Concentrations of uranium in groundwater in the domestic buffer zone wells (northwest of the Gunnison River) downgradient from the site are well below the MCL of 0.044 mg/L and below the action level set by CDPHE of 0.020 mg/L (Figure 13).

Concentrations of uranium in groundwater in three domestic wells (0080, 0081, and 0082), installed in 2002 south of Tomichi Creek, are also well below the MCL of 0.044 mg/L and below the action level set by CDPHE of 0.020 mg/L (Figure 14). Because uranium concentrations in groundwater in domestic well 0082 exceeded the upper range of background (0.0085 mg/L) (DOE 1996) in 2003 (to a level of 0.0155 mg/L), DOE installed monitor well 0067 adjacent to the domestic well to obtain data from this portion of the aquifer from a well designed for collecting water quality samples. Results from DOE monitor well 0067 are shown in Figure 14 for comparison with the domestic wells. Migration of significant concentrations of uranium in groundwater is not expected south of Tomichi Creek.

Concentrations of manganese in groundwater in the domestic wells are well below the DWEL of 1.6 mg/L (Figure 15 and Figure 16).

## 4.3 Surface Water

Concentrations of uranium in surface water in the Gunnison River during 2008 were very low (0.0007 mg/L) and indicative of runoff conditions from the melting of the mountain snow pack. The concentration of uranium in surface water in the Valco, Inc., pond (0780) was below the historical low of 0.014 mg/L at 0.013 mg/L (Figure 17) and was the second consecutive year below the historical low concentration.

Tomichi Creek was rerouted in 2006 to its original channel to establish a conservation area by the landowner. Location 0248, which is approximately 1,500 feet downstream of the Valco, Inc., pond discharge point, is located on the abandoned portion of the channel. The water in the abandoned channel is comprised of discharge from the Valco, Inc., pond, flow through the diversion structure, and groundwater discharge. Concerns have been raised that low flows in the abandoned channel could concentrate uranium. In 2008, the concentration of uranium in the sample collected from location 0248 was very low (0.0054 mg/L), indicating minimal impacts from groundwater discharge and limited discharge from the Valco, Inc., pond at the time of sampling. The concentration of uranium (0.0055 mg/L) in the sample collected farther downstream on Tomichi Creek at location 0777 was essentially the same as location 0248.

Concentrations of manganese in surface water are well below the DWEL of 1.6 mg/L and comparable to background (Figure 18).

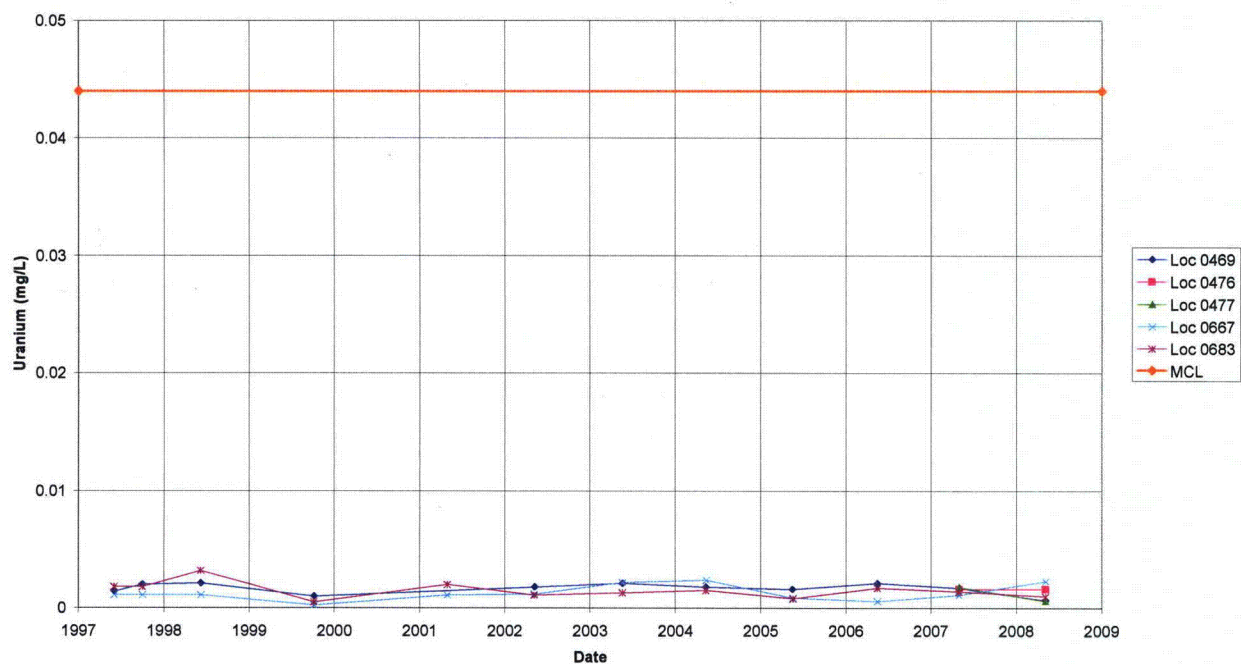


Figure 13. Uranium Concentrations in Groundwater – Domestic Wells Downgradient from the Gunnison Site

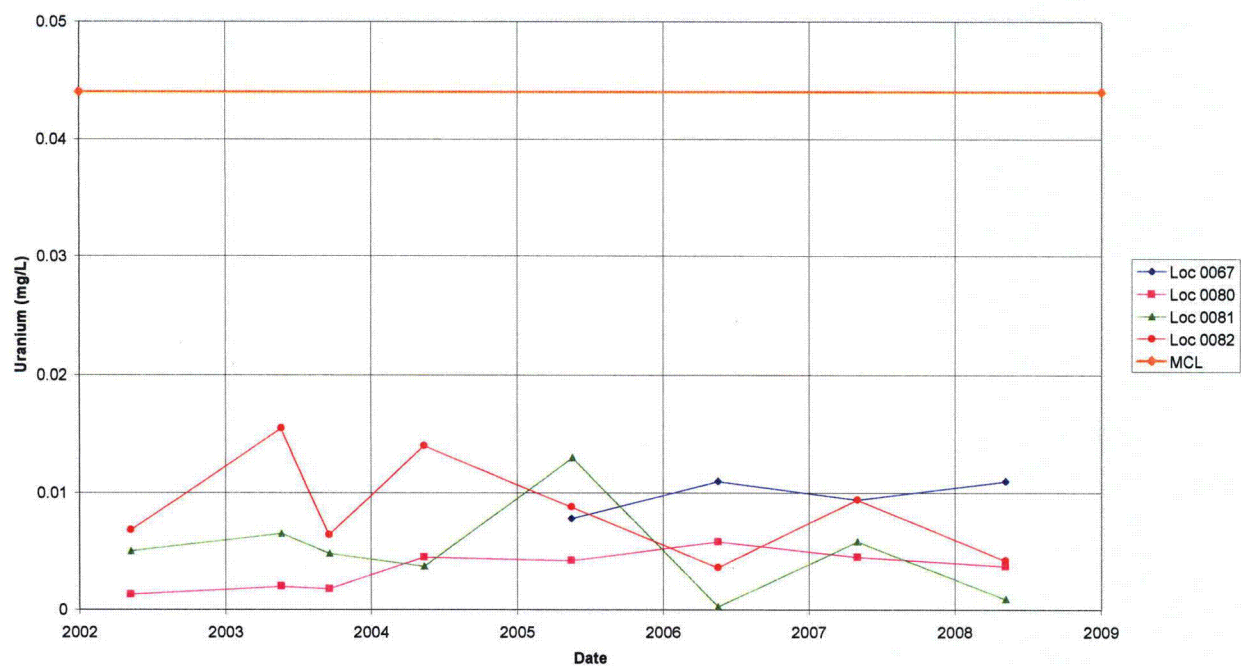


Figure 14. Uranium Concentrations in Groundwater – Domestic Wells South of Tomichi Creek



