LMS/MND/S08562

Mound, Ohio, Site

Parcel 6, 7, and 8 Groundwater Monitoring Report Calendar Year 2011

September 2012

U.S. DEPARTMENT OF ENERGY | Legacy Management

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Abbreviations

BVA	Buried Valley Aquifer
DCE	dichloroethene
MCL	maximum contaminant level
µg/L	micrograms per liter
MNA	monitored natural attenuation
nCi/L	nanocuries per liter
PCE	tetrachloroethene
pCi/L	picocuries per liter
Ra-226	radium-226
Ra-228	radium-228
Sr-90	strontium-90
TCE	trichloroethene
VOC	volatile organic compound

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1.0 Introduction

Parcels 6, 7, and 8 occupy approximately 101 acres of the northern portion of the Mound Plant site. The main production facilities were located within Parcels 6 and 8, and this area is called the Main Hill area. A tributary valley runs between these two parcels and Parcel 7; it contains a narrow tongue of glacial deposits that are in hydraulic communication with the Buried Valley Aquifer (BVA). Groundwater within the fractured bedrock beneath the Main Hill area, and in topographic highs within Parcel 7, flows along horizontal bedding planes and fractures and ultimately discharges to seeps or to the downgradient BVA.

Two monitoring wells in the BVA indicate volatile organic compound (VOC) impact, primarily trichloroethene (TCE), that exceeds maximum contaminant levels (MCLs) established in the Safe Drinking Water Act. Monitored natural attenuation (MNA) is being proposed as the remedy for the VOCs in the groundwater associated with the Main Hill (DOE 2009a). Sampling is being performed to assess the contaminant concentrations and to ensure that the downgradient BVA is not being affected.

Also associated with this area are seeps located along the Main Hill of the plant property. Two seeps are within the plant property boundary, and the remaining four seeps are offsite to the north. Several seeps in this area have elevated levels of tritium and VOCs. One seep also has elevated levels of radium-226 (Ra-226), radium-228 (Ra-228), and strontium-90 (Sr-90). These seeps and several downgradient wells are being monitored to verify that source removal (buildings and soil) on the Main Hill will result in decreasing concentrations over time.

1.1 Purpose

This report was prepared to summarize the data collected in 2011. An annual report has been prepared for this area since 2006. All sampling and data analyses were performed in accordance with the *Parcel 6, 7, and 8 Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan* (DOE 2006), unless noted otherwise.

The report includes data collected in the four quarterly groundwater sampling events performed in 2011. Data are presented in time-series plots and map-view plots. Trend analysis was performed on selected wells using the nonparametric Mann-Kendall test. This type of long-term trend analysis can be used to confirm downward trends in contaminant concentrations. The time-series plots will also be used to evaluate changes in data over time.

The report also documents any operational changes that occurred during the reporting period and identifies any maintenance or repair activities associated with the monitoring wells being sampled.

1.2 Summary of 2010 Report

The conclusions from the 2010 Annual Report (DOE 2011a) were as follows:

- VOC data demonstrated that the highest TCE impact in groundwater continued to be associated with wells 0315 and 0347, where concentrations exceeded the MCL of 5 micrograms per liter (µg/L). The concentration of TCE in source well 0347 exceeded the

trigger of 30 µg/L during the first quarter. TCE impact extended to four wells screened in the BVA immediately downgradient of this area. TCE remained undetected in the remainder of the downgradient BVA wells. Concentrations of TCE in wells 0315 and 0347 were variable since monitoring started. Statistical analysis indicated increasing TCE concentrations in source wells 0315 and 0347; however, no trends were present in the data for these two wells. A downward trend in the TCE concentrations was determined in the data from well 0386. The concentrations in the six BVA wells remained below the MCL.

- TCE concentrations in some of the Main Hill seeps continued to exceed the MCL in 2010, but no locations had concentrations that exceeded the trigger level of 150 µg/L (established for seep 0605). The highest concentrations continued to be measured in seep 0602, which is onsite. Detectable concentrations of *cis*-1,2-dichloroethene (DCE) were reported in seeps 0602 and 0605. Statistical analysis using data collected since 2005 indicated an upward trend in TCE for seep 0602 and a downward trend in seep 0605. Monitoring results indicated elevated concentrations of TCE in downgradient wells 0347 and 0379.
- Tetrachloroethene (PCE) concentrations continued to exceed the MCL of 5 µg/L at seep 0601; however, concentrations at this location did not exceed the trigger level of 75 µg/L. No statistical trend in the PCE concentrations was identified in the data from seep 0601.
- Tritium levels in the Main Hill seeps continued to be elevated during 2010 and were higher than the levels in the downgradient groundwater wells. The highest tritium activity was observed in seep 0601, which is onsite. None of the seep locations had tritium levels that exceeded the trigger level of 1,500 nanocuries per liter (nCi/L). Tritium levels in seep 0601 exceeded the MCL of 20 nCi/L. Tritium was detected in five wells downgradient of the Main Hill area. The highest levels were observed in well 0347, which is downgradient of seeps 0601 and 0602. None of the groundwater wells had tritium levels that exceeded the MCL of 20 nCi/L. Statistical analysis using data collected since 2005 indicated downward trends in four seeps and four downgradient wells.
- Ra-226, Ra-228, and Sr-90 continued to be present in seep 0601. The activities observed at this location did not exceed the trigger level of 20 picocuries per liter (pCi/L) for Sr-90 or combined Ra-226/228. Statistical analysis of data collected since 2005 indicated a downward trend in Sr-90. No statistical trend was identified in the combined Ra-226/228 data from this seep.

2.0 Monitoring Program

Groundwater in the Parcel 6, 7, and 8 area is monitored for TCE and its degradation products to verify that the downgradient BVA is not affected and that concentrations are decreasing. In addition, groundwater discharging from seeps is monitored for TCE and its degradation products, tritium, and radioisotopes (Sr-90, Ra-226, and Ra-228) to verify that source removal will result in decreasing concentrations over time.

The sampling is separated into two programs that relate to the areas of impact. These areas are:

- **Well 0315/0347 Area:** Wells at the edge of the BVA on the southwestern corner of Parcel 8 that have elevated concentrations of VOCs. The program consists of wells that have TCE greater than the MCL and downgradient wells to the west.
- **Main Hill Seeps:** Seeps on the northern and southern sides of the Main Hill that have elevated concentrations of VOCs and tritium. The program consists of seeps and downgradient wells to the west.

Under the Parcel 6, 7, and 8 MNA monitoring program, samples are collected quarterly for selected wells and seeps (Figure 1) and analyzed as outlined in Sections 4.1 and 4.2 of the *Parcel 6, 7, and 8 Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan* (DOE 2006).

2.1 Well 0315/0347 Monitoring

The two source wells and other selected downgradient BVA wells are monitored for VOCs—namely, PCE, DCE, TCE, and vinyl chloride. A summary of the monitoring locations is provided in Table 1.

Table 1. Monitoring for the Well 0315/0347 Area

Monitoring Location	Area	VOC
Well 0315	Source Wells	TCE PCE DCE Vinyl Chloride
Well 0347		
Well 0124	Downgradient BVA Monitoring	
Well 0126		
Well 0386		
Well 0387		
Well 0389		
Well 0392		

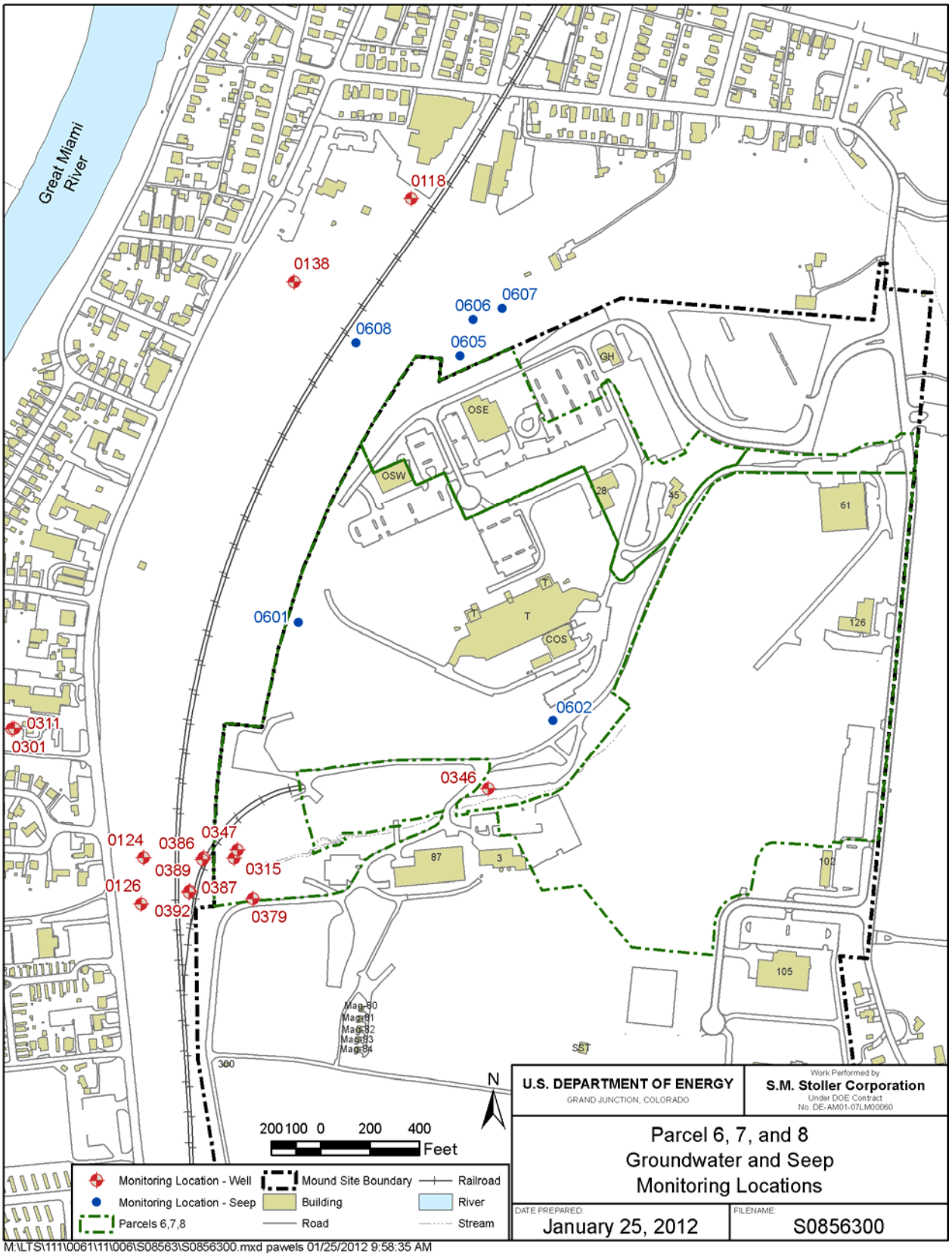

Figure 1. Parcel 6, 7, and 8 Groundwater and Seep Monitoring Locations

2.2 Main Hill Seep Monitoring

Water from seeps 0601, 0602, 0605, 0606, 0607, and 0608 is collected and analyzed for VOCs and the radiological constituents shown in Table 2. Wells within the BVA that are downgradient of the bedrock groundwater discharge area of the Main Hill will also be sampled to monitor the levels of tritium and VOC contamination.

Table 2. Monitoring for the Main Hill Seeps and Groundwater

Monitoring Location	Area	Parameters
Seep 0601	Main Hill Seeps	TCE PCE DCE Vinyl Chloride Ra-226 and Ra-228 Tritium Sr-90
Seep 0602		TCE PCE DCE Vinyl Chloride Tritium
Seep 0605		
Seep 0606		
Seep 0607		
Seep 0608		
Well 0118	Downgradient BVA Monitoring Wells	TCE PCE DCE Vinyl Chloride Tritium
Well 0138		
Well 0301		
Well 0346		
Well 0379		

2.3 Triggers

The contaminant data are evaluated against previous data collected at each location to determine if downward trends are occurring. Trigger levels and response actions have been established for each contaminant as presented in the *Parcel 6, 7, and 8 Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan* (DOE 2006). The triggers are summarized in Table 3.

The U.S. Environmental Protection Agency and the Ohio Environmental Protection Agency must be notified if these trigger levels are exceeded. After notification, the core team (the U.S. Environmental Protection Agency, the Ohio Environmental Protection Agency, and the U.S. Department of Energy) will determine an appropriate course of action.

Table 3. Trigger Levels for Parcel 6, 7, and 8 Monitoring Locations

Location	TCE (µg/L)	PCE (µg/L)	Tritium (nCi/L)	Ra-226/228 (pCi/L)	Sr-90 (pCi/L)
0315	30				
0347	30				
0124	5				
0126	5				
0386	5				
0387	5				
0389	5				
0392	5				
0601 (seep)		75	1,500	20	20
0605 (seep)	150				

2.4 Groundwater Flow

Static water level measurements are collected prior to sampling at each well location. Since these measurements were made within a short time frame, the data were used to depict the general groundwater flow in the area (Figure 2). Two groundwater regimes are present at the site: groundwater in the bedrock and groundwater in the BVA. Groundwater flow in the bedrock typically mimics the topography, with groundwater discharging to the BVA or at seeps from the upper bedrock. Groundwater flow in the BVA flows south, following the course of the Great Miami River.

2.5 Deviations from the Sampling Plan

All required locations were sampled in 2011, except seep 0602. Seep 0602 was dry during the third quarter of 2011, and no samples were collected.

Updated sampling methods for the Mound site were developed by the Mound groundwater technical team and approved by the Mound Core Team. These methods are included in Appendix A.

2.6 Trend Analysis Methodology

The computer program VSP, developed by Battelle Memorial Institute, was used to perform trend analysis; the method used was the nonparametric Mann-Kendall test. The analyses indicate the potential presence of statistically significant downward or upward trends in concentrations at a given location.