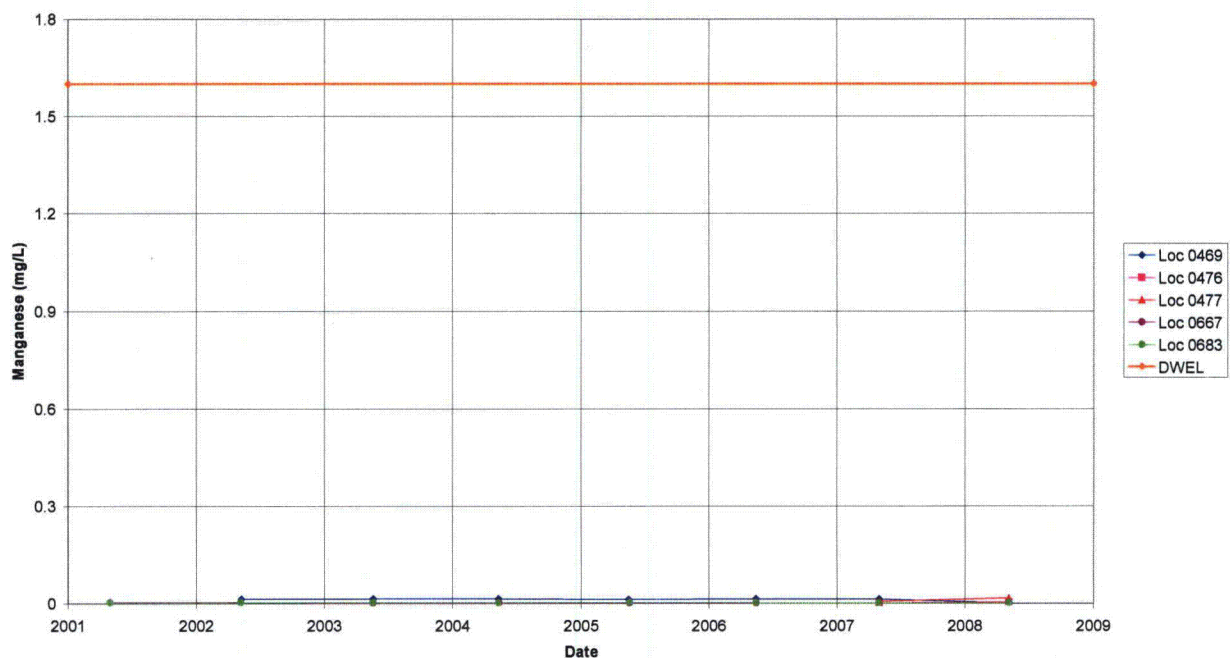


Figure 15. Manganese Concentrations in Groundwater – Domestic Wells Downgradient from the Gunnison Site

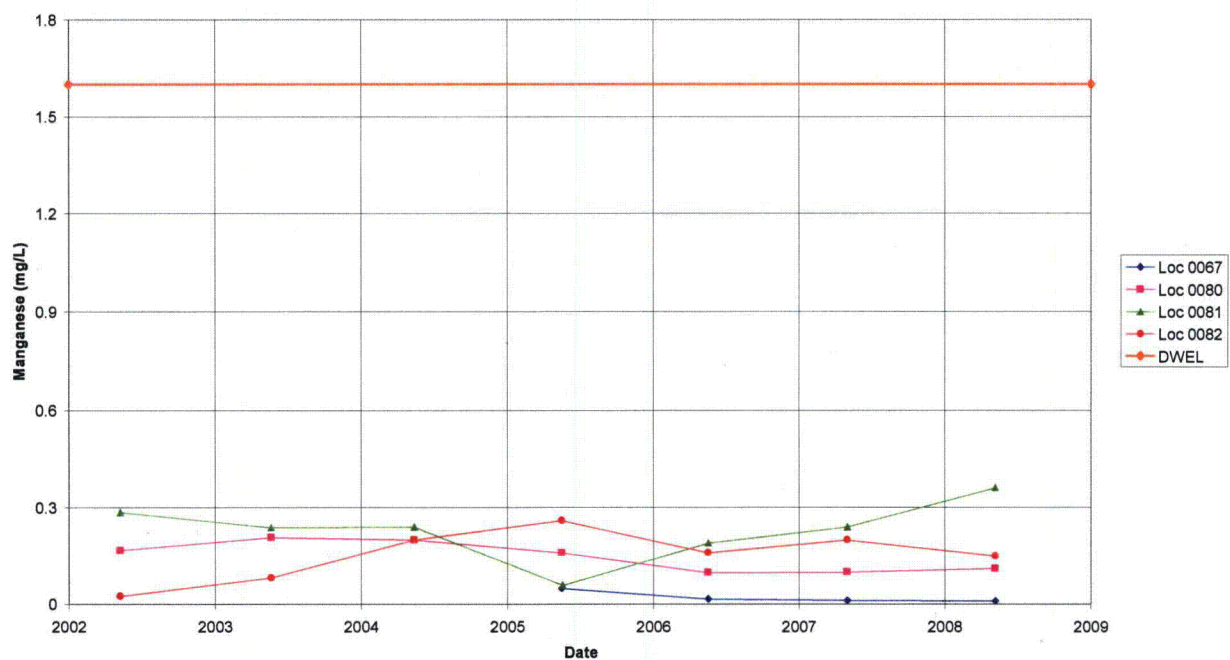


Figure 16. Manganese Concentrations in Groundwater – Domestic Wells South of Tomichi Creek

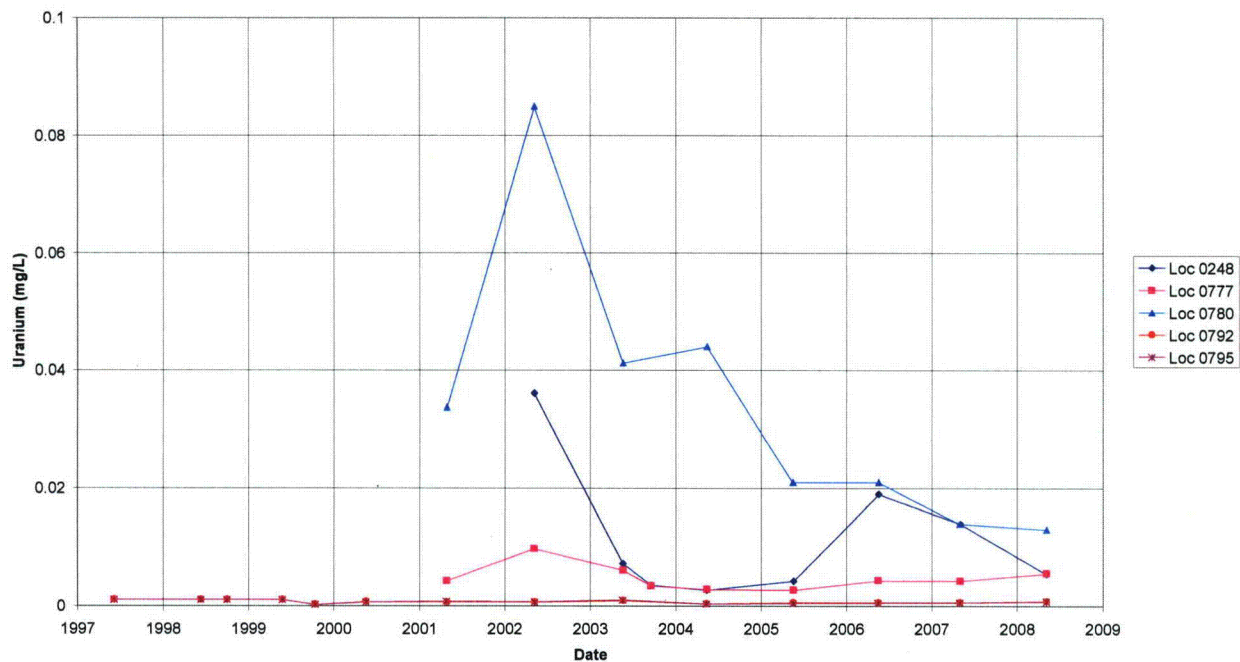


Figure 17. Uranium Concentrations in Surface Water Near the Gunnison Site

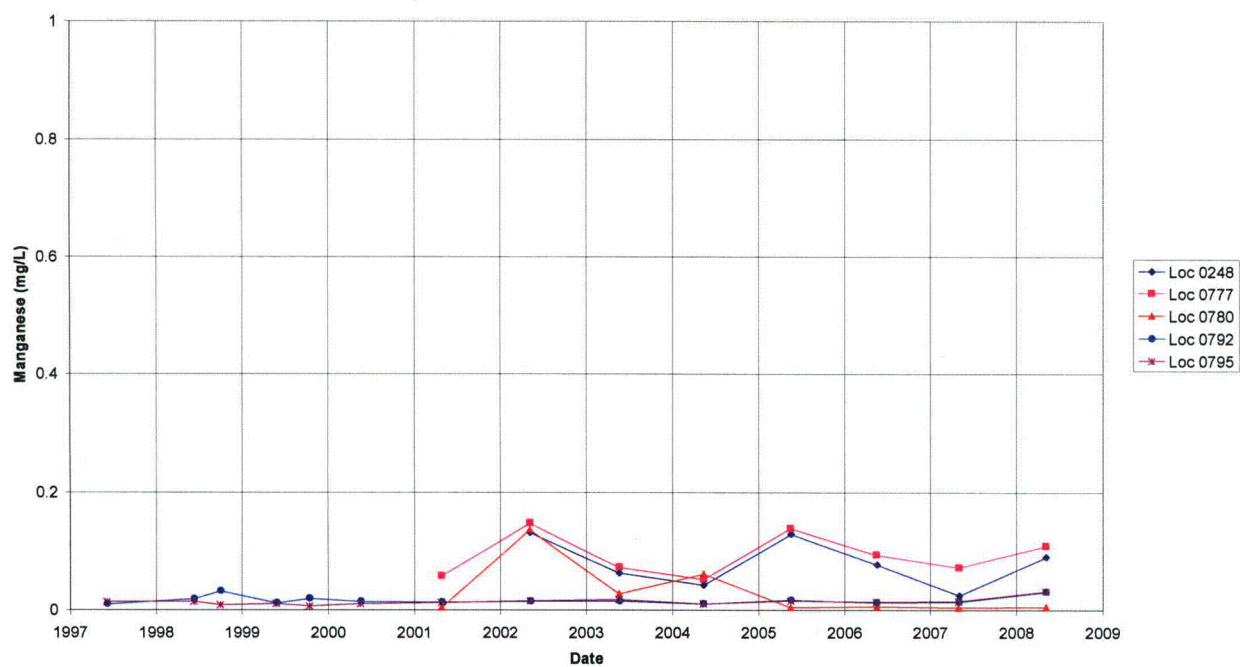


Figure 18. Manganese Concentrations in Surface Water Near the Gunnison Site

## 5.0 Natural Flushing Assessment

Groundwater flow and transport modeling has predicted that uranium concentrations in groundwater in the alluvial aquifer will decrease to below the EPA groundwater standard within 100 years. Figure 19 compares uranium concentrations predicted by groundwater flow and transport modeling to actual concentrations determined by analysis of groundwater samples from intermediate zone monitor well 0113. This well was selected as an indicator of natural flushing progress because of its location adjacent to and immediately downgradient of the millsite, which is in an area of the aquifer that should be the first to flush as the plume migrates off the millsite. Additionally, data from this well will be used to assess potential groundwater impacts from the RRM supplemental standards areas remaining on the millsite. As shown in this figure, recent concentrations are similar to concentrations predicted by the groundwater model and are trending downward, which indicates that natural flushing processes have been effective and RRM remaining on the millsite is not a significant, continuous source of groundwater contamination.

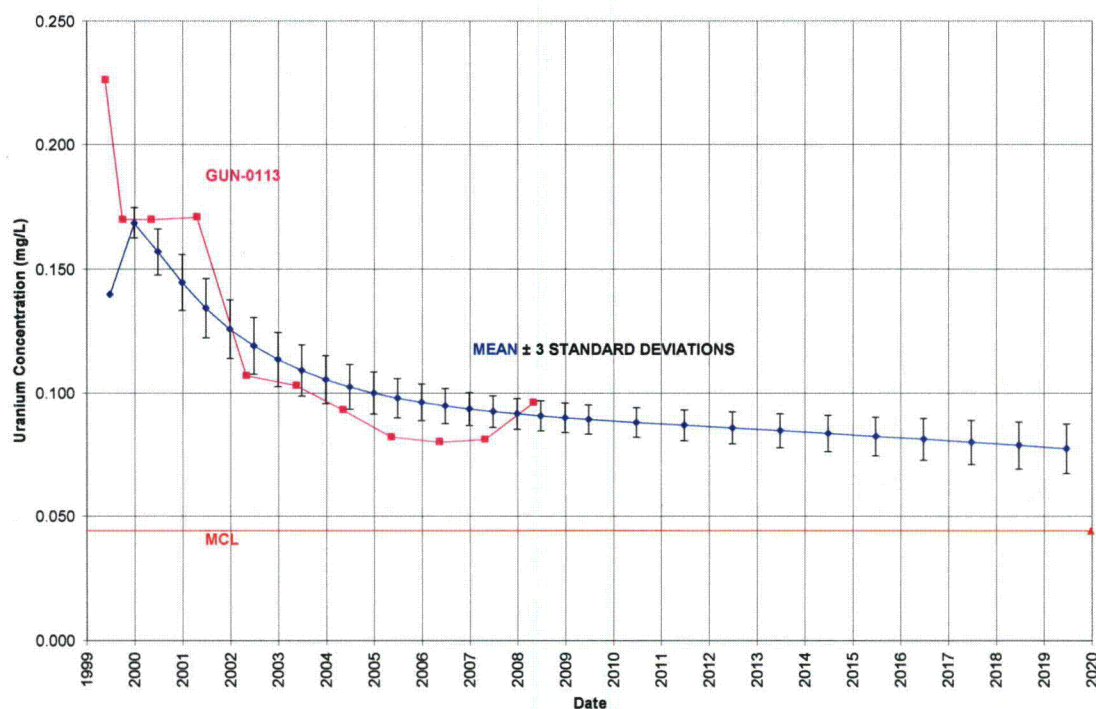


Figure 19. Uranium Concentration – Predicted and Actual – in DOE Monitor Well 0113 at the Gunnison Site



Trend analysis of uranium concentrations in groundwater using the Mann-Kendall test (Gilbert 1987) was performed to assess the temporal behavior of uranium concentrations. This test determines if an upward trend, downward trend, or no trend exists. As shown in Table 3, trends of uranium concentrations in monitor wells are generally down in wells on the millsite and immediately downgradient of the millsite, no trend in wells farther downgradient from the millsite, and upward in the wells farthest downgradient of the millsite. These trends are expected as contamination migrates through the aquifer and natural flushing progresses. The one exception to this is the intermediate zone wells on the millsite, which show an upward trend as uranium migrates vertically from the shallow zone.

Table 3. Assessment of Uranium Concentration Trends at the Gunnison Site

Location	No. of Samples	Trend <sup>1</sup>	2008 Result (mg/L)	Standard <sup>2</sup> Exceeded in 2008 (Yes/No)
0006	14	Down	0.760	Yes
0012/0012R	9	Down	0.370	Yes
0013	13	Down	0.028	No
0106	14	Up	0.010	No
0112	9	Up	0.036	No
0113	14	Down	0.096	Yes
0125	10	Down	0.007	No
0126	14	Down	0.0082	No
0127	14	Down	0.020	No
0135	5	None	0.0013	No
0136	10	None	0.018	No
0160	12	Up	0.024	No
0161	12	Up	0.019	No
0181	8	Down	0.014	No
0183	11	None	0.064	Yes
0186	10	Down	0.019	No
0188	14	None	0.037	No
0189	14	None	0.017	No

<sup>1</sup> Data from 1997 to 2008. Only wells with more than five data points are included.