The Mann-Kendall test is used for temporal trend identification because it can easily facilitate missing data and does not require the data to conform to a particular distribution (such as a normal or log-normal distribution). The nonparametric method is valid for scenarios where there are a high number of nondetect data points. Data reported as trace concentrations or less than the detection limit can be used by assigning them a common value that is smaller than the smallest measured value in the data set (i.e., one-half the specified detection limit). This approach is valid because only the relative magnitudes of the data, rather than their measured values, are used in

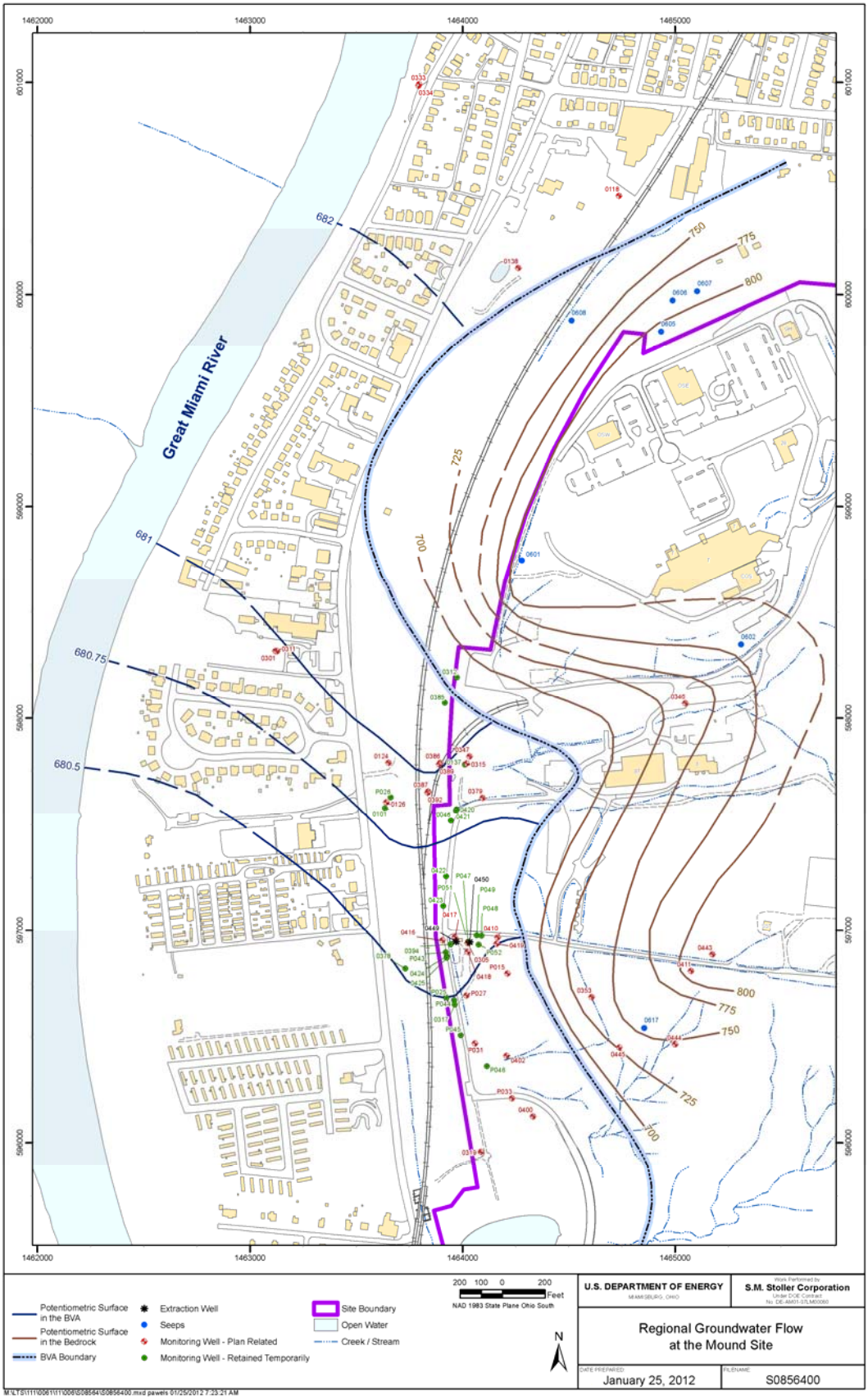

Figure 2. Regional Groundwater Flow at the Mound Site

the method. A possible consequence of this approach is that the test can produce biased results if a large fraction of data within a given time series are nondetect, and if detection limits change between sampling events. The specified detection limit (on the date of analysis) was used in place of concentrations reported as nondetect.

The two-tailed version of the Mann-Kendall test was used to detect either an upward or downward trend for each data set. As part of this approach, a test statistic, Z, was calculated. A positive value of Z indicated that the data were skewed in an upward direction, and a negative value of Z indicated that the data were skewed in a downward direction. The alpha value (or false rejection rate) used to identify a significant trend was 0.05. The beta value (or false acceptance rate) was set at 0.10. A nonparametric estimate of the slope, which is calculated independently of the trend, was determined for each data set using the Sen's nonparametric estimate of the slope in the VSP program. In addition, a 95 percent ($1-\alpha$) two-sided confidence interval about the true slope was obtained.

3.0 Well 0315 and 0347 Area

3.1 Monitoring Results

Monitoring results for 2011 (Table 4) continue to show detections of TCE in wells 0315, 0347, and 0386; the highest concentrations are detected in wells 0315 and 0347 (source wells), where concentrations also exceed the MCL. The concentrations of TCE reported in wells 0315 and 0347 were less than the trigger level of 30 µg/L for the source area wells. Estimated detections of TCE were reported in wells 0387, 0389, and 0392. No detectable concentrations of TCE were measured in the other wells. All TCE concentrations were below applicable trigger levels.

Table 4. Summary of VOC Results in the 0315 and 0347 Area for 2011

Well ID	Location	VOC	Q1	Q2	Q3	Q4
0124	BVA	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0126	BVA	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	0.91 (J)	0.93 (J)	0.90 (J)	0.82 (J)
0315	Source Area	TCE (µg/L)	**13.6**	**8.1**	**6.2**	**10.7**
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0347	Source Area	TCE (µg/L)	**23.2**	**24.5**	**22.1**	**27.8**
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0386	BVA	TCE (µg/L)	2.3	0.94 (J)	2.2	1.9
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0387	BVA	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	0.22 (J)	ND (<1)	ND (<1)	ND (<1)
0389	BVA	TCE (µg/L)	0.99 (J)	0.54 (J)	0.24 (J)	0.72 (J)
		PCE (µg/L)	0.44 (J)	0.25 (J)	ND (<1)	0.29 (J)
0392	BVA	TCE (µg/L)	0.14 (J)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	0.32 (J)	ND (<1)	0.27 (J)	0.32 (J)

ND = Not detected
J = Estimated value that is less than the reporting limit
Q = Quarter
TCE trigger level for 0315 and 0347 = 30 µg/L
TCE trigger level for other wells = 5 µg/L
Values in **bold** exceed the MCL

TCE concentrations in wells 0315 and 0347 have varied. Changes in concentrations in these two wells were similar until the end of 2006, when a substantial increase was identified in well 0347 while TCE concentrations decreased in 0315 (Figure 3). Data were highly variable in well 0347, and starting in 2008, TCE concentrations increased in this well. TCE concentrations were lower in well 0315 during 2006 and then rebounded and remained steady. Site improvements began in late 2006 on the Main Hill, and the changes in TCE concentrations may be due to surface water infiltration into exposed tritium capture pits near the location of the SW building. These pits extended into the bedrock, and surface water was infiltrating into the subsurface. The point of access into the pits was covered in October 2009. Concentrations in well 0315 appear to be decreasing since the capture pits were covered. Concentrations in well 0347 have continued to remain high. Since 2000, the concentrations in the two downgradient BVA wells (0386 and 0389) have been less than the MCL.

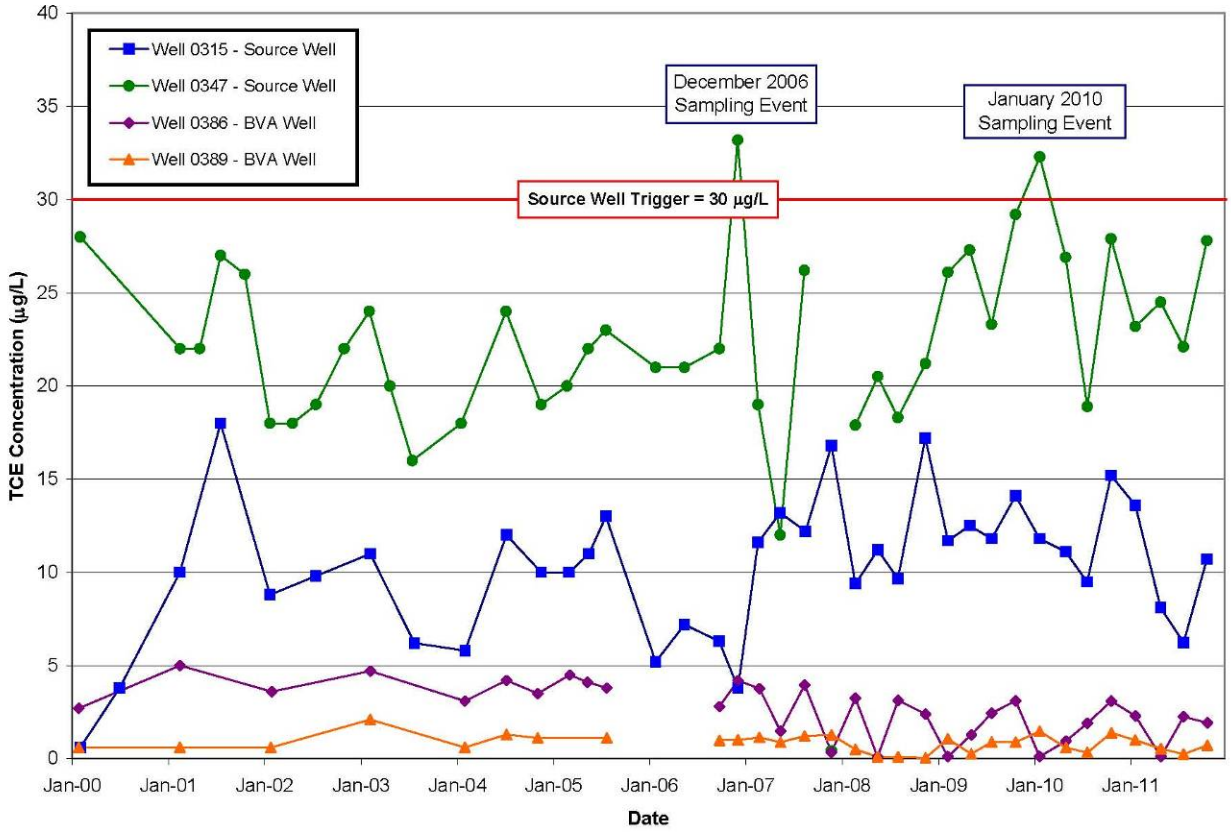

Figure 3. TCE Concentrations in Well 0315/0347 Area (2000–2011)

Estimated detections of PCE (less than 1 µg/L) were reported in wells 0126, 0387, 0389, and 0392 (Figure 3). No trigger levels are established for PCE. No *cis*-1,2-DCE, *trans*-1,2-DCE, or vinyl chloride was detected in any of these wells.

The distribution of TCE in groundwater (Figure 4) indicates that the greatest impact is still associated with wells 0315 and 0347. TCE concentrations in these wells continue to exceed the MCL. The two BVA wells immediately downgradient of this area have TCE concentrations below the MCL, with slight impact extending downgradient. Figure 4 depicts the 2011 annual averages of TCE in the monitoring network.

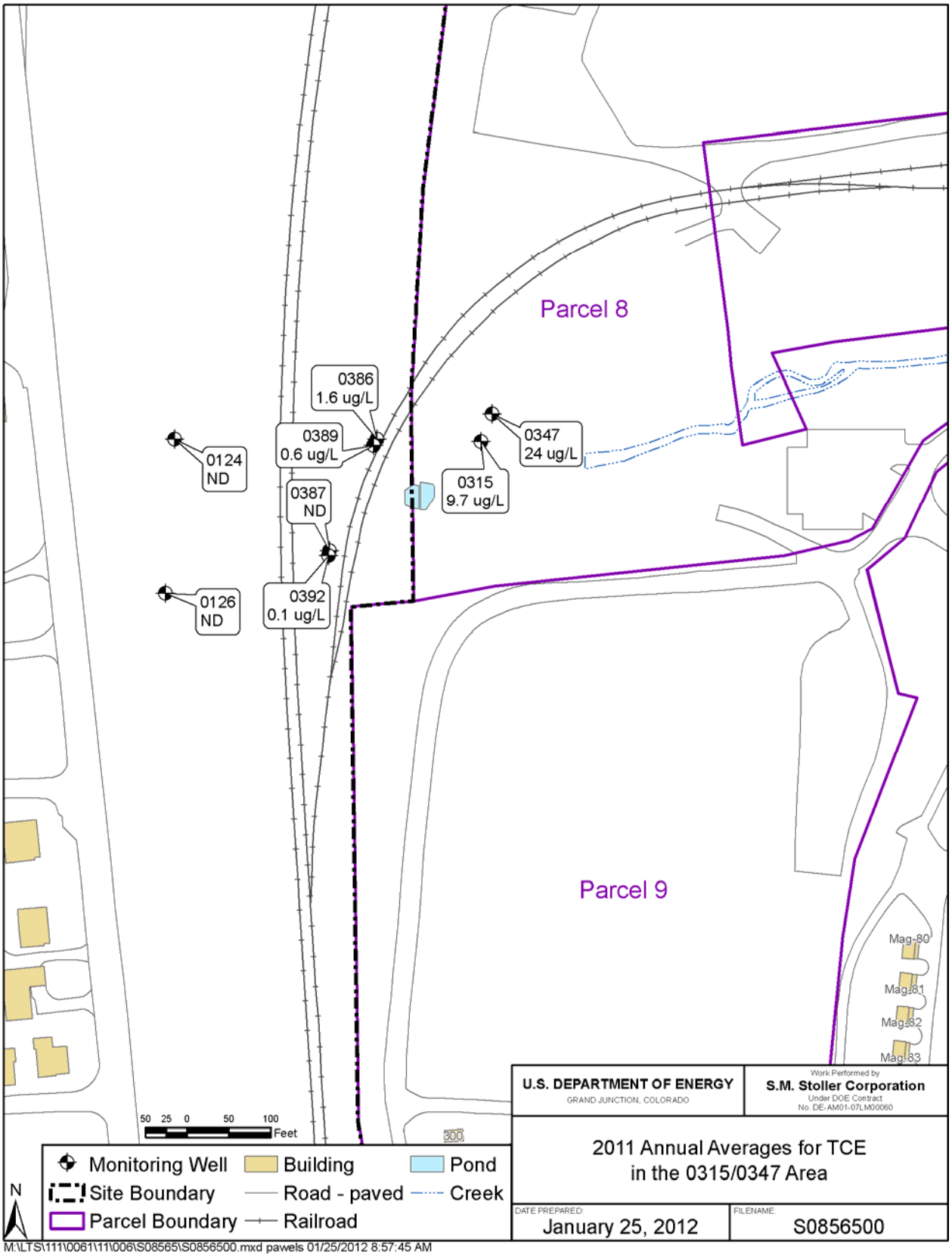

Figure 4. 2011 Annual Average TCE Concentrations in Well 0315/0347 Area

3.2 Trend Analysis

Statistical analysis of the TCE data collected since 2005 from wells 0315, 0347, 0386, and 0389 indicates increasing concentrations of TCE in source wells 0315 and 0347, as implied by positive slopes (Table 5). This period was selected to represent data collected since the completion of remediation activities on the Main Hill. No statistical trends, upward or downward, were identified in these two wells. Decreasing TCE concentrations are indicated for wells 0386 and 0389, as implied by negative slopes. A downward trend was calculated for well 0386. Trend analysis was not performed on data from the remainder of the wells because results consistently showed nondetects or sporadic estimated detections.