<sup>2</sup> 0.044 mg/L from 40 CFR 192.



## 6.0 Conclusions

Concentrations of uranium and manganese in groundwater beneath the Gunnison site are still above their relevant MCL and DWEL, respectively, but are generally decreasing with time, indicating that natural flushing is progressing in the alluvial aquifer. Concentrations of uranium in groundwater downgradient from the site and deeper in the alluvial aquifer in some areas are still elevated and increasing, as expected, as the plume migrates downgradient. Contaminant distribution continues to confirm the site conceptual model of contaminants migrating deeper in the alluvial aquifer with distance from the millsite.

Uranium concentrations in the domestic wells sampled near the processing site were all below the MCL and the CDPHE action level. Manganese concentrations in these wells were all below the DWEL.

The uranium concentrations in the Gunnison River and Tomichi Creek locations indicate minimal impacts from contaminated groundwater discharge. Uranium concentration at the Valco, Inc., gravel pit pond (0780) is elevated when compared to background, which is expected because the gravel pit receives discharge of contaminated groundwater; however, the concentration was at an all-time low.

Verification monitoring of COPCs in groundwater in the alluvial aquifer and surface water in the vicinity of the Gunnison site will continue on an annual basis to assess the progress of natural flushing. The next update to this report will be compiled after groundwater and surface water monitoring in April 2009.

## 7.0 References

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## **Appendix A**

### **Groundwater Quality Data by Parameter for DOE Monitor Wells**

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CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0002	WL	05/06/2008	N001	AL	U	205	F #	-	-
	mg/L	0005	WL	05/07/2008	N001	AL	O	261	F #	-	-
	mg/L	0006	WL	05/07/2008	N001	AL	O	157	F #	-	-
	mg/L	0013	WL	05/06/2008	N001	AL	D	243	F #	-	-
	mg/L	0062	WL	05/06/2008	N001	AL	O	209	F #	-	-
	mg/L	0063	WL	05/06/2008	N001	AL	O	192	F #	-	-
	mg/L	0064	WL	05/06/2008	N001	AL	O	207	F #	-	-
	mg/L	0065	WL	05/06/2008	N001	AL	O	256	F #	-	-
	mg/L	0066	WL	05/05/2008	N001	AL	O	215	F #	-	-
	mg/L	0067	WL	05/06/2008	N001	AL	O	225	F #	-	-
	mg/L	0102	WL	05/06/2008	N001	AL	U	254	F #	-	-
	mg/L	0105	WL	05/07/2008	N001	AL	O	188	F #	-	-
	mg/L	0106	WL	05/07/2008	N001	AL	O	77	F #	-	-
	mg/L	0112	WL	05/07/2008	N001	AL	O	128	F #	-	-
	mg/L	0113	WL	05/06/2008	N001	AL	D	224	F #	-	-
	mg/L	0125	WL	05/06/2008	N001	AL	D	216	F #	-	-
	mg/L	0126	WL	05/06/2008	N001	AL	D	223	F #	-	-
	mg/L	0127	WL	05/06/2008	N001	AL	D	249	F #	-	-
	mg/L	0135	WL	05/06/2008	N001	AL	D	161	F #	-	-
	mg/L	0136	WL	05/06/2008	N001	AL	D	161	FQ #	-	-
	mg/L	0160	WL	05/05/2008	N001	AL	D	276	F #	-	-
	mg/L	0161	WL	05/05/2008	N001	AL	D	227	F #	-	-
	mg/L	0181	WL	05/07/2008	N001	AL	D	210	F #	-	-
	mg/L	0183	WL	05/07/2008	N001	AL	D	304	F #	-	-
	mg/L	0186	WL	05/05/2008	N001	AL	D	297	F #	-	-
	mg/L	0187	WL	05/05/2008	N001	AL	D	576	F #	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0188	WL	05/05/2008	N001	AL	D	290	F #	-	-
	mg/L	0189	WL	05/05/2008	N001	AL	D	981	FQ #	-	-
Manganese	mg/L	0002	WL	05/06/2008	N001	AL	U	0.0046	B F #	0.00013	-
	mg/L	0005	WL	05/07/2008	N001	AL	O	0.470	F #	0.00013	-
	mg/L	0006	WL	05/07/2008	N001	AL	O	0.076	F #	0.00013	-
	mg/L	0012R	WL	06/10/2008	N001			0.100	#	0.00013	-
	mg/L	0013	WL	05/06/2008	N001	AL	D	0.024	F #	0.00013	-
	mg/L	0062	WL	05/06/2008	N001	AL	O	0.0047	B F #	0.00013	-
	mg/L	0063	WL	05/06/2008	N001	AL	O	0.014	F #	0.00013	-
	mg/L	0064	WL	05/06/2008	N001	AL	O	0.032	F #	0.00013	-
	mg/L	0065	WL	05/06/2008	N001	AL	O	0.034	F #	0.00013	-
	mg/L	0066	WL	05/05/2008	N001	AL	O	0.019	F #	0.00013	-
	mg/L	0067	WL	05/06/2008	N001	AL	O	0.0091	F #	0.00013	-
	mg/L	0102	WL	05/06/2008	N001	AL	U	0.00083	B UF #	0.00013	-
	mg/L	0102	WL	05/06/2008	N002	AL	U	0.00061	B UF #	0.00013	-
	mg/L	0105	WL	05/07/2008	N001	AL	O	3.500	F #	0.00013	-
	mg/L	0106	WL	05/07/2008	N001	AL	O	6.500	F #	0.00013	-
	mg/L	0112	WL	05/07/2008	N001	AL	O	5.500	F #	0.00013	-
	mg/L	0112	WL	05/07/2008	N002	AL	O	5.800	F #	0.00013	-
	mg/L	0113	WL	05/06/2008	N001	AL	D	1.600	F #	0.00013	-
	mg/L	0125	WL	05/06/2008	N001	AL	D	0.035	F #	0.00013	-
	mg/L	0126	WL	05/06/2008	N001	AL	D	0.022	F #	0.00013	-
	mg/L	0127	WL	05/06/2008	N001	AL	D	0.0096	F #	0.00013	-
	mg/L	0135	WL	05/06/2008	N001	AL	D	3.500	F #	0.00013	-
	mg/L	0136	WL	05/06/2008	N001	AL	D	0.130	FQ #	0.00013	-
	mg/L	0160	WL	05/05/2008	N001	AL	D	0.091	F #	0.00013	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Manganese	mg/L	0161	WL	05/05/2008	N001	AL	D	0.011	F #	0.00013	-
	mg/L	0181	WL	05/07/2008	N001	AL	D	0.890	F #	0.00013	-
	mg/L	0183	WL	05/07/2008	N001	AL	D	0.0062	F #	0.00013	-
	mg/L	0186	WL	05/05/2008	N001	AL	D	0.0012	B UF #	0.00013	-
	mg/L	0187	WL	05/05/2008	N001	AL	D	1.200	F #	0.00013	-
	mg/L	0188	WL	05/05/2008	N001	AL	D	0.002	B UF #	0.00013	-
	mg/L	0189	WL	05/05/2008	N001	AL	D	0.850	FQ #	0.00013	-
Oxidation Reduction Potent	mV	0002	WL	05/06/2008	N001	AL	U	-11	F #	-	-
	mV	0005	WL	05/07/2008	N001	AL	O	-153	F #	-	-
	mV	0006	WL	05/07/2008	N001	AL	O	-122	F #	-	-
	mV	0012R	WL	06/10/2008	N001			90.9	#	-	-
	mV	0013	WL	05/06/2008	N001	AL	D	-47	F #	-	-
	mV	0062	WL	05/06/2008	N001	AL	O	-59	F #	-	-
	mV	0063	WL	05/06/2008	N001	AL	O	-65	F #	-	-
	mV	0064	WL	05/06/2008	N001	AL	O	-44	F #	-	-
	mV	0065	WL	05/06/2008	N001	AL	O	-36	F #	-	-
	mV	0066	WL	05/05/2008	N001	AL	O	-74	F #	-	-
	mV	0067	WL	05/06/2008	N001	AL	O	-77	F #	-	-
	mV	0102	WL	05/06/2008	N001	AL	U	-58	F #	-	-
	mV	0105	WL	05/07/2008	N001	AL	O	-146	F #	-	-
	mV	0106	WL	05/07/2008	N001	AL	O	-173	F #	-	-
	mV	0112	WL	05/07/2008	N001	AL	O	-214	F #	-	-
	mV	0113	WL	05/06/2008	N001	AL	D	-47	F #	-	-
	mV	0125	WL	05/06/2008	N001	AL	D	-160	F #	-	-
	mV	0126	WL	05/06/2008	N001	AL	D	-174	F #	-	-
	mV	0127	WL	05/06/2008	N001	AL	D	-205	F #	-	-



CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Oxidation Reduction Potent	mV	0135	WL	05/06/2008	N001	AL	D	-63	F #	-	-
	mV	0136	WL	05/06/2008	N001	AL	D	-72	FQ #	-	-
	mV	0160	WL	05/05/2008	N001	AL	D	10	F #	-	-
	mV	0161	WL	05/05/2008	N001	AL	D	19	F #	-	-
	mV	0181	WL	05/07/2008	N001	AL	D	-220	F #	-	-
	mV	0183	WL	05/07/2008	N001	AL	D	-203	F #	-	-
	mV	0186	WL	05/05/2008	N001	AL	D	-92	F #	-	-
	mV	0187	WL	05/05/2008	N001	AL	D	-115	F #	-	-
	mV	0188	WL	05/05/2008	N001	AL	D	145.5	F #	-	-
	mV	0189	WL	05/05/2008	N001	AL	D	18.3	FQ #	-	-
pH	s.u.	0002	WL	05/06/2008	N001	AL	U	7.13	F #	-	-
	s.u.	0005	WL	05/07/2008	N001	AL	O	7.26	F #	-	-
	s.u.	0006	WL	05/07/2008	N001	AL	O	7.07	F #	-	-
	s.u.	0012R	WL	06/10/2008	N001			6.82	#	-	-
	s.u.	0013	WL	05/06/2008	N001	AL	D	7.40	F #	-	-
	s.u.	0062	WL	05/06/2008	N001	AL	O	7.45	F #	-	-
	s.u.	0063	WL	05/06/2008	N001	AL	O	7.47	F #	-	-
	s.u.	0064	WL	05/06/2008	N001	AL	O	7.34	F #	-	-
	s.u.	0065	WL	05/06/2008	N001	AL	O	7.44	F #	-	-
	s.u.	0066	WL	05/05/2008	N001	AL	O	7.25	F #	-	-
	s.u.	0067	WL	05/06/2008	N001	AL	O	7.19	F #	-	-
	s.u.	0102	WL	05/06/2008	N001	AL	U	7.45	F #	-	-
	s.u.	0105	WL	05/07/2008	N001	AL	O	6.85	F #	-	-
	s.u.	0106	WL	05/07/2008	N001	AL	O	5.95	F #	-	-
	s.u.	0112	WL	05/07/2008	N001	AL	O	6.27	F #	-	-
	s.u.	0113	WL	05/06/2008	N001	AL	D	7.07	F #	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
pH	s.u.	0125	WL	05/06/2008	N001	AL	D	7.33	F #	-	-
	s.u.	0126	WL	05/06/2008	N001	AL	D	7.35	F #	-	-
	s.u.	0127	WL	05/06/2008	N001	AL	D	7.45	F #	-	-
	s.u.	0135	WL	05/06/2008	N001	AL	D	6.83	F #	-	-
	s.u.	0136	WL	05/06/2008	N001	AL	D	8.50	FQ #	-	-
	s.u.	0160	WL	05/05/2008	N001	AL	D	6.61	F #	-	-
	s.u.	0161	WL	05/05/2008	N001	AL	D	6.61	F #	-	-
	s.u.	0181	WL	05/07/2008	N001	AL	D	7.32	F #	-	-
	s.u.	0183	WL	05/07/2008	N001	AL	D	6.73	F #	-	-
	s.u.	0186	WL	05/05/2008	N001	AL	D	7.41	F #	-	-
	s.u.	0187	WL	05/05/2008	N001	AL	D	6.51	F #	-	-
	s.u.	0188	WL	05/05/2008	N001	AL	D	7.05	F #	-	-
	s.u.	0189	WL	05/05/2008	N001	AL	D	6.33	FQ #	-	-
Specific Conductance	umhos/cm	0002	WL	05/06/2008	N001	AL	U	1090	F #	-	-
	umhos/cm	0005	WL	05/07/2008	N001	AL	O	687	F #	-	-
	umhos/cm	0006	WL	05/07/2008	N001	AL	O	2319	F #	-	-
	umhos/cm	0012R	WL	06/10/2008	N001			1474	#	-	-
	umhos/cm	0013	WL	05/06/2008	N001	AL	D	712	F #	-	-
	umhos/cm	0062	WL	05/06/2008	N001	AL	O	541	F #	-	-
	umhos/cm	0063	WL	05/06/2008	N001	AL	O	487	F #	-	-
	umhos/cm	0064	WL	05/06/2008	N001	AL	O	513	F #	-	-
	umhos/cm	0065	WL	05/06/2008	N001	AL	O	743	F #	-	-
	umhos/cm	0066	WL	05/05/2008	N001	AL	O	701	F #	-	-
	umhos/cm	0067	WL	05/06/2008	N001	AL	O	486	F #	-	-
	umhos/cm	0102	WL	05/06/2008	N001	AL	U	584	F #	-	-
	umhos/cm	0105	WL	05/07/2008	N001	AL	O	536	F #	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Specific Conductance	umhos/cm	0106	WL	05/07/2008	N001	AL	O	1946	F #	-	-
	umhos/cm	0112	WL	05/07/2008	N001	AL	O	976	F #	-	-
	umhos/cm	0113	WL	05/06/2008	N001	AL	D	552	F #	-	-
	umhos/cm	0125	WL	05/06/2008	N001	AL	D	483	F #	-	-
	umhos/cm	0126	WL	05/06/2008	N001	AL	D	643	F #	-	-
	umhos/cm	0127	WL	05/06/2008	N001	AL	D	776	F #	-	-
	umhos/cm	0135	WL	05/06/2008	N001	AL	D	412	F #	-	-
	umhos/cm	0136	WL	05/06/2008	N001	AL	D	585	FQ #	-	-
	umhos/cm	0160	WL	05/05/2008	N001	AL	D	836	F #	-	-
	umhos/cm	0161	WL	05/05/2008	N001	AL	D	839	F #	-	-
	umhos/cm	0181	WL	05/07/2008	N001	AL	D	642	F #	-	-
	umhos/cm	0183	WL	05/07/2008	N001	AL	D	1146	F #	-	-
	umhos/cm	0186	WL	05/05/2008	N001	AL	D	691	F #	-	-
	umhos/cm	0187	WL	05/05/2008	N001	AL	D	1293	F #	-	-
	umhos/cm	0188	WL	05/05/2008	N001	AL	D	808	F #	-	-
	umhos/cm	0189	WL	05/05/2008	N001	AL	D	2086	FQ #	-	-
Temperature	C	0002	WL	05/06/2008	N001	AL	U	9.7	F #	-	-
	C	0005	WL	05/07/2008	N001	AL	O	7.9	F #	-	-
	C	0006	WL	05/07/2008	N001	AL	O	7.6	F #	-	-
	C	0012R	WL	06/10/2008	N001			10.48	#	-	-
	C	0013	WL	05/06/2008	N001	AL	D	9.1	F #	-	-
	C	0062	WL	05/06/2008	N001	AL	O	8.6	F #	-	-
	C	0063	WL	05/06/2008	N001	AL	O	9.0	F #	-	-
	C	0064	WL	05/06/2008	N001	AL	O	9.3	F #	-	-
	C	0065	WL	05/06/2008	N001	AL	O	9.1	F #	-	-
	C	0066	WL	05/05/2008	N001	AL	O	9.7	F #	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Temperature	C	0067	WL	05/06/2008	N001	AL	O	9.5	F #	-	-