Table 5. Summary of Trend Analysis Results for TCE in the Source Area and Downgradient Wells (2005−2011)

Location	Number of Samples	Trend	Slope (μg/L/year)	Confidence Interval (μg/L/year)	
				Lower	Upper
0315	27	None	0.22	-0.40	0.98
0347	27	None	0.87	-0.01	1.88
0386	25	**Down**	-0.36	-0.63	-0.14
0389	23	None	-0.06	-0.17	0.07

μg/L/year = micrograms per liter per year

3.3 Recommendations

No changes to the 0315 and 0347 area monitoring program are warranted at this time. Source wells 0315 and 0347 continue to show influence from surface water infiltration on the Main Hill that flushes residual VOCs into the groundwater. Data will continue to be evaluated to determine whether surface water infiltration caused long-term increases in VOC concentrations.

4.0 Main Hill Seeps

4.1 Volatile Organic Compounds Results

Although TCE concentrations in some Main Hill seeps continued to exceed the MCL in 2011 (Table 6), no locations had concentrations that exceeded the trigger level of 150 µg/L (established for seep 0605). The highest concentrations in 2011 were in seep 0602, which is onsite. This seep was dry during the third quarter of 2011. PCE concentrations continued to exceed the MCL of 5 µg/L in seep 0601; however, PCE concentrations at this location did not exceed the trigger level of 75 µg/L. Estimated detections of PCE were reported in seeps 0602 and 0605. Detectable concentrations of *cis*-1,2-DCE were observed in seeps 0602, 0605, 0606, and 0607; seep 0602 had the highest concentrations. Estimated detections of *cis*-1,2-DCE (less than 1 µg/L) were reported in seeps 0601 and 0608. Estimated detections of *trans*-1,2-DCE (less than 1 µg/L) were reported in seeps 0602 and 0605. No vinyl chloride was detected in the seeps.

Monitoring results (Table 6) showed low concentrations of TCE in well 0379 downgradient of the Main Hill seeps. Elevated concentrations of TCE are reported in downgradient well 0347 (discussed in Section 3.0). Estimated detections of PCE were reported in wells 0311 and 0379. No trigger levels have been set for these locations. Only the concentrations of TCE in well 0347 exceeded the MCL of 5 µg/L. Neither DCE nor vinyl chloride was detected in the downgradient wells.

A graph of TCE concentrations in the seeps since 2005 (Figure 5) shows that overall the concentrations in seep 0602 have increased since the remediation of contaminated buildings and soil on the Main Hill was completed (mid-2006). Concentrations of TCE have varied significantly at this location, ranging from 15 µg/L to 139 µg/L. A possible cause for the changes and overall increases may be surface water infiltration upgradient of the seeps, resulting in flushing of residual VOCs. Site improvements started in 2006 on the Main Hill and included a new parking lot constructed where B building was located. It was discovered in late 2009 that grading in the area had exposed two manholes over a large tritium capture pit that was located along the western side of SW building. These test pits extend into the weathered bedrock. Surface water had been infiltrating into these uncovered access ports and was lost to the subsurface. The access ports were covered in October 2009. After covering the ports, the TCE concentrations decreased slightly but became more varied.

Efforts are made to collect seep samples under base flow conditions. Base flow is considered flow not impacted by surface water runoff and is representative of actual groundwater from within the bedrock. Sampling is not performed within several days of a precipitation event to reduce the influence of surface water on the sample. However, during the January sampling event, snowmelt was occurring and may have impacted the flow in the seep.

In response to the significant TCE increase in seep 0602, potential residual sources and transport mechanisms were reviewed. This included review of former building operations on the Main Hill and a field reconnaissance to determine if additional areas where surface water could enter the subsurface were observed.

Several areas could be potential sources of residual VOC contamination upgradient of this seep (possibly T building, E building, or DS building). A large foundation system is located around T building, which is upgradient of seep 0602. This drain could intercept VOC-impacted groundwater and divert it upgradient of seep 0602. Groundwater flow within the bedrock mimics the bedrock topography. Review of the bedrock topography map indicates that groundwater to the north and east could be expressed at this seep.

A field reconnaissance was performed in April 2011 to visually inspect for locations where surface water may enter the subsurface upgradient of seep 0602. Surface erosion was observed around the east head house for T building. Water has also been observed leaking into several rooms that are on the east side of T building. A soil berm was constructed in November 2011 to divert surface water away from the east head house. Subsequent data will continue to be evaluated.

A special study was performed to evaluate the effects of precipitation and surface water infiltration on the TCE concentrations in seep 0602. A seep sample was collected on April 25, 2011, and another was collected on May 10, 2011. The results were 49.9 µg/L and 70.1 µg/L, respectively. The sample collected on April 25, 2011, was influence by surface water infiltration. Several precipitation events had occurred immediately prior to sampling. The sample from May 10, 2011, represents base flow conditions, as there had been no precipitation events several days prior to the sampling. For this limited special study, the VOC concentrations were higher during base flow conditions. A larger data set is needed to establish a pattern.

In seep 0601, PCE concentrations (Figure 6) are slightly higher than TCE concentrations. The concentrations of PCE have decreased below the MCL of 5 µg/L on two occasions since 2010. The PCE concentrations have shown a general decrease and are similar to those measured prior to remediation on the Main Hill. Estimated detections of PCE (less than 1 µg/L) were reported in seeps 0602 and 0605.

Table 6. Summary of VOC Results in the Main Hill Area for 2011

Location	Area	VOC Concentrations				
		VOC	Q1	Q2	Q3	Q4
Seeps						
0601	Onsite	TCE (µg/L)	3.9	4.6	**5.8**	**5.0**
		PCE (µg/L)	4.3	**11.5**	**9.6**	**9.3**
		cis-1,2-DCE (µg/L)	0.46 (J)	0.66 (J)	0.50 (J)	0.64 (J)
		trans-1,2-DCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0602	Onsite	TCE (µg/L)	**139**	**70.1**	Dry	**16.9**
		PCE (µg/L)	0.37 (J)	0.27 (J)		ND (<1)
		cis-1,2-DCE (µg/L)	38.0	30.5		22.6
		trans-1,2-DCE (µg/L)	0.48 (J)	0.28 (J)		0.23 (J)
0605	Offsite	TCE (µg/L)	**12.2**	**13.1**	**15.9**	**11.5**
		PCE (µg/L)	ND (<1)	0.29 (J)	ND (<1)	ND (<1)
		cis-1,2-DCE (µg/L)	4.5	1.6	7.1	3.2
		trans-1,2-DCE (µg/L)	0.31 (J)	0.31 (J)	0.28 (J)	ND (<1)
0606	Offsite	TCE (µg/L)	0.15 (J)	0.95 (J)	**8.7**	1.8
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		cis-1,2-DCE (µg/L)	ND (<1)	ND (<1)	1.6	0.27 (J)
		trans-1,2-DCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0607	Offsite	TCE (µg/L)	4.9	3.7	**8.7**	**5.5**
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		cis-1,2-DCE (µg/L)	1.2	0.43 (J)	1.6	0.81 (J)
		trans-1,2-DCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0608	Offsite	TCE (µg/L)	2.0	1.1	0.23 (J)	0.42 (J)
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		cis-1,2-DCE (µg/L)	0.31 (J)	ND (<1)	ND (<1)	ND (<1)
		trans-1,2-DCE (µg/L)	ND (< 1)	ND (< 1)	ND (< 1)	ND (< 1)
Downgradient Wells						
0118	Offsite	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0138	Offsite	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0301	Offsite	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0311	Offsite	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	0.23 (J)	0.23 (J)	ND (<1)	0.22 (J)
0346	Onsite	TCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0347	Onsite	TCE (µg/L)	**23.2**	**24.5**	**22.1**	**27.8**
		PCE (µg/L)	ND (<1)	ND (<1)	ND (<1)	ND (<1)
0379	Onsite	TCE (µg/L)	1.4	1.4	1.9	1.8
		PCE (µg/L)	0.40 (J)	0.40 (J)	0.30 (J)	0.39 (J)

ND = Not detected
J = Estimated value that is less than the reporting limit
Q = Quarter
PCE trigger level at 0601 = 75 µg/L
TCE trigger level at the seeps = 150 µg/L
Values in **bold** exceed the MCL

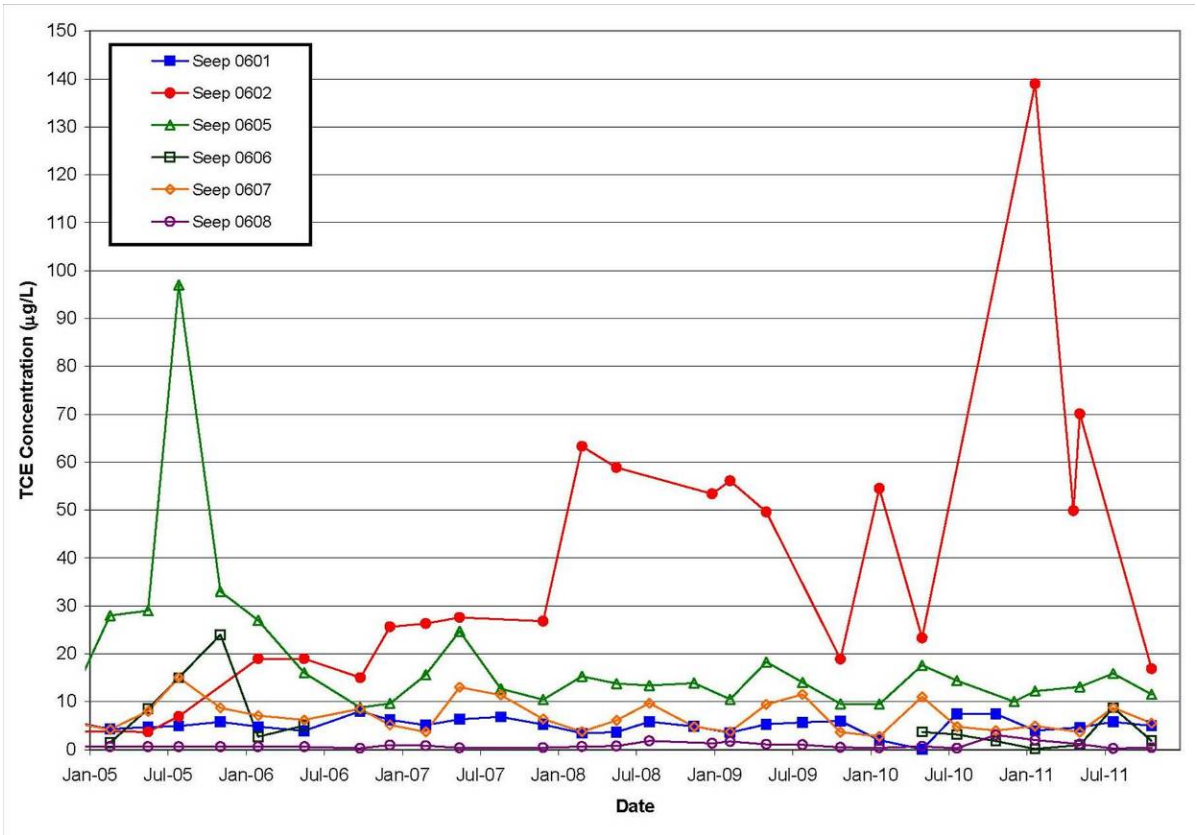

Figure 5. TCE Concentrations in the Main Hill Seeps (2005–2011)

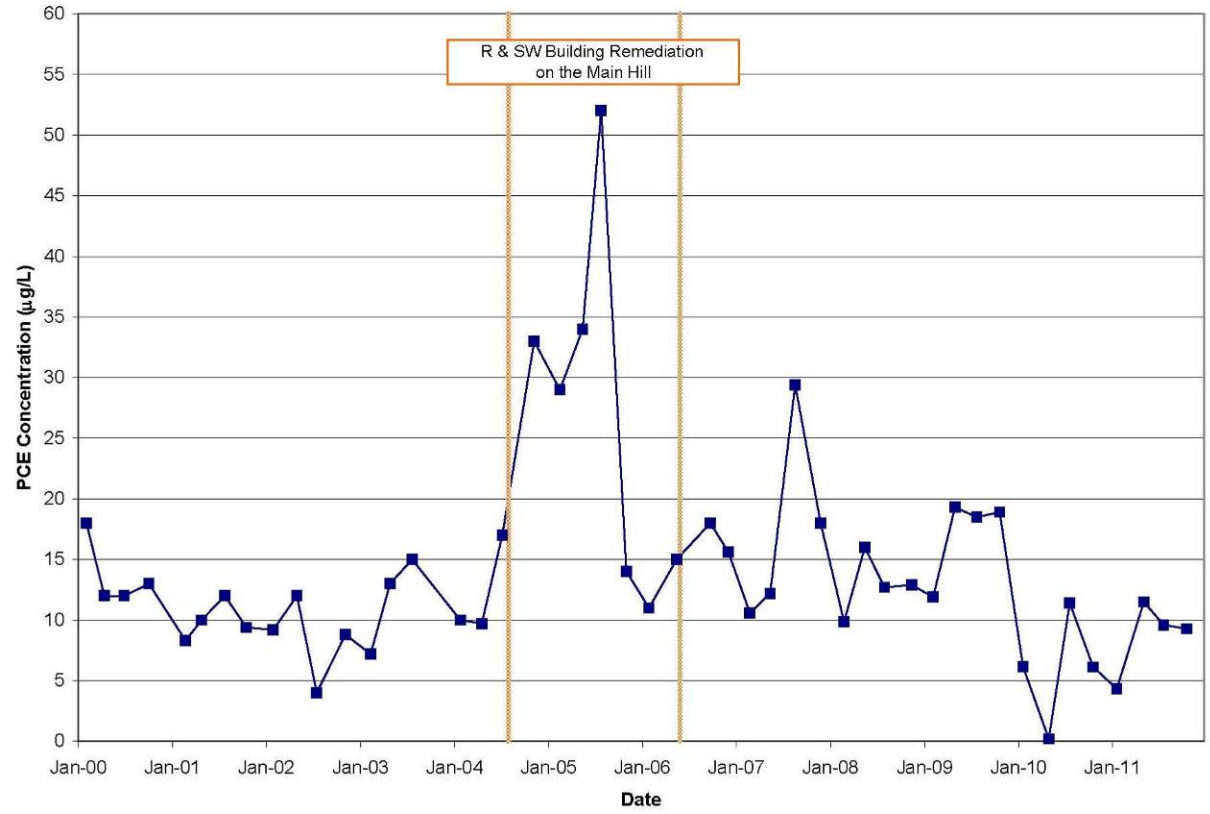

Figure 6. PCE Concentrations in Seep 0601 (2000–2011)

Detectable concentrations of *cis*-1,2-DCE were reported in seeps 0602, 0605, 0606, and 0607. The highest concentrations were reported in seeps 0602 and 0605. A comparison of TCE and *cis*-1,2-DCE concentrations (Figure 7) in these two seeps indicates that the concentration changes in the two contaminants generally behaved similarly. Although an increase in *cis*-1,2-DCE concentrations is an expected indicator of TCE degradation, in this instance, it is likely the result of flushing of residual DCE from the system. When degradation occurs, TCE concentrations typically decrease as *cis*-1,2-DCE concentrations increase. Estimated detections of *trans*-1,2-DCE were reported in seeps 0602 and 0605. Subsequent data will continue to be evaluated for evidence of TCE degradation.

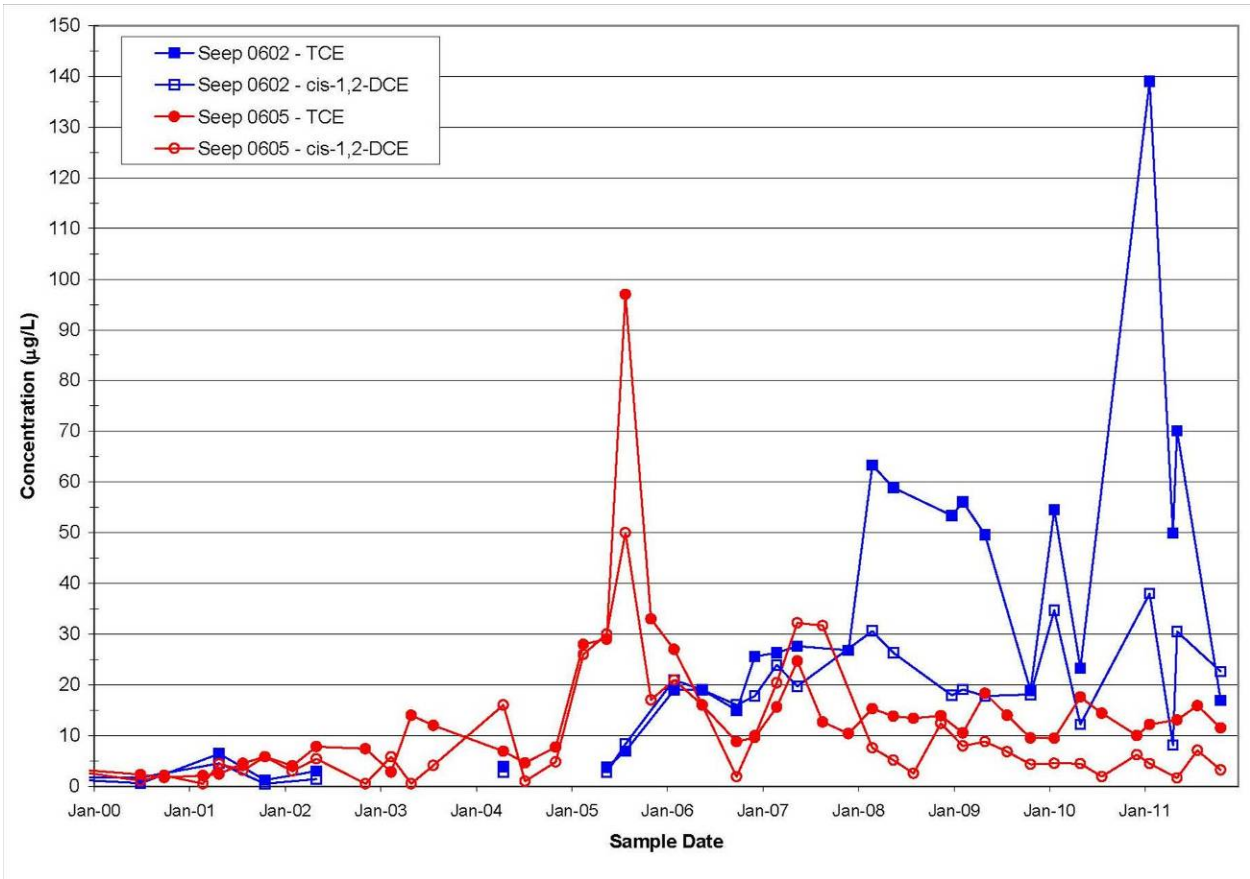

Figure 7. TCE and cis*-1,2-DCE Concentrations in Seeps 0602 and 0605 (2000–2011)*

The distribution of TCE in groundwater (Figure 8) in the Main Hill area indicates that the highest area of impact is associated with the seeps, particularly seep 0602. Downgradient well 0347 has TCE levels that exceed the MCL of 5 µg/L. Figure 8 depicts the 2011 annual averages of TCE in the monitoring network.

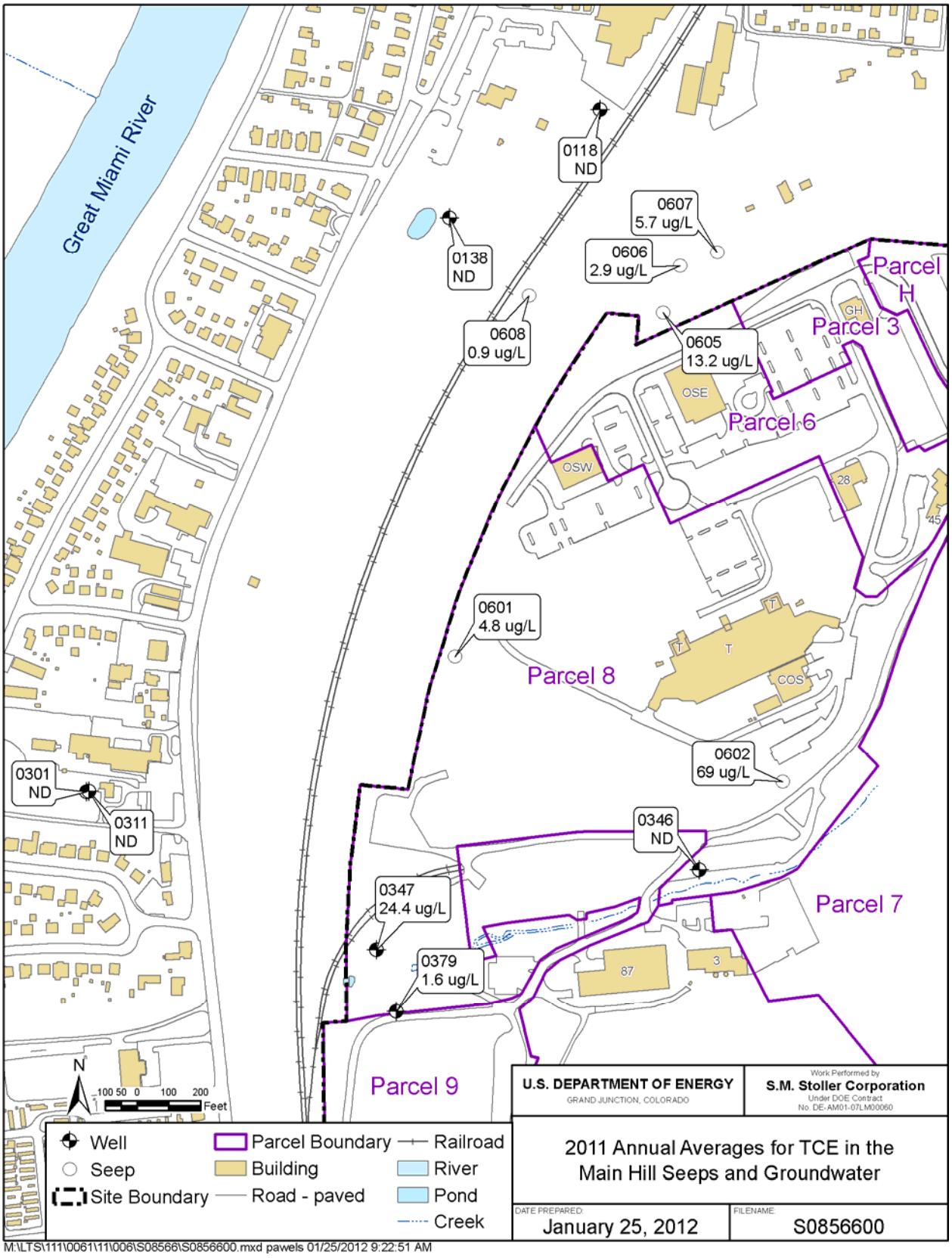

Figure 8. 2011 Annual Average TCE Concentrations in the Main Hill Seeps

4.2 Tritium Results

Tritium levels in the Main Hill seeps continued to be elevated in 2011 and were higher than those in the downgradient groundwater wells (Table 7). The highest tritium activity was observed in seep 0601, which is located onsite. Seep 0601 is the only location that exceeded the MCL of 20 nCi/L during 2011. None of the seeps had tritium levels that exceeded the trigger level of 1,500 nCi/L.

Five wells downgradient of the Main Hill area continued to show detectable levels of tritium in 2011 (Table 7). The highest levels were observed in well 0347, downgradient of seeps 0601 and 0602. The four remaining wells had tritium levels similar to the background value of 0.77 nCi/L (DOE 1995). None of the groundwater wells had tritium levels that exceeded the MCL of 20 nCi/L.

Table 7. Summary of Tritium Results in the Main Hill Area for 2011

Location	Tritium Activity (nCi/L)			
	Q1	Q2	Q3	Q4
Seeps				
0601	**38.3**	**32.7**	**54.0**	**46.2**
0602	10.1	7.2	Dry	14.5
0605	14.9	11.9	13.2	13.1
0606	5.9	5.7	11.1	4.9
0607	7.0	3.7	5.4	5.7
0608	11.9	8.8	9.2	10.2
Downgradient Wells				
0118	ND (<0.33)	ND (<0.32)	ND (<0.22)	ND (<0.36)
0138	0.48	1.6	1.6	0.91
0301	ND (<0.32)	ND (<0.32)	ND (<0.22)	ND (<0.36)
0311	1.0	0.81	ND (<0.22)	ND (<0.33)
0346	1.3	0.99	1.5	0.92
0347	5.7	3.9	2.9	5.3
0379	1.4	1.4	1.4	1.6

Q = Quarter
ND = Not detected
Tritium trigger level at the seeps = 1,500 nCi/L
Values in **bold** exceed the MCL of 20 nCi/L

Tritium levels in the seeps were highest during remediation activities on the Main Hill (2004−2006). Tritium data collected after building demolition and soil removal indicate decreasing levels in all of the seeps (Figure 9). The decreasing tritium levels from post-remediation data suggest that the majority of the source was removed from the Main Hill area and that, with continued flushing, levels should continue to decline. Starting in 2009, the tritium levels in all of the seeps, except seep 0601, were less than the MCL of 20 nCi/L. Changes in tritium levels in seep 0601 indicate a seasonal effect as levels typically increase in late summer/early fall. Comparisons of tritium concentrations in the seeps with those measured in downgradient monitoring wells indicate that the seeps responded more quickly than the wells because they are direct discharge points for groundwater originating beneath the Main Hill.