	C	0102	WL	05/06/2008	N001	AL	U	12.7	F #	-	-
	C	0105	WL	05/07/2008	N001	AL	O	9.6	F #	-	-
	C	0106	WL	05/07/2008	N001	AL	O	9.6	F #	-	-
	C	0112	WL	05/07/2008	N001	AL	O	9.5	F #	-	-
	C	0113	WL	05/06/2008	N001	AL	D	10.7	F #	-	-
	C	0125	WL	05/06/2008	N001	AL	D	8.3	F #	-	-
	C	0126	WL	05/06/2008	N001	AL	D	8.9	F #	-	-
	C	0127	WL	05/06/2008	N001	AL	D	8.1	F #	-	-
	C	0135	WL	05/06/2008	N001	AL	D	7.9	F #	-	-
	C	0136	WL	05/06/2008	N001	AL	D	9.1	FQ #	-	-
	C	0160	WL	05/05/2008	N001	AL	D	9.3	F #	-	-
	C	0161	WL	05/05/2008	N001	AL	D	9.0	F #	-	-
	C	0181	WL	05/07/2008	N001	AL	D	6.7	F #	-	-
	C	0183	WL	05/07/2008	N001	AL	D	7.3	F #	-	-
	C	0186	WL	05/05/2008	N001	AL	D	9.2	F #	-	-
	C	0187	WL	05/05/2008	N001	AL	D	9.2	F #	-	-
	C	0188	WL	05/05/2008	N001	AL	D	8.26	F #	-	-
	C	0189	WL	05/05/2008	N001	AL	D	8.42	FQ #	-	-
Turbidity	NTU	0002	WL	05/06/2008	N001	AL	U	1.84	F #	-	-
	NTU	0005	WL	05/07/2008	N001	AL	O	9.98	F #	-	-
	NTU	0006	WL	05/07/2008	N001	AL	O	4.99	F #	-	-
	NTU	0012R	WL	06/10/2008	N001			2.87	#	-	-
	NTU	0013	WL	05/06/2008	N001	AL	D	1.39	F #	-	-
	NTU	0062	WL	05/06/2008	N001	AL	O	2.79	F #	-	-
	NTU	0063	WL	05/06/2008	N001	AL	O	3.56	F #	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Turbidity	NTU	0064	WL	05/06/2008	N001	AL	O	4.22	F #	-	-
	NTU	0065	WL	05/06/2008	N001	AL	O	7.99	F #	-	-
	NTU	0066	WL	05/05/2008	N001	AL	O	2.00	F #	-	-
	NTU	0067	WL	05/06/2008	N001	AL	O	3.48	F #	-	-
	NTU	0102	WL	05/06/2008	N001	AL	U	1.01	F #	-	-
	NTU	0105	WL	05/07/2008	N001	AL	O	3.54	F #	-	-
	NTU	0106	WL	05/07/2008	N001	AL	O	4.37	F #	-	-
	NTU	0112	WL	05/07/2008	N001	AL	O	1.47	F #	-	-
	NTU	0113	WL	05/06/2008	N001	AL	D	1.74	F #	-	-
	NTU	0125	WL	05/06/2008	N001	AL	D	1.18	F #	-	-
	NTU	0126	WL	05/06/2008	N001	AL	D	2.14	F #	-	-
	NTU	0127	WL	05/06/2008	N001	AL	D	4.61	F #	-	-
	NTU	0135	WL	05/06/2008	N001	AL	D	4.22	F #	-	-
	NTU	0136	WL	05/06/2008	N001	AL	D	21.5	FQ #	-	-
	NTU	0160	WL	05/05/2008	N001	AL	D	3.60	F #	-	-
	NTU	0161	WL	05/05/2008	N001	AL	D	3.01	F #	-	-
	NTU	0181	WL	05/07/2008	N001	AL	D	7.16	F #	-	-
	NTU	0183	WL	05/07/2008	N001	AL	D	8.90	F #	-	-
	NTU	0186	WL	05/05/2008	N001	AL	D	1.94	F #	-	-
	NTU	0187	WL	05/05/2008	N001	AL	D	8.79	F #	-	-
	NTU	0188	WL	05/05/2008	N001	AL	D	2.31	F #	-	-
	NTU	0189	WL	05/05/2008	N001	AL	D	6.18	FQ #	-	-
Uranium	mg/L	0002	WL	05/06/2008	N001	AL	U	0.0039	F #	0.0001	-
	mg/L	0005	WL	05/07/2008	N001	AL	O	0.060	F #	0.0001	-
	mg/L	0006	WL	05/07/2008	N001	AL	O	0.760	F #	0.001	-
	mg/L	0012R	WL	06/10/2008	N001			0.370	#	0.001	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Uranium	mg/L	0013	WL	05/06/2008	N001	AL	D	0.028	F #	0.0001	-
	mg/L	0062	WL	05/06/2008	N001	AL	O	0.0089	F #	0.0001	-
	mg/L	0063	WL	05/06/2008	N001	AL	O	0.011	F #	0.0001	-
	mg/L	0064	WL	05/06/2008	N001	AL	O	0.013	F #	0.0001	-
	mg/L	0065	WL	05/06/2008	N001	AL	O	0.033	F #	0.0001	-
	mg/L	0066	WL	05/05/2008	N001	AL	O	0.024	F #	0.0001	-
	mg/L	0067	WL	05/06/2008	N001	AL	O	0.011	F #	0.0001	-
	mg/L	0102	WL	05/06/2008	N001	AL	U	0.0044	F #	0.0001	-
	mg/L	0102	WL	05/06/2008	N002	AL	U	0.0043	F #	0.0001	-
	mg/L	0105	WL	05/07/2008	N001	AL	O	0.016	F #	0.0001	-
	mg/L	0106	WL	05/07/2008	N001	AL	O	0.010	F #	0.0001	-
	mg/L	0112	WL	05/07/2008	N001	AL	O	0.036	F #	0.0001	-
	mg/L	0112	WL	05/07/2008	N002	AL	O	0.036	F #	0.0001	-
	mg/L	0113	WL	05/06/2008	N001	AL	D	0.096	F #	0.0001	-
	mg/L	0125	WL	05/06/2008	N001	AL	D	0.0082	F #	0.0001	-
	mg/L	0126	WL	05/06/2008	N001	AL	D	0.012	F #	0.0001	-
	mg/L	0127	WL	05/06/2008	N001	AL	D	0.020	F #	0.0001	-
	mg/L	0135	WL	05/06/2008	N001	AL	D	0.0013	F #	0.0001	-
	mg/L	0136	WL	05/06/2008	N001	AL	D	0.018	FQ #	0.0001	-
	mg/L	0160	WL	05/05/2008	N001	AL	D	0.024	F #	0.0001	-
	mg/L	0161	WL	05/05/2008	N001	AL	D	0.019	F #	0.0001	-
	mg/L	0181	WL	05/07/2008	N001	AL	D	0.014	F #	0.0001	-
	mg/L	0183	WL	05/07/2008	N001	AL	D	0.064	F #	0.0001	-
	mg/L	0186	WL	05/05/2008	N001	AL	D	0.019	F #	0.0001	-
	mg/L	0187	WL	05/05/2008	N001	AL	D	0.026	F #	0.0001	-
	mg/L	0188	WL	05/05/2008	N001	AL	D	0.037	F #	0.0001	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Uranium	mg/L	0189	WL	05/05/2008	N001	AL	D	0.017	FQ #	0.0001	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site