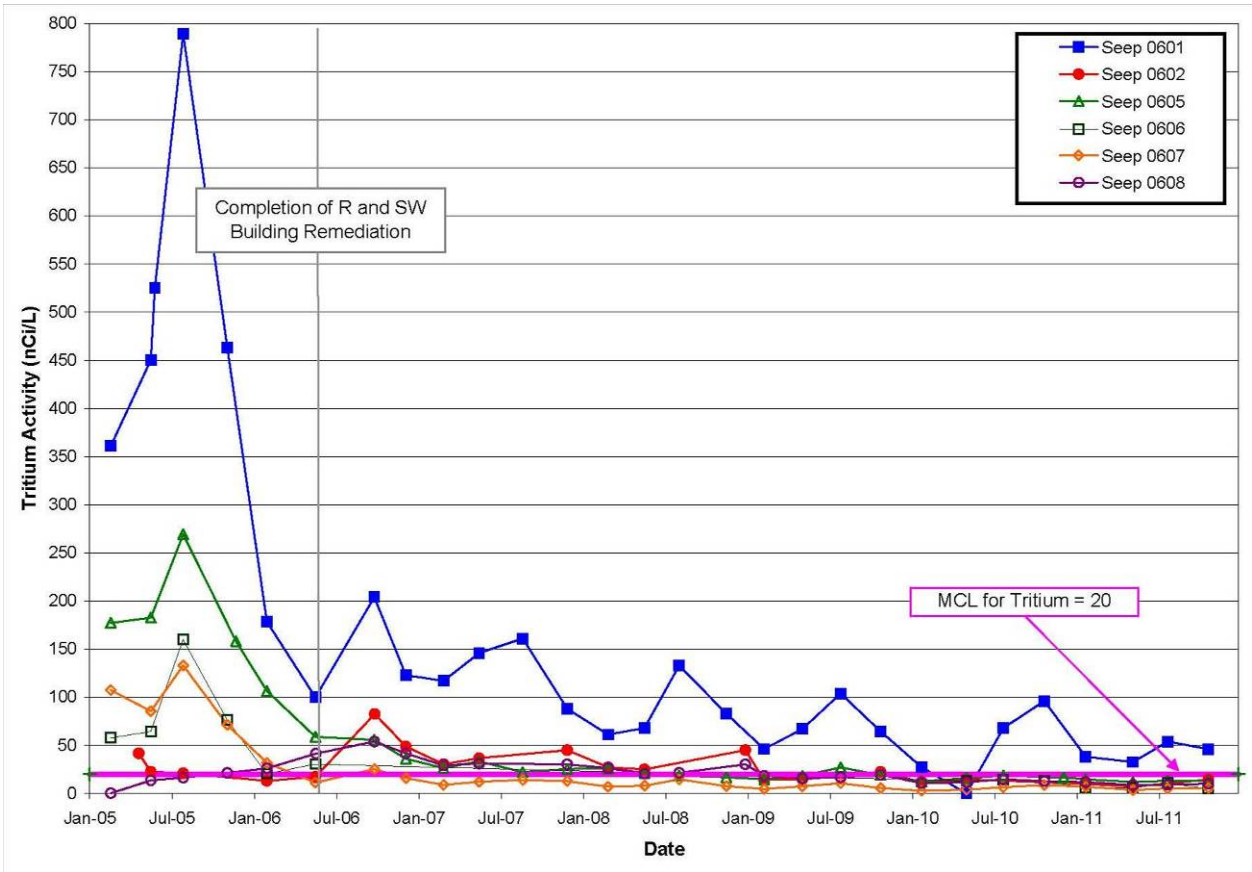

Figure 9. Tritium Activity in Seeps (2005−2011)

A graph of tritium levels in downgradient wells (Figure 10) illustrates that groundwater impact in the wells lagged behind impact expressed in the seeps. Groundwater impact increased near the end of remediation activities on the Main Hill, and impact in the seeps occurred as remediation activities were being performed and began to decrease as activities were completed. Wells 0138 and 0347 had the highest levels of tritium and responded rapidly to remediation activities. Tritium levels in wells 0138, 0346, and 0379 have leveled off and are similar to background.

The distribution of tritium in groundwater Figure 11 in the Main Hill area indicates that the greatest impact is still associated with the seeps, particularly seep 0601. Downgradient well 0347 also had elevated levels of tritium. Figure 11 depicts the 2011 annual averages of tritium in the monitoring network.

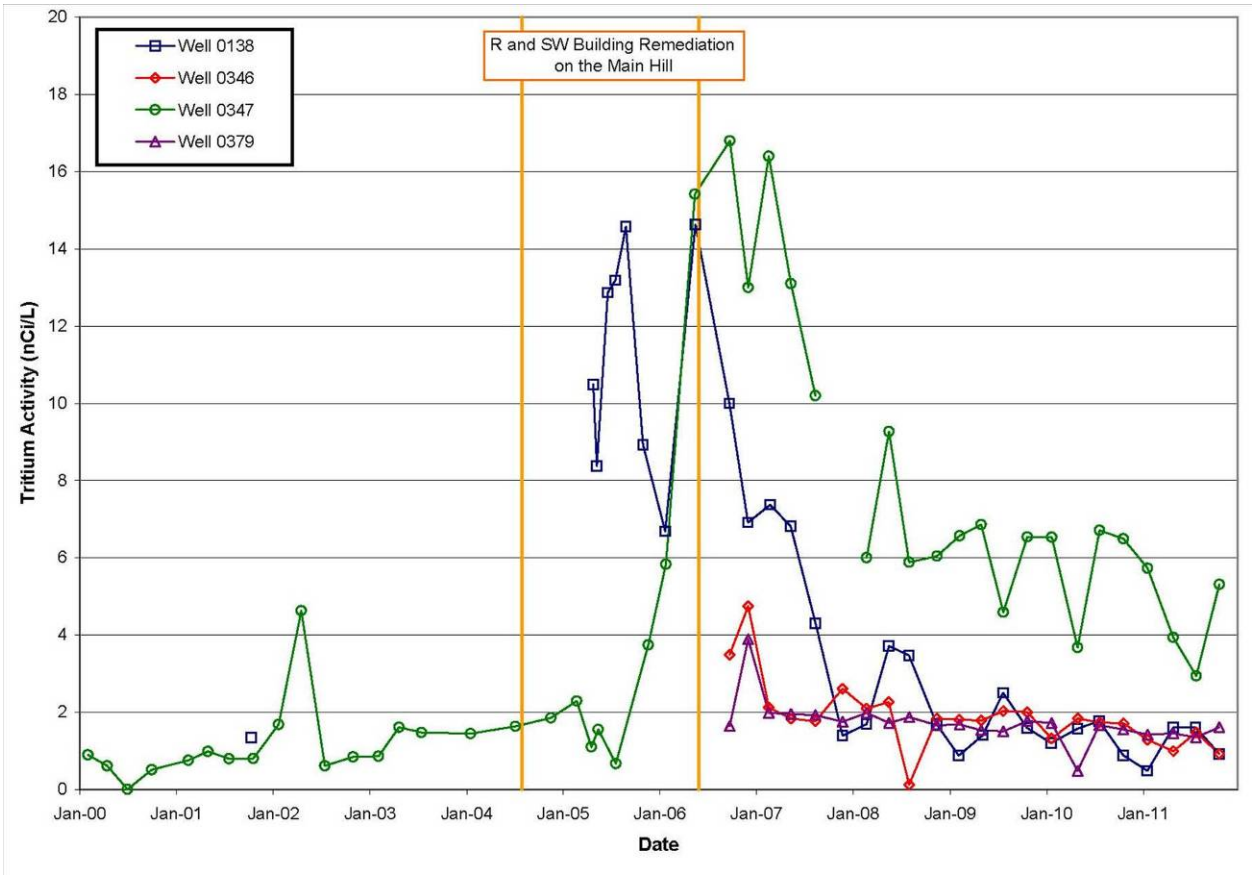

Figure 10. Tritium Activity in Wells 0138, 0346, 0347, and 0379 (2000–2011)

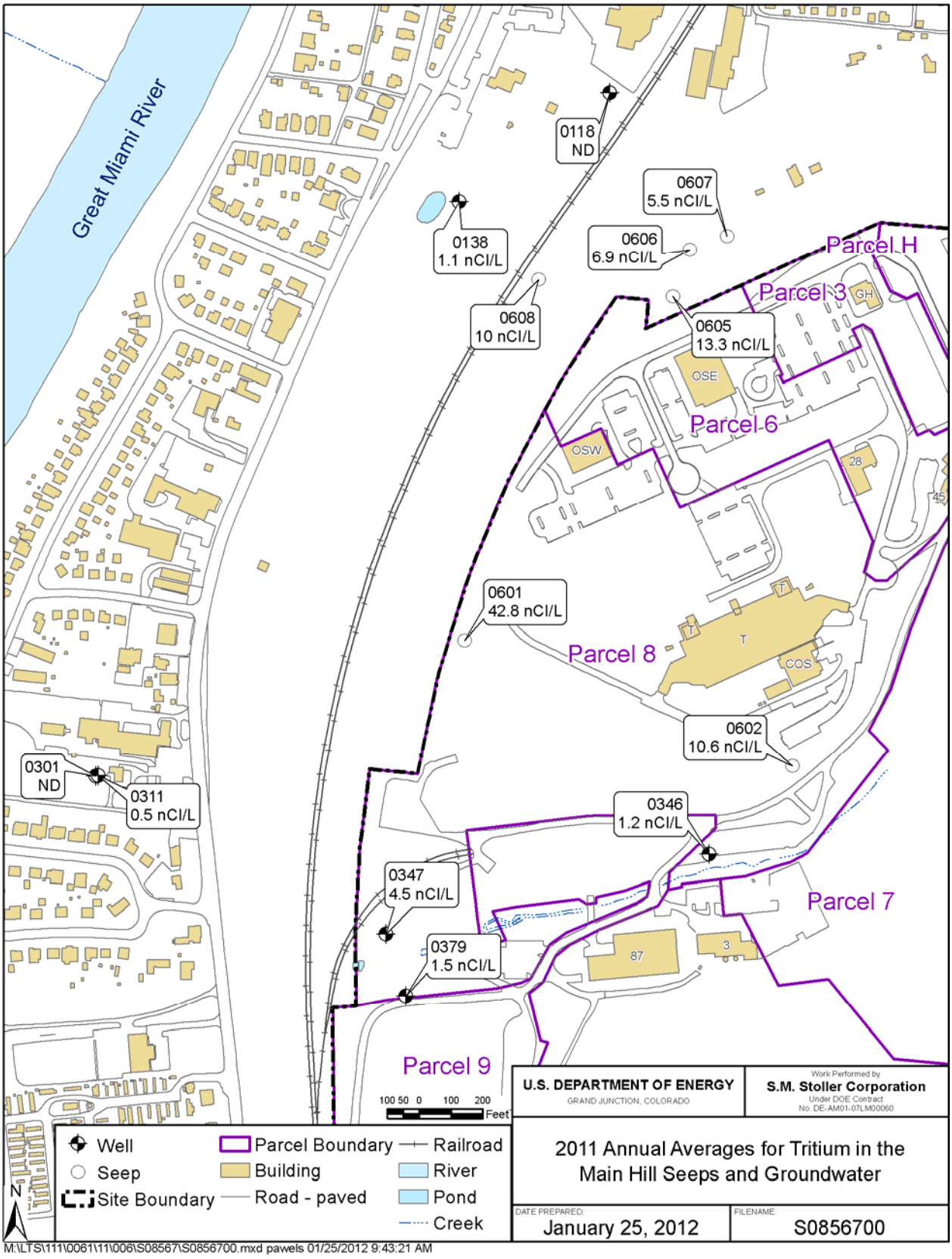

Figure 11. 2011 Annual Average Tritium Levels in the Main Hill Seeps

4.3 Other Radionuclides Results

Ra-226, Ra-228, and Sr-90 continued to be present in seep 0601 (Table 8). The activities observed at this location did not exceed the trigger level of 20 pCi/L for Sr-90 or combined Ra-226/228. Graphs of the concentrations over time (Figure 12 and Figure 13) indicate that levels of Sr-90 have decreased since 2004. An increase in combined Ra-226/228 was observed at the end of 2009; however, levels decreased in 2010 and have remained low. Data from unimpacted seeps in Parcel 4 were used to estimate background levels for these isotopes in the bedrock aquifer. The maximum Ra-226 level measured in the Parcel 4 seeps was 0.81 pCi/L, and the maximum Sr-90 level was 2.8 pCi/L. The levels of Sr-90 in seep 0601 are similar to those measured in Parcel 4 seeps. Levels of Ra-226 can be slightly greater than those measured in Parcel 4 seeps on occasion.

Table 8. Summary of Radionuclides in Seep 0601 for 2011

Location	Radionuclide	Q1	Q2	Q3	Q4
0601	Ra-226 (pCi/L)	1.3 (J)	1.6	ND (< 0.45)	0.65
	Ra-228 (pCi/L)	ND (< 0.56)	1.0 (J)	ND (< 0.53)	ND (< 0.62)
	Sr-90 (pCi/L)	ND (< 0.98)	2.0 (J)	2.1	0.74

J = Estimated value that is less than the reporting limit
Q = Quarter
Ra-226/228 trigger level at seep 0601 = 20 pCi/L
Sr-90 trigger level at seep 0601 = 20 pCi/L

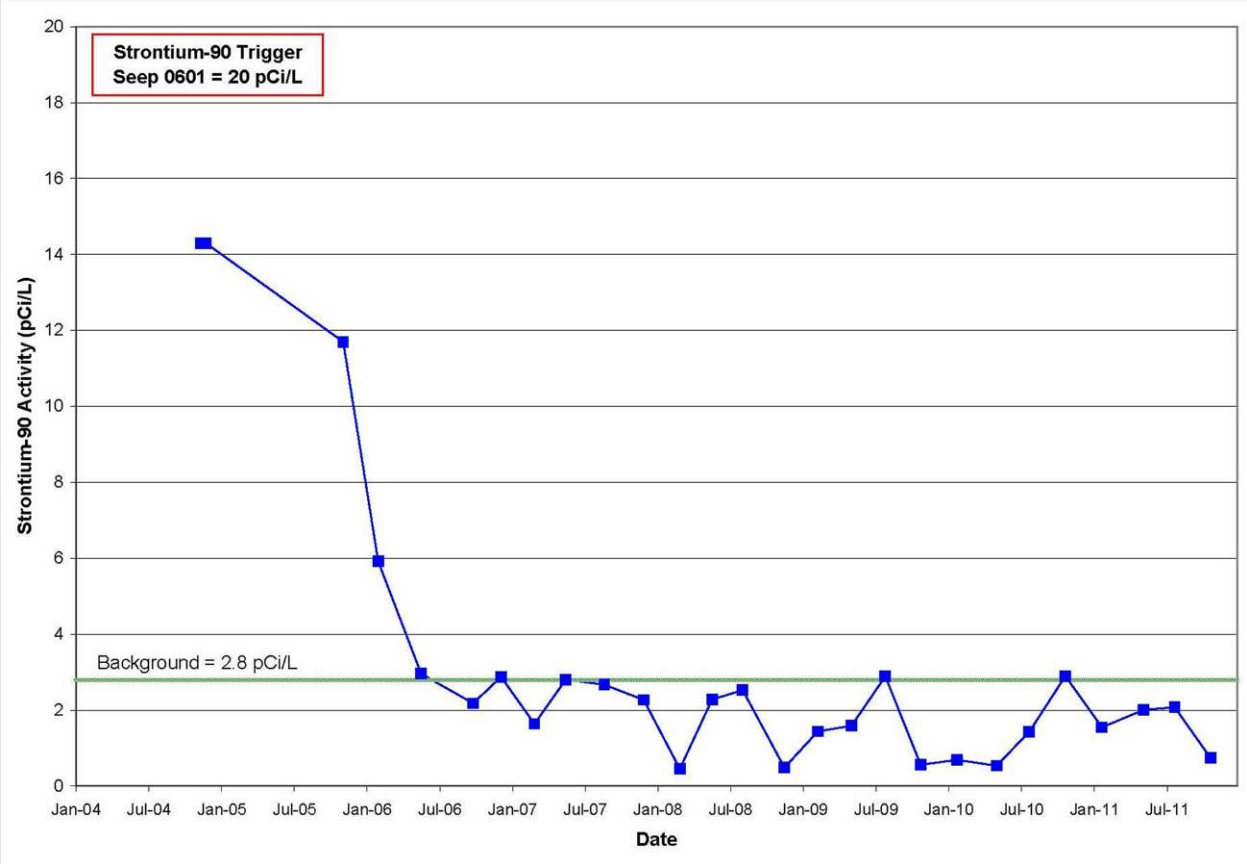

Figure 12. Sr-90 Activity over Time in Seep 0601 (2004–2011)

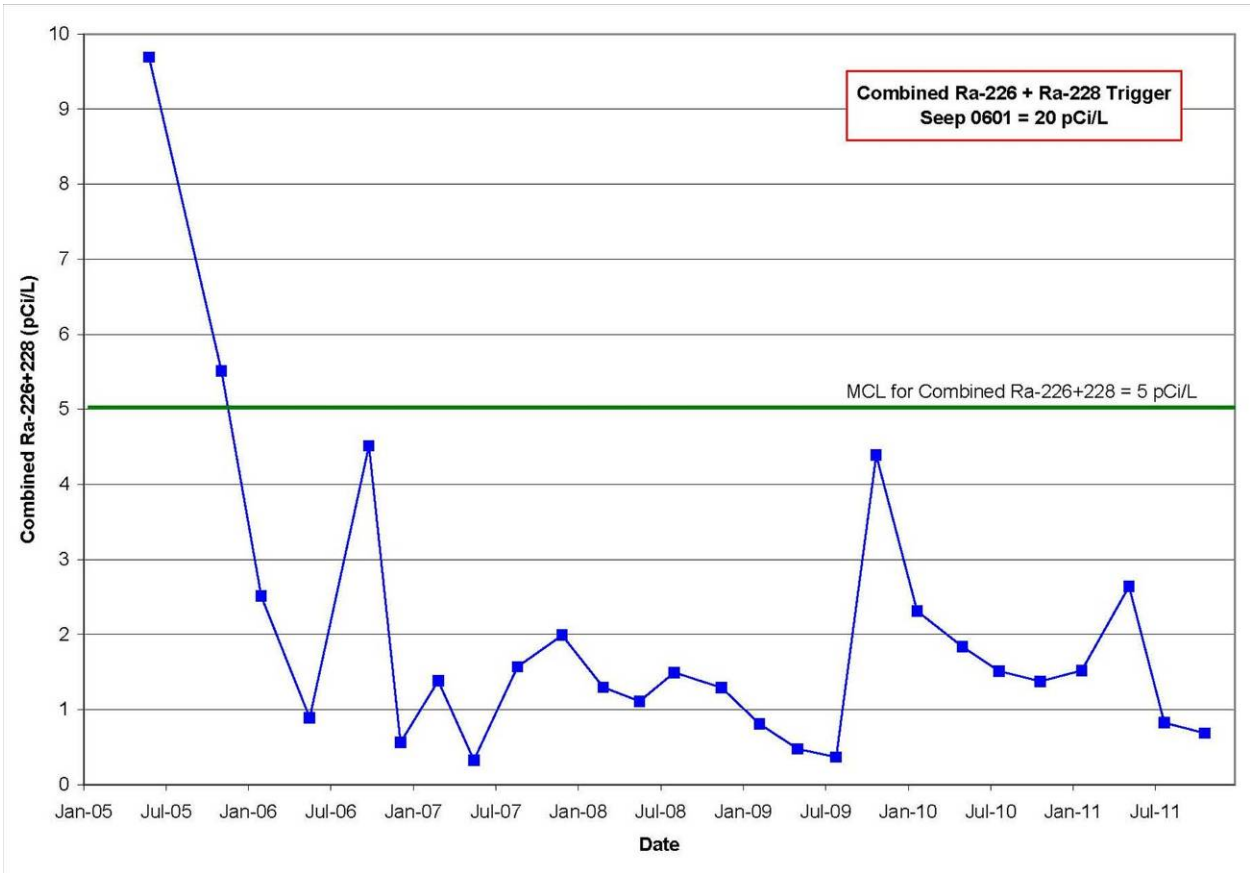

Figure 13. Combined Ra-226/228 Activity over Time in Seep 0601 (2005–2011)

4.4 Trend Analysis

Trend analysis was performed on VOC, tritium, and other radionuclide data using the nonparametric Mann-Kendall test. Trend analysis is reported for data collected since 2005. This period was selected to represent data collected since the completion of remediation activities on the Main Hill.

4.4.1 Volatile Organic Compounds

Trend analysis for TCE data collected since 2005 indicates increasing TCE concentrations in seep 0602, as indicated by positive slopes (Table 9). Although the slopes are positive for seeps 0601 and 0608, the slope values are near zero. An upward trend was calculated for TCE in seep 0602. TCE concentrations are decreasing in seeps 0605, 0606, and 0607, as indicated by negative slopes. A downward trend was calculated for seep 0605.

Concentrations of PCE in seep 0601 are decreasing, as implied by a negative slope (Table 9). A statistically significant downward trend was indicated in the data from this seep. Data from seeps 0602 and 0605 were evaluated for trends in *cis*-1,2-DCE concentrations (Table 9). Concentrations of *cis*-1,2-DCE are increasing in seep 0602; however, an upward trend is not indicated in the data. A downward trend was calculated in the *cis*-1,2-DCE data from seep 0605.

Table 9. Summary of Trend Analysis Results for VOCs in the Main Hill Seeps (2005–2011)

Location	Number of Samples	Trend	Slope (µg/L/year)	Confidence Interval (µg/L/year)	
				Lower	Upper
TCE					
0601	28	None	0.01	-0.32	0.31
0602	21	**Up**	9.2	2.2	12.6
0605	28	**Down**	-1.6	-3.1	-0.33
0606	13	None	-0.89	-2.5	0.23
0607	28	None	-0.44	-1.0	0.12
0608	27	None	0.02	-0.04	0.13
PCE					
0601	28	**Down**	-2.0	-4.0	-0.84
cis-1,2-DCE					
0602	21	None	1.5	-0.37	4.1
0605	28	**Down**	-3.1	-4.7	-1.8

µg/L/year = micrograms per liter per year

Data from the downgradient wells were not evaluated for statistical trends. TCE concentrations have been sporadic in these wells, with the exception of well 0347, which is discussed in Section 3.0.

4.4.2 Tritium and Other Radionuclides

Trend analysis for tritium data collected since 2005 indicates decreasing tritium levels in all of the seeps and the four wells with detectable tritium levels, as implied by negative slopes. Statistically significant downward trends in tritium were calculated in all of the seeps and wells 0138, 0346, and 0379 (Table 10).

Table 10. Summary of Trend Analysis Results for Tritium in the Main Hill Seeps and Downgradient Wells (2005−2011)

Location	Number of Samples	Trend	Slope (µg/L/year)	Confidence Interval (nCi/L/year)	
				Lower	Upper
0601	29	**Down**	-36.1	-58.3	-20.9
0602	21	**Down**	-3.8	-7.3	-1.1
0605	28	**Down**	-9.1	-18.5	-4.9
0606	13	**Down**	-8.3	-13.1	-3.4
0607	28	**Down**	-3.8	-7.3	-2.0
0608	27	**Down**	-3.4	-5.4	-1.5
0138	30	**Down**	-1.6	-2.2	-1.2
0346	22	**Down**	-0.28	-0.44	-0.14
0347	29	None	-0.11	-1.3	0.52
0379	22	**Down**	-0.12	-0.19	-0.07

µg/L/year = micrograms per liter per year
nCi/L/year = nanocuries per liter per year

Trend analysis for Sr-90 and combined Ra-226/228 from seep 0601 (Table 11) indicates decreasing levels in both constituents, as implied by negative slopes. A downward trend in Sr-90 was calculated for this location. No statistical trend was present in the combined Ra-226/228 levels.

Table 11. Summary of Trend Analysis Results for Other Radionuclides in Seep 0601 (2005−2011)

Radionuclide	Number of Samples	Trend	Slope (µg/L/year)	Confidence Interval (nCi/L/year)	
				Lower	Upper
Ra-226/228	26	None	-0.18	-0.64	0.08
Sr-90	25	**Down**	-0.38	-0.70	-0.06

µg/L/year = micrograms per liter per year
nCi/L/year = nanocuries per liter per year

4.5 Recommendations

No changes to the Main Hill seeps VOC monitoring program are warranted at this time. TCE concentrations greater than the MCL have continued to be measured in several seeps and downgradient monitoring well. Seep 0602 is influenced by surface water that infiltrated the Main Hill and flushed residual VOCs into the groundwater. Data will continue to be evaluated to determine whether surface water infiltration has caused long-term increases in VOC concentrations. Also, data will be evaluated to determine if degradation of TCE is occurring as indicated by the presence of the TCE breakdown products in the seeps.

Based on the body of tritium levels measured in the seeps since 2005, it is recommended to decrease the monitoring frequency for the Main Hill tritium program from quarterly to semiannually. Tritium data collected after building demolition and soil removal indicate decreasing levels in all of the seeps and downgradient wells and suggests that the majority of the source was removed from the Main Hill area during remediation activities. With continued flushing, levels in the groundwater should continue to decline. Starting in 2009, the tritium levels in all of the seeps, except seep 0601, were less than the MCL of 20 nCi/L. Changes in tritium levels in seep 0601 indicate a seasonal effect as levels typically increase in late summer/early fall. It is recommended that samples be collected during the first and third quarters of the year to capture seasonal variation in the tritium levels.

It is recommended to discontinue the Sr-90 and combined Ra-226/228 monitoring in seep 0601. The activities observed at this location have not exceeded the trigger level of 20 pCi/L for Sr-90 or combined Ra-226/228 since the monitoring program was started. Trend analysis also indicated overall decreasing concentrations in both constituents since 2005. An increase in combined Ra-226/228 was observed at the end of 2009; however, levels decreased in 2010 and have remained low. The levels of Sr-90 in seep 0601 are similar to those measured in background seeps. The levels of combined Ra-226/228 have been less than the MCL of 5 pCi/L since 2006. Trend analysis also indicated overall decreasing concentrations in both constituents since 2005.

5.0 Inspection of the Monitoring System

A routine maintenance program has been established for the long-term groundwater monitoring locations at the Mound site. This program includes periodic inspections focusing on the integrity of each well and the condition of the protective casing and surface pad, the surrounding area, and the route of access. These inspections are usually performed during each sampling event. If these wells were neglected, the surface seals could fail, and contamination could migrate from surface sources to the subsurface.

It was observed during the 2010 annual IC inspection that the old tritium sampler over seep 0607 was no longer required or functional. This sampler and the surrounding fence were removed in 2011, and the area was returned to its original state.

General maintenance was performed on the wells in March and April 2011. The wells were repainted, and vegetation and soil buildup were removed. Photographs of the wells after maintenance are in Appendix C.

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6.0 Data Validation

Each quarter's data were validated in accordance with procedures specified in the *Environmental Procedures Catalog*, LMS/POL/S04325, "Standard Practice for Validation of Laboratory Data." This procedure also fulfills the requirements of applicable procedures in the *Mound Methods Compendium* (MD 80045). Data validation was documented in quarterly reports prepared for each quarter (DOE 2011b, 2011c, 2011d, 2012). All 2011 data, including data validation qualifiers, are summarized in Appendix B.

Laboratory performance is assessed by reviewing and evaluating the following quality indicators:

Sample shipping and receiving practices	Holding times
Chain of custody	Instrument calibrations
Laboratory blanks	Interference check samples
Preparation blanks	Radiochemical uncertainty
Laboratory replicates	Laboratory control samples
Serial dilutions	Sample dilutions
Detection limits	Surrogate recoveries
Peak integrations	Confirmation analyses
Matrix spikes and matrix spike duplicates	Electronic data

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7.0 Summary and Recommendations

This report documents the groundwater sampling results for the Parcel 6, 7, and 8 area. Monitoring was performed to assess the changes in TCE concentrations in the groundwater and the changes in tritium levels and VOC concentrations in the seeps since contaminated buildings and soil were removed from the Main Hill area of the site. General decreases in tritium levels were observed in 2011; however, VOC concentrations in some areas have varied and in some instances increased.

Remediation activities, including the excavation of contaminated soil and the demolition of contaminated buildings, significantly affected groundwater quality in the Main Hill area. Substantial increases in contaminant levels were observed from 2004 through 2006 when remediation was performed. It was discovered in late 2009 that construction activities on the Main Hill had exposed abandoned tritium capture pits. These pits extend into the bedrock and allow for surface water to infiltrate into the subsurface. This infiltration may have caused changes in contaminant concentrations in the seeps and groundwater.

Monitoring will continue to evaluate the effect of source removal on groundwater quality, to evaluate the effect of surface water infiltration on contaminant levels, to determine trends in contaminant levels, and to ensure that the BVA is not adversely affected.

7.1 Wells 0315/0347

Monitoring results for 2011 continued to show TCE in wells 0315, 0347, and 0386 with the highest concentrations in wells 0315 and 0347 (source wells), which also exceed the MCL. All TCE concentrations were below applicable trigger levels in 2011. Estimated detections of TCE were reported in BVA wells 0387, 0389, and 0392. No detectable concentrations of TCE were reported in the remaining wells. Estimated detections of PCE were reported in wells 0126, 0387, 0389, and 0392. None of the wells had detectable concentrations of DCE or vinyl chloride.

TCE concentrations in wells 0315 and 0347 have been variable. Influence of surface water infiltration from the Main Hill into the subsurface was reflected in the data starting in 2006. The access points were addressed in October 2009. Concentrations of TCE in well 0315 appear to be decreasing since the capture pits were covered. Meanwhile, concentrations of TCE in well 0347 have remained high.

Statistical analysis of the TCE data indicated increasing TCE concentrations in source wells 0315 and 0347; however, no statistically significant trends either upward or downward were calculated for these two wells. Decreasing TCE concentrations were indicated in wells 0386 and 0389, and a statistically significant downward trend was calculated for well 0386. Starting in 2000, the concentrations in BVA wells 0386 and 0389, which have consistently shown TCE impact, have remained below the MCL.