REPORT DATE: 8/1/2008 3:01 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
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RECORDS: SELECTED FROM USEE200 WHERE site\_code='GUN01' AND location\_code  
in('0002','0005','0006','0012R','0013','0062','0063','0064','0065','0066','0067','0102','0105','0106','0112','0113','0125','0126','0127','0135','0136','0160','0161','0181','0183','0186','0187','0188','0189')  
AND quality\_assurance = TRUE AND (data\_validation\_qualifiers IS NULL OR data\_validation\_qualifiers NOT LIKE '%N%' AND data\_validation\_qualifiers NOT LIKE '%R%' AND  
data\_validation\_qualifiers NOT LIKE '%X%') AND DATE\_SAMPLED between #4/1/2008# and #6/30/2008#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LOCATION TYPES: WL WELL

ZONES OF COMPLETION:

AL ALLUVIUM

FLOW CODES: D DOWN GRADIENT O ON-SITE U UPGRADIENT

LAB QUALIFIERS:

- \* Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- |  |  |  |
|--|--|--|
| F Low flow sampling method used.                     | G Possible grout contamination, pH > 9.  | J Estimated value.                             |
| L Less than 3 bore volumes purged prior to sampling. | N Presumptive evidence that analyte is present. The analyte is "tentatively identified". | Q Qualitative result due to sampling technique |
| R Unusable result.                                   | U Parameter analyzed for but was not detected.   | X Location is undefined.                       |

QA QUALIFIER: # = validated according to Quality Assurance guidelines.



## **Appendix B**

### **Groundwater Quality Data by Parameter for Domestic Wells**

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CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 2:57 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0080	WL	05/06/2008	N001	AL		223	#	-	-
	mg/L	0081	WL	05/06/2008	N001	AL		178	#	-	-
	mg/L	0082	WL	05/06/2008	N001	AL		270	#	-	-
	mg/L	0469	WL	05/05/2008	N001	AL	D	80	#	-	-
	mg/L	0476	WL	05/05/2008	N001			110	#	-	-
	mg/L	0477	WL	05/05/2008	N001			119	#	-	-
	mg/L	0667	WL	05/05/2008	N001	AL	N	101	#	-	-
	mg/L	0683	WL	05/05/2008	N001	AL	N	124	#	-	-
Manganese	mg/L	0080	WL	05/06/2008	N001	AL		0.110	#	0.00013	-
	mg/L	0081	WL	05/06/2008	N001	AL		0.360	#	0.00013	-
	mg/L	0082	WL	05/06/2008	N001	AL		0.150	#	0.00013	-
	mg/L	0469	WL	05/05/2008	N001	AL	D	0.0015	B U	0.00013	-
	mg/L	0476	WL	05/05/2008	N001			0.0045	B	0.00013	-
	mg/L	0477	WL	05/05/2008	N001			0.017	#	0.00013	-
	mg/L	0667	WL	05/05/2008	N001	AL	N	0.0015	B U	0.00013	-
	mg/L	0683	WL	05/05/2008	N001	AL	N	0.0015	B U	0.00013	-
Oxidation Reduction Potent	mV	0080	WL	05/06/2008	N001	AL		-98	#	-	-
	mV	0081	WL	05/06/2008	N001	AL		-177	#	-	-
	mV	0082	WL	05/06/2008	N001	AL		-140	#	-	-
	mV	0469	WL	05/05/2008	N001	AL	D	15	#	-	-
	mV	0476	WL	05/05/2008	N001			-29	#	-	-
	mV	0477	WL	05/05/2008	N001			-48	#	-	-
	mV	0667	WL	05/05/2008	N001	AL	N	28	#	-	-
	mV	0683	WL	05/05/2008	N001	AL	N	26	#	-	-
pH	s.u.	0080	WL	05/06/2008	N001	AL		7.21	#	-	-
	s.u.	0081	WL	05/06/2008	N001	AL		7.65	#	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 2:57 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
pH	s.u.	0082	WL	05/06/2008	N001	AL		7.30	#	-	-
	s.u.	0469	WL	05/05/2008	N001	AL	D	8.14	#	-	-
	s.u.	0476	WL	05/05/2008	N001			7.29	#	-	-
	s.u.	0477	WL	05/05/2008	N001			7.52	#	-	-
	s.u.	0667	WL	05/05/2008	N001	AL	N	7.25	#	-	-
	s.u.	0683	WL	05/05/2008	N001	AL	N	7.78	#	-	-
Specific Conductance	umhos/cm	0080	WL	05/06/2008	N001	AL		469	#	-	-
	umhos/cm	0081	WL	05/06/2008	N001	AL		374	#	-	-
	umhos/cm	0082	WL	05/06/2008	N001	AL		527	#	-	-
	umhos/cm	0469	WL	05/05/2008	N001	AL	D	231	#	-	-
	umhos/cm	0476	WL	05/05/2008	N001			242	#	-	-
	umhos/cm	0477	WL	05/05/2008	N001			258	#	-	-
	umhos/cm	0667	WL	05/05/2008	N001	AL	N	266	#	-	-
	umhos/cm	0683	WL	05/05/2008	N001	AL	N	313	#	-	-
Temperature	C	0080	WL	05/06/2008	N001	AL		10.6	#	-	-
	C	0081	WL	05/06/2008	N001	AL		6.6	#	-	-
	C	0082	WL	05/06/2008	N001	AL		9.3	#	-	-
	C	0469	WL	05/05/2008	N001	AL	D	15.2	#	-	-
	C	0476	WL	05/05/2008	N001			12.6	#	-	-
	C	0477	WL	05/05/2008	N001			10.8	#	-	-
	C	0667	WL	05/05/2008	N001	AL	N	10.0	#	-	-
	C	0683	WL	05/05/2008	N001	AL	N	11.0	#	-	-
Turbidity	NTU	0080	WL	05/06/2008	N001	AL		2.46	#	-	-
	NTU	0081	WL	05/06/2008	N001	AL		2.34	#	-	-
	NTU	0082	WL	05/06/2008	N001	AL		2.44	#	-	-
	NTU	0469	WL	05/05/2008	N001	AL	D	2.52	#	-	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 2:57 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Turbidity	NTU	0476	WL	05/05/2008	N001			2.19	#	-	-
	NTU	0477	WL	05/05/2008	N001			1.79	#	-	-
	NTU	0667	WL	05/05/2008	N001	AL	N	1.89	#	-	-
	NTU	0683	WL	05/05/2008	N001	AL	N	2.66	#	-	-
Uranium	mg/L	0080	WL	05/06/2008	N001	AL		0.0037	#	0.0001	-
	mg/L	0081	WL	05/06/2008	N001	AL		0.0009	#	0.0001	-
	mg/L	0082	WL	05/06/2008	N001	AL		0.0042	#	0.0001	-
	mg/L	0469	WL	05/05/2008	N001	AL	D	0.00064	#	0.0001	-
	mg/L	0476	WL	05/05/2008	N001			0.0016	#	0.0001	-
	mg/L	0477	WL	05/05/2008	N001			0.00058	#	0.0001	-
	mg/L	0667	WL	05/05/2008	N001	AL	N	0.0023	#	0.0001	-
	mg/L	0683	WL	05/05/2008	N001	AL	N	0.001	#	0.0001	-

CLASSIC GROUND WATER QUALITY DATA BY PARAMETER WITH ZONE (USEE201) FOR SITE GUN01, Gunnison Processing Site