Monitoring associated with TCE in wells 0315 and 0347 will continue in 2012. The evaluation of the 2011 data does not suggest that the monitoring program should be changed at this time. Quarterly sampling to evaluate whether surface water infiltration caused long-term increases in VOC concentrations will continue.

7.2 Main Hill Seeps

7.2.1 VOC Monitoring

Although TCE concentrations in some of the Main Hill seeps continued to exceed the MCL in 2011, no locations had concentrations that exceeded the trigger level of 150 µg/L (established for seep 0605). The highest concentrations were in seep 0602, which is onsite. PCE concentrations continued to exceed the MCL of 5 µg/L at seep 0601; however, this location did not exceed the trigger level of 75 µg/L. Monitoring of downgradient wells indicated elevated concentrations of TCE in wells 0347 and 0379; however, only well 0347 exceeded the MCL of 5 µg/L. Estimated detections of VOCs were reported in well 0311. No DCE or vinyl chloride was detected in the downgradient wells.

Concentrations of *cis*-1,2-DCE were reported in all of the seeps, except seep 0608. The highest concentrations were reported for seeps 0602 and 0605. Concentrations in seep 0602 increased in 2006 but have remained stable since 2008. Concentrations in seep 0605 decreased after 2007. Evaluation of TCE and *cis*-1,2-DCE concentrations in these two seeps indicates that the concentrations of each contaminant vary similarly. Although an increase in *cis*-1,2-DCE concentrations is an expected indicator of TCE degradation, in this instance, it is likely the result of flushing of residual DCE from the system. Estimated detections of *trans*-1,2-DCE, another breakdown product, were reported in seeps 0602 and 0605. No vinyl chloride was detected in 2011.

Trend analysis for TCE data collected since 2005 indicated increasing TCE and *cis*-1,2-DCE concentrations in seep 0602. A statistically significant upward trend in TCE concentrations was calculated for this location. This seep was influenced by the infiltration of surface water though an exposed tritium capture pit on the Main Hill and may continue to be influence by infiltration from other sources.

Statistical analysis indicates decreasing TCE concentrations in seeps 0605, 0606, and 0607. Downward trends in TCE and *cis*-1,2-DCE concentrations were calculated for seep 0605. A downward trend in PCE concentrations was calculated for data from seep 0601.

VOC monitoring associated with seeps and downgradient monitoring wells will continue in 2012. The evaluation of the 2011 data does not suggest that the monitoring program should be significantly changed now. TCE concentrations greater than the MCL have continued to be measured in several seeps and in downgradient monitoring wells. Surface water infiltration influences will continue to be evaluated to determine whether long-term increases in VOC concentrations have occurred. Quarterly sampling will continue at the seep and monitoring well locations.

7.2.2 Tritium and Other Radionuclide Monitoring

Elevated tritium levels are present in the Main Hill seeps, and one downgradient groundwater monitoring well showed tritium impact in 2011. Tritium levels in the Main Hill seeps continued to be higher than those in the downgradient groundwater wells. The highest tritium activity was observed in seep 0601, which is onsite. No locations had tritium levels that exceeded the trigger

level of 1,500 nCi/L. Levels in only seep 0601 exceeded the MCL of 20 nCi/L. Tritium was detected in five wells (0138, 0311, 0346, 0347, and 0379) downgradient of the seeps; however, most of the data were similar to background. The highest tritium levels in groundwater are in well 0347, which is downgradient of seep 0601. None of the groundwater wells had tritium levels that exceeded the MCL of 20 nCi/L.

Statistical analysis of tritium data collected since 2005 indicated decreasing levels in all of the seeps and four downgradient wells. Downward trends were calculated for all of the seeps and wells 0138, 0346, and 0379. The downward trends determined from post-remediation data suggest that the majority of the source has been removed from the Main Hill area and that continued flushing should continue to lower the levels. Also, tritium levels will likely decrease more rapidly than the VOCs because tritium does not attenuate through degradation or sorption in the natural environment; therefore, it moves more quickly in the groundwater system.

Ra-226, Ra-228, and Sr-90 continued to be present in seep 0601. The activities observed at this location did not exceed the trigger level of 20 pCi/L for Sr-90 or combined Ra-226/228. The levels of Sr-90 measured in seep 0601 are similar to those measured in unimpacted seeps. Levels of Ra-226 can occasionally be slightly higher than those measured in the unimpacted seeps. Trend analysis indicated decreasing levels of both radionuclides in seep 0601, and a statistically significant downward trend was calculated for Sr-90 levels measured since 2005.

It is recommended to decrease the monitoring frequency for the Main Hill tritium program from quarterly to semiannual starting in 2012. Tritium data collected since the completion of the Main Hill remediation indicate decreasing levels in all of the seeps and downgradient wells. This suggests that the majority of the source was removed from the Main Hill area during remediation activities and that, with continued flushing, levels should continue to decline.

It is recommended to discontinue the Sr-90 and combined Ra-226/228 monitoring in seep 0601 starting in 2012. The activities observed at this location have not exceeded the trigger level of 20 pCi/L for Sr-90 or combined Ra-226/228 since the monitoring program was started. Trend analysis also indicated overall decreasing concentrations in both constituents since 2005. The levels of both radionuclides in seep 0601 are similar to those measured in background seeps.

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Appendix A

Mound Specific Sampling Protocols

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Procedure A1 – Sampling Method for BVA Wells

The following procedure will be utilized for collection of groundwater samples from wells at the Mound Site screened in the BVA using a low-flow method.

Field parameter measurements to be recorded:

- Water quality indicators (pH, dissolved oxygen, and specific conductance)
- Temperature
- Oxidation-reduction potential (ORP)
- Turbidity
- Water level

Groundwater samples will be collected using the following procedural steps for low-flow sampling:

1. Measure the depth to water prior to purging or portable sampling pump.

   If a portable pump is used for sampling of wells, the water level should be measured again for monitoring of drawdown during purging. Purging can commence immediately. Pumps should be lowered to approximately 2 ft above the bottom of the screened interval. Efforts should be made to slowly lower pumps into wells to prevent agitation of the water column.

2. Turn pump on at lowest setting and slowly increase the flow rate until water begins to emerge from the discharge tube. Adjust the flow rate to approximately 500 mL/min.

3. After 1 pump/tubing volume has been purged, water quality indicators, DO, ORP, and turbidity will be measured at regular intervals based on volume purged (1 pump/tubing volume) or time (at least 3 minutes apart).

4. Monitor the water level in the well. If drawdown is occurring, the purge rate should be decreased until drawdown stops or a purge rate of 100 mL/min is obtained. If a purge rate of 100 mL/min cannot be maintained, contact the project lead to determine appropriate action for the well.

5. Sample collection can begin as soon as the drawdown and the water quality indicators have stabilized. Stability will be considered achieved when the criteria in Table A–1 are achieved and the turbidity of the water has reached 50 NTUs. A lower NTU level is required when chromium and nickel are analytes.

Table A–1. Stabilization Criteria for Field Parameters

Parameter	Criteria
Water Level	< 0.05 ft
pH	± 0.2 units
Dissolved Oxygen	±10 %
Specific Conductance	±10 %
Turbidity	≤ 50 NTU
Turbidity – Cr & Ni analyses	≤ 10 NTU

Procedure A2 – Sampling Method for Wells 0411 and 0443

The following procedure will be utilized for collection of groundwater samples from low-yield bedrock wells 0411 and 0443 in Phase I at the Mound Site.

Field parameter measurements to be recorded:

- Water quality indicators (pH, dissolved oxygen, and specific conductance)
- Temperature
- Oxidation-reduction potential (ORP)
- Turbidity
- Water level

Groundwater samples will be collected using the following procedural steps:

1. Measure the depth to water prior to purging or portable sampling pump.

   If a portable pump is used for sampling of wells, the water level should be measured again for monitoring of drawdown during purging. Purging can commence immediately. Pumps should be lowered to approximately 2 ft above the bottom of the screened interval. Efforts should be made to slowly lower pumps into wells to prevent agitation of the water column.

2. Turn pump on at a flow rate of 100 mL/min to 200 mL/min until water begins to emerge from the discharge tube.

3. After 1 pump/tubing volume has been purged, water quality indicators, temperature, ORP, and turbidity will be measured at regular intervals based on volume purged (1 pump/tubing volume) or time (at least 3 minutes apart).

4. Monitor the water level in the well. If drawdown in the wells is greater than 3 ft, stop purging water and contact the project lead to determine appropriate action for the well. Sampling method will likely be changed to that in Procedure A3.

5. Sample collection can begin as soon as the drawdown and the water quality indicators have stabilized. Stability will be considered achieved when the criteria in Table A–2 are achieved and the turbidity of the water has reached 50 NTUs. A lower NTU level is required when chromium and nickel are analytes. If the turbidity criteria cannot be attained and the other parameters meet criteria, contact the project lead to determine appropriate action for the well.

Table A–2. Stabilization Criteria for Field Parameters

Parameter	Criteria
Water Level	< 3 ft
pH	± 0.2 units
Dissolved Oxygen	±10 %
Specific Conductance	±10 %
Turbidity	≤ 50 NTU
Turbidity – Cr & Ni analyses	≤ 10 NTU

Procedure A3 – Sampling Method for Wells 0353, 0444, and 0445

The following procedure will be utilized for collection of groundwater samples from low-yield bedrock wells 0353, 0444, and 0445 in Phase I at the Mound Site.

Field parameter measurements to be recorded:

- Water quality indicators (pH, dissolved oxygen, and specific conductance)
- Temperature
- Oxidation-reduction potential (ORP)
- Turbidity
- Water level

Groundwater samples will be collected using the following procedural steps:

1. Measure the depth to water prior to purging or portable sampling pump.

   If a portable pump is used for sampling of wells, the water level should be measured again for monitoring of drawdown during purging. Purging can commence immediately. Pumps should be lowered to approximately 2 ft from the bottom of the screened interval. Efforts should be made to slowly lower pumps into wells to prevent agitation of the water column.

2. Turn pump on at a flow rate of 100 mL/min.

3. Sample collection can begin after 1 pump/tubing volume has been purged.

4. Water quality indicators, DO, ORP, and turbidity will be measured after the removal of 1 pump/tubing volume and at the end of sampling, and recorded.

5. Measure and record the depth of water after collecting samples.

Procedure A4 – Sampling Method for Seeps

The following procedure will be utilized for collection of surface water samples from seeps at the Mound Site.

Field parameter measurements to be recorded:

- pH
- specific conductance
- Oxidation-reduction potential (ORP)

1. Note condition of seep water (qualitative description of flow, color, turbidity, etc.) prior to sampling.

2. Create a surface basin for ponding of seep water if one is not present.

3. Allow water to flush through the basin until water becomes clear (similar condition prior to creating basin).

4. Samples may be collected by using a transfer container or by submerging the sample bottle into the basin. This is not acceptable for pre-preserved sample bottles; a transfer container will be used for collecting samples.

Appendix B

2011 Data for Parcel 6, 7, and 8 Groundwater Monitoring

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Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0118	Main Hill Seeps	cis-1,2-Dichloroethene	1/24/2011	0.1	ug/L	0.1	U	F
0118	Main Hill Seeps	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0118	Main Hill Seeps	cis-1,2-Dichloroethene	7/26/2011	0.1	ug/L	0.1	U	F
0118	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	0.1	ug/L	0.1	U	F
0118	Main Hill Seeps	Dissolved Oxygen	1/24/2011	6.12	mg/L			F
0118	Main Hill Seeps	Dissolved Oxygen	5/2/2011	5.76	mg/L			F
0118	Main Hill Seeps	Dissolved Oxygen	7/26/2011	6.64	mg/L			F
0118	Main Hill Seeps	Dissolved Oxygen	10/25/2011	7.77	mg/L			F
0118	Main Hill Seeps	Oxidation Reduction Potential	1/24/2011	120	mV			F
0118	Main Hill Seeps	Oxidation Reduction Potential	5/2/2011	120.8	mV			F
0118	Main Hill Seeps	Oxidation Reduction Potential	7/26/2011	85.2	mV			F
0118	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	148.4	mV			F
0118	Main Hill Seeps	pH	1/24/2011	7.07	s.u.			F
0118	Main Hill Seeps	pH	5/2/2011	6.87	s.u.			F
0118	Main Hill Seeps	pH	7/26/2011	6.95	s.u.			F
0118	Main Hill Seeps	pH	10/25/2011	6.82	s.u.			F
0118	Main Hill Seeps	Specific Conductance	1/24/2011	1260	umhos/cm			F
0118	Main Hill Seeps	Specific Conductance	5/2/2011	1254	umhos/cm			F
0118	Main Hill Seeps	Specific Conductance	7/26/2011	1343	umhos/cm			F
0118	Main Hill Seeps	Specific Conductance	10/25/2011	1302	umhos/cm			F
0118	Main Hill Seeps	Temperature	1/24/2011	12.79	C			F
0118	Main Hill Seeps	Temperature	5/2/2011	13.02	C			F
0118	Main Hill Seeps	Temperature	7/26/2011	15.09	C			F
0118	Main Hill Seeps	Temperature	10/25/2011	14	C			F
0118	Main Hill Seeps	Tetrachloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Tetrachloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Tetrachloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	trans-1,2-Dichloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	trans-1,2-Dichloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Trichloroethene	1/24/2011	0.11	ug/L	0.11	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0118	Main Hill Seeps	Trichloroethene	5/2/2011	0.11	ug/L	0.11	U	F
0118	Main Hill Seeps	Trichloroethene	7/26/2011	0.11	ug/L	0.11	U	F
0118	Main Hill Seeps	Trichloroethene	10/25/2011	0.11	ug/L	0.11	U	F
0118	Main Hill Seeps	Tritium	1/24/2011	102	pCi/L	331	U	F
0118	Main Hill Seeps	Tritium	5/2/2011	-6.2	pCi/L	321	U	F
0118	Main Hill Seeps	Tritium	7/26/2011	108	pCi/L	217	U	F
0118	Main Hill Seeps	Tritium	10/25/2011	154	pCi/L	362	U	F
0118	Main Hill Seeps	Turbidity	1/24/2011	41.6	NTU			F
0118	Main Hill Seeps	Turbidity	5/2/2011	39.7	NTU			F
0118	Main Hill Seeps	Turbidity	7/26/2011	12.6	NTU			F
0118	Main Hill Seeps	Turbidity	10/25/2011	19.2	NTU			F
0118	Main Hill Seeps	Vinyl chloride	1/24/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Vinyl chloride	7/26/2011	0.2	ug/L	0.2	U	F
0118	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	cis-1,2-Dichloroethene	1/24/2011	0.1	ug/L	0.1	U	F
0138	Main Hill Seeps	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0138	Main Hill Seeps	cis-1,2-Dichloroethene	7/26/2011	0.1	ug/L	0.1	U	F
0138	Main Hill Seeps	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	F
0138	Main Hill Seeps	Dissolved Oxygen	1/24/2011	3.92	mg/L			F
0138	Main Hill Seeps	Dissolved Oxygen	5/2/2011	3.91	mg/L			F
0138	Main Hill Seeps	Dissolved Oxygen	7/26/2011	4.17	mg/L			F
0138	Main Hill Seeps	Dissolved Oxygen	10/24/2011	4.57	mg/L			F
0138	Main Hill Seeps	Oxidation Reduction Potential	1/24/2011	47.4	mV			F
0138	Main Hill Seeps	Oxidation Reduction Potential	5/2/2011	142.3	mV			F
0138	Main Hill Seeps	Oxidation Reduction Potential	7/26/2011	74.1	mV			F
0138	Main Hill Seeps	Oxidation Reduction Potential	10/24/2011	179.1	mV			F
0138	Main Hill Seeps	pH	1/24/2011	6.97	s.u.			F
0138	Main Hill Seeps	pH	5/2/2011	6.92	s.u.			F
0138	Main Hill Seeps	pH	7/26/2011	6.97	s.u.			F
0138	Main Hill Seeps	pH	10/24/2011	6.6	s.u.			F
0138	Main Hill Seeps	Specific Conductance	1/24/2011	1289	umhos/cm			F
0138	Main Hill Seeps	Specific Conductance	5/2/2011	1438	umhos/cm			F
0138	Main Hill Seeps	Specific Conductance	7/26/2011	1310	umhos/cm			F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0138	Main Hill Seeps	Specific Conductance	10/24/2011	1242	umhos/cm			F
0138	Main Hill Seeps	Temperature	1/24/2011	11.31	C			F
0138	Main Hill Seeps	Temperature	5/2/2011	12.13	C			F
0138	Main Hill Seeps	Temperature	7/26/2011	14.4	C			F
0138	Main Hill Seeps	Temperature	10/24/2011	13.3	C			F
0138	Main Hill Seeps	Tetrachloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Tetrachloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Tetrachloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Tetrachloroethene	10/24/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	trans-1,2-Dichloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	trans-1,2-Dichloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Trichloroethene	1/24/2011	0.11	ug/L	0.11	U	F
0138	Main Hill Seeps	Trichloroethene	5/2/2011	0.11	ug/L	0.11	U	F
0138	Main Hill Seeps	Trichloroethene	7/26/2011	0.11	ug/L	0.11	U	F
0138	Main Hill Seeps	Trichloroethene	10/24/2011	0.11	ug/L	0.11	U	F
0138	Main Hill Seeps	Tritium	1/24/2011	479	pCi/L	309		FJ
0138	Main Hill Seeps	Tritium	5/2/2011	1600	pCi/L	324		F
0138	Main Hill Seeps	Tritium	7/26/2011	1600	pCi/L	221		F
0138	Main Hill Seeps	Tritium	10/24/2011	914	pCi/L	363		JF
0138	Main Hill Seeps	Turbidity	1/24/2011	29.4	NTU			F
0138	Main Hill Seeps	Turbidity	5/2/2011	27.8	NTU			F
0138	Main Hill Seeps	Turbidity	7/26/2011	27	NTU			F
0138	Main Hill Seeps	Turbidity	10/24/2011	15.3	NTU			F
0138	Main Hill Seeps	Vinyl chloride	1/24/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Vinyl chloride	7/26/2011	0.2	ug/L	0.2	U	F
0138	Main Hill Seeps	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	cis-1,2-Dichloroethene	1/24/2011	0.1	ug/L	0.1	U	F
0301	Main Hill Seeps	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0301	Main Hill Seeps	cis-1,2-Dichloroethene	7/26/2011	0.1	ug/L	0.1	U	F
0301	Main Hill Seeps	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	FJ
0301	Main Hill Seeps	Dissolved Oxygen	1/24/2011	2.15	mg/L			F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0301	Main Hill Seeps	Dissolved Oxygen	5/2/2011	0.96	mg/L			F
0301	Main Hill Seeps	Dissolved Oxygen	7/26/2011	0.44	mg/L			F
0301	Main Hill Seeps	Dissolved Oxygen	10/24/2011	1.09	mg/L			FJ
0301	Main Hill Seeps	Oxidation Reduction Potential	1/24/2011	68.7	mV			F
0301	Main Hill Seeps	Oxidation Reduction Potential	5/2/2011	105.7	mV			F
0301	Main Hill Seeps	Oxidation Reduction Potential	7/26/2011	-70.1	mV			F
0301	Main Hill Seeps	Oxidation Reduction Potential	10/24/2011	159.7	mV			FJ
0301	Main Hill Seeps	pH	1/24/2011	11.27	s.u.			F
0301	Main Hill Seeps	pH	5/2/2011	9.69	s.u.			F
0301	Main Hill Seeps	pH	7/26/2011	7.69	s.u.			F
0301	Main Hill Seeps	pH	10/24/2011	9.54	s.u.			FJ
0301	Main Hill Seeps	Specific Conductance	1/24/2011	1412	umhos/cm			F
0301	Main Hill Seeps	Specific Conductance	5/2/2011	998	umhos/cm			F
0301	Main Hill Seeps	Specific Conductance	7/26/2011	1046	umhos/cm			F
0301	Main Hill Seeps	Specific Conductance	10/24/2011	1039	umhos/cm			FJ
0301	Main Hill Seeps	Temperature	1/24/2011	10.63	C			F
0301	Main Hill Seeps	Temperature	5/2/2011	13.34	C			F
0301	Main Hill Seeps	Temperature	7/26/2011	16.26	C			F
0301	Main Hill Seeps	Temperature	10/24/2011	17.35	C			FJ
0301	Main Hill Seeps	Tetrachloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	Tetrachloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	Tetrachloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	Tetrachloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0301	Main Hill Seeps	trans-1,2-Dichloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	trans-1,2-Dichloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0301	Main Hill Seeps	Trichloroethene	1/24/2011	0.11	ug/L	0.11	U	F
0301	Main Hill Seeps	Trichloroethene	5/2/2011	0.11	ug/L	0.11	U	F
0301	Main Hill Seeps	Trichloroethene	7/26/2011	0.11	ug/L	0.11	U	F
0301	Main Hill Seeps	Trichloroethene	10/24/2011	0.11	ug/L	0.11	U	FJ
0301	Main Hill Seeps	Tritium	1/24/2011	23.4	pCi/L	318	U	F
0301	Main Hill Seeps	Tritium	5/2/2011	188	pCi/L	325	U	F
0301	Main Hill Seeps	Tritium	7/26/2011	167	pCi/L	224	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0301	Main Hill Seeps	Tritium	10/24/2011	308	pCi/L	355	U	FJ
0301	Main Hill Seeps	Turbidity	1/24/2011	3.06	NTU			F
0301	Main Hill Seeps	Turbidity	5/2/2011	2.02	NTU			F
0301	Main Hill Seeps	Turbidity	7/26/2011	2.5	NTU			F
0301	Main Hill Seeps	Turbidity	10/24/2011	4.58	NTU			FJ
0301	Main Hill Seeps	Vinyl chloride	1/24/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	Vinyl chloride	7/26/2011	0.2	ug/L	0.2	U	F
0301	Main Hill Seeps	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	FJ
0311	Main Hill Seeps	cis-1,2-Dichloroethene	1/24/2011	0.1	ug/L	0.1	U	F
0311	Main Hill Seeps	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0311	Main Hill Seeps	cis-1,2-Dichloroethene	7/26/2011	0.1	ug/L	0.1	U	F
0311	Main Hill Seeps	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	F
0311	Main Hill Seeps	Dissolved Oxygen	1/24/2011	3.23	mg/L			F
0311	Main Hill Seeps	Dissolved Oxygen	5/2/2011	0.3	mg/L			F
0311	Main Hill Seeps	Dissolved Oxygen	7/26/2011	2.96	mg/L			F
0311	Main Hill Seeps	Dissolved Oxygen	10/24/2011	4.5	mg/L			F
0311	Main Hill Seeps	Oxidation Reduction Potential	1/24/2011	81.8	mV			F
0311	Main Hill Seeps	Oxidation Reduction Potential	5/2/2011	90.6	mV			F
0311	Main Hill Seeps	Oxidation Reduction Potential	7/26/2011	40.3	mV			F
0311	Main Hill Seeps	Oxidation Reduction Potential	10/24/2011	152.2	mV			F
0311	Main Hill Seeps	pH	1/24/2011	7.09	s.u.			F
0311	Main Hill Seeps	pH	5/2/2011	6.99	s.u.			F
0311	Main Hill Seeps	pH	7/26/2011	7.05	s.u.			F
0311	Main Hill Seeps	pH	10/24/2011	6.88	s.u.			F
0311	Main Hill Seeps	Specific Conductance	1/24/2011	1200	umhos/cm			F
0311	Main Hill Seeps	Specific Conductance	5/2/2011	1167	umhos/cm			F
0311	Main Hill Seeps	Specific Conductance	7/26/2011	993	umhos/cm			F
0311	Main Hill Seeps	Specific Conductance	10/24/2011	1040	umhos/cm			F
0311	Main Hill Seeps	Temperature	1/24/2011	13.91	C			F
0311	Main Hill Seeps	Temperature	5/2/2011	13.85	C			F
0311	Main Hill Seeps	Temperature	7/26/2011	1.73	C			F
0311	Main Hill Seeps	Temperature	10/24/2011	18.1	C			F
0311	Main Hill Seeps	Tetrachloroethene	1/24/2011	0.23	ug/L	0.2	J	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0311	Main Hill Seeps	Tetrachloroethene	5/2/2011	0.23	ug/L	0.2	J	F
0311	Main Hill Seeps	Tetrachloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	Tetrachloroethene	10/24/2011	0.22	ug/L	0.2	J	F
0311	Main Hill Seeps	trans-1,2-Dichloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	trans-1,2-Dichloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	Trichloroethene	1/24/2011	0.11	ug/L	0.11	U	F
0311	Main Hill Seeps	Trichloroethene	5/2/2011	0.11	ug/L	0.11	U	F
0311	Main Hill Seeps	Trichloroethene	7/26/2011	0.11	ug/L	0.11	U	F
0311	Main Hill Seeps	Trichloroethene	10/24/2011	0.11	ug/L	0.11	U	F
0311	Main Hill Seeps	Tritium	1/24/2011	1020	pCi/L	310		F
0311	Main Hill Seeps	Tritium	5/2/2011	809	pCi/L	320		FJ
0311	Main Hill Seeps	Tritium	7/26/2011	151	pCi/L	217	U	F
0311	Main Hill Seeps	Tritium	10/24/2011	-56.3	pCi/L	330	U	F
0311	Main Hill Seeps	Turbidity	1/24/2011	20.8	NTU			F
0311	Main Hill Seeps	Turbidity	5/2/2011	46.4	NTU			F
0311	Main Hill Seeps	Turbidity	7/26/2011	23.1	NTU			F
0311	Main Hill Seeps	Turbidity	10/24/2011	21.2	NTU			F
0311	Main Hill Seeps	Vinyl chloride	1/24/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	Vinyl chloride	7/26/2011	0.2	ug/L	0.2	U	F
0311	Main Hill Seeps	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0346	Main Hill Seeps	cis-1,2-Dichloroethene	5/3/2011	0.1	ug/L	0.1	U	F
0346	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	0.1	ug/L	0.1	U	FQ
0346	Main Hill Seeps	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	F
0346	Main Hill Seeps	Dissolved Oxygen	1/25/2011	0.56	mg/L			F
0346	Main Hill Seeps	Dissolved Oxygen	5/3/2011	8.93	mg/L			F
0346	Main Hill Seeps	Dissolved Oxygen	7/27/2011	0.56	mg/L			FQ
0346	Main Hill Seeps	Dissolved Oxygen	10/24/2011	2.7	mg/L			F
0346	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	61.4	mV			F
0346	Main Hill Seeps	Oxidation Reduction Potential	5/3/2011	58.9	mV			F
0346	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	31.6	mV			FQ

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0346	Main Hill Seeps	Oxidation Reduction Potential	10/24/2011	137.4	mV			F
0346	Main Hill Seeps	pH	1/25/2011	7.08	s.u.			F
0346	Main Hill Seeps	pH	5/3/2011	7.74	s.u.			F
0346	Main Hill Seeps	pH	7/27/2011	7.12	s.u.			FQ
0346	Main Hill Seeps	pH	10/24/2011	6.9	s.u.			F
0346	Main Hill Seeps	Specific Conductance	1/25/2011	1733	umhos/cm			F
0346	Main Hill Seeps	Specific Conductance	5/3/2011	809	umhos/cm			F
0346	Main Hill Seeps	Specific Conductance	7/27/2011	1910	umhos/cm			FQ
0346	Main Hill Seeps	Specific Conductance	10/24/2011	1312	umhos/cm			F
0346	Main Hill Seeps	Temperature	1/25/2011	13.3	C			F
0346	Main Hill Seeps	Temperature	5/3/2011	12.88	C			F
0346	Main Hill Seeps	Temperature	7/27/2011	16.35	C			FQ
0346	Main Hill Seeps	Temperature	10/24/2011	14.57	C			F
0346	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	Tetrachloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	Tetrachloroethene	7/27/2011	0.2	ug/L	0.2	U	FQ
0346	Main Hill Seeps	Tetrachloroethene	10/24/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	trans-1,2-Dichloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.2	ug/L	0.2	U	FQ
0346	Main Hill Seeps	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	Trichloroethene	1/25/2011	0.11	ug/L	0.11	U	F
0346	Main Hill Seeps	Trichloroethene	5/3/2011	0.11	ug/L	0.11	U	F
0346	Main Hill Seeps	Trichloroethene	7/27/2011	0.11	ug/L	0.11	U	FQ
0346	Main Hill Seeps	Trichloroethene	10/24/2011	