REPORT DATE: 8/1/2008 2:57 pm

PARAMETER	UNITS	LOCATION ID	LOCATION TYPE	SAMPLE: DATE	ID	ZONE COMPL	FLOW REL	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
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RECORDS: SELECTED FROM USEE200 WHERE site\_code='GUN01' AND location\_code in('0080','0081','0082','0469','0476','0477','0667','0683') AND quality\_assurance = TRUE AND (data\_validation\_qualifiers IS NULL OR data\_validation\_qualifiers NOT LIKE '%N%' AND data\_validation\_qualifiers NOT LIKE '%R%' AND data\_validation\_qualifiers NOT LIKE '%X%') AND DATE\_SAMPLED between #4/1/2008# and #6/30/2008#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LOCATION TYPES: WL WELL

ZONES OF COMPLETION:

AL ALLUVIUM

FLOW CODES: D DOWN GRADIENT N UNKNOWN

LAB QUALIFIERS:

- \* Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- F Low flow sampling method used.
- G Possible grout contamination, pH > 9.
- J Estimated value.
- L Less than 3 bore volumes purged prior to sampling.
- N Presumptive evidence that analyte is present. The analyte is "tentatively identified".
- Q Qualitative result due to sampling technique
- R Unusable result.
- U Parameter analyzed for but was not detected.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

## **Appendix C**

### **Surface Water Quality Data by Parameter**

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SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 2:35 pm

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN- CERTAINTY
Alkalinity, Total (As CaCO3	mg/L	0248	05/05/2008	N001	88	#	-	-
	mg/L	0777	05/05/2008	N001	87	#	-	-
	mg/L	0780	05/06/2008	N001	82	#	-	-
	mg/L	0792	05/05/2008	N001	75	#	-	-
	mg/L	0795	05/05/2008	N001	78	#	-	-
Manganese	mg/L	0248	05/05/2008	N001	0.091	#	0.00013	-
	mg/L	0777	05/05/2008	N001	0.110	#	0.00013	-
	mg/L	0780	05/06/2008	N001	0.0051	#	0.00013	-
	mg/L	0792	05/05/2008	N001	0.031	#	0.00013	-
	mg/L	0795	05/05/2008	N001	0.032	#	0.00013	-
Oxidation Reduction Potent	mV	0248	05/05/2008	N001	-25	#	-	-
	mV	0777	05/05/2008	N001	-30	#	-	-
	mV	0780	05/06/2008	N001	64	#	-	-
	mV	0792	05/05/2008	N001	51	#	-	-
	mV	0795	05/05/2008	N001	5.7	#	-	-
pH	s.u.	0248	05/05/2008	N001	7.96	#	-	-
	s.u.	0777	05/05/2008	N001	7.41	#	-	-
	s.u.	0780	05/06/2008	N001	8.75	#	-	-
	s.u.	0792	05/05/2008	N001	7.97	#	-	-
	s.u.	0795	05/05/2008	N001	8.23	#	-	-
Specific Conductance	umhos/cm	0248	05/05/2008	N001	239	#	-	-
	umhos/cm	0777	05/05/2008	N001	272	#	-	-
	umhos/cm	0780	05/06/2008	N001	356	#	-	-
	umhos/cm	0792	05/05/2008	N001	215	#	-	-
	umhos/cm	0795	05/05/2008	N001	200	#	-	-
Temperature	C	0248	05/05/2008	N001	11.3	#	-	-
	C	0777	05/05/2008	N001	12.6	#	-	-
	C	0780	05/06/2008	N001	14.3	#	-	-
	C	0792	05/05/2008	N001	9.5	#	-	-
	C	0795	05/05/2008	N001	9.7	#	-	-
Turbidity	NTU	0248	05/05/2008	N001	9.86	#	-	-
	NTU	0777	05/05/2008	N001	9.72	#	-	-
	NTU	0780	05/06/2008	N001	3.12	#	-	-
	NTU	0792	05/05/2008	N001	7.28	#	-	-
	NTU	0795	05/05/2008	N001	5.63	#	-	-
Uranium	mg/L	0248	05/05/2008	N001	0.0054	#	0.0001	-
	mg/L	0777	05/05/2008	N001	0.0055	#	0.0001	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE GUN01, Gunnison Processing Site  
REPORT DATE: 8/1/2008 2:35 pm

PARAMETER	UNITS	LOCATION		SAMPLE:		RESULT	QUALIFIERS:			DETECTION LIMIT	UN- CERTAINTY
		ID	DATE	ID			LAB	DATA	QA		
Uranium	mg/L	0780	05/06/2008	N001		0.013			#	0.0001	-
	mg/L	0792	05/05/2008	N001		0.0007			#	0.0001	-
	mg/L	0795	05/05/2008	N001		0.0007			#	0.0001	-

RECORDS: SELECTED FROM USEE800 WHERE site\_code='GUN01' AND quality\_assurance = TRUE AND (data\_validation\_qualifiers IS NULL OR data\_validation\_qualifiers NOT LIKE '%N%' AND data\_validation\_qualifiers NOT LIKE '%R%' AND data\_validation\_qualifiers NOT LIKE '%X%') AND DATE\_SAMPLED between #4/1/2008# and #6/30/2008#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- \* Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- F Low flow sampling method used.
- J Estimated value.
- N Presumptive evidence that analyte is present. The analyte is "tentatively identified".
- R Unusable result.
- X Location is undefined.
- G Possible grout contamination, pH > 9.
- L Less than 3 bore volumes purged prior to sampling.
- Q Qualitative result due to sampling technique
- U Parameter analyzed for but was not detected.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

**Appendix D**

**Water Level Data for 2008**

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STATIC WATER LEVELS (USEE700) FOR SITE GUN01, Gunnison Processing Site  
 REPORT DATE: 8/1/2008 2:36 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			
0002	U	7646.75	05/06/2008		3.20	7643.55	
0005	O	7644.66	05/07/2008		4.70	7639.96	
0006	O	7647.19	05/07/2008		9.32	7637.87	
0012R		-	06/10/2008		10.14	-10.14	
0013	D	7643.75	05/06/2008		10.57	7633.18	
0062	O	7630.61	05/06/2008		6.74	7623.87	
0063	O	7630.34	05/06/2008		7.76	7622.58	
0064	O	7620.76	05/06/2008		6.69	7614.07	
0065	O	7610.27	05/06/2008		1.98	7608.29	
0066	O	7606.22	05/05/2008		1.48	7604.74	
0067	O	7628.96	05/06/2008		2.00	7626.96	
0081		-	05/06/2008		3.54	-3.54	
0082		-	05/06/2008		2.25	-2.25	
0102	U	7647.30	05/06/2008		4.08	7643.22	
0105	O	7646.11	05/07/2008		6.84	7639.27	
0106	O	7647.30	05/07/2008		9.60	7637.70	
0112	O	7644.84	05/07/2008		10.72	7634.12	
0113	D	7643.83	05/06/2008		10.79	7633.04	
0125	D	7633.52	05/06/2008		6.15	7627.37	
0126	D	7634.14	05/06/2008		6.51	7627.63	
0127	D	7634.64	05/06/2008		8.24	7626.40	
0135	D	7627.03	05/06/2008		5.82	7621.21	
0136	D	7626.24	05/06/2008		5.87	7620.37	
0160	D	7604.39	05/05/2008		4.81	7599.58	
0161	D	7605.63	05/05/2008		6.25	7599.38	
0181	D	7619.07	05/07/2008		2.39	7616.68	
0183	D	7617.82	05/07/2008		4.41	7613.41	
0186	D	7627.21	05/05/2008		6.12	7621.09	
0187	D	7625.91	05/05/2008		5.61	7620.30	
0188	D	7613.65	05/05/2008		5.57	7608.08	

STATIC WATER LEVELS (USEE700) FOR SITE GUN01, Gunnison Processing Site  
REPORT DATE: 8/1/2008 2:36 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			
0189	D	7613.56	05/05/2008		6.20	7607.36	

RECORDS: SELECTED FROM USEE700 WHERE site\_code='GUN01' AND LOG\_DATE between #4/1/2008# and #8/30/2008#

FLOW CODES: D DOWN GRADIENT O ON-SITE U UPGRADIENT

WATER LEVEL FLAGS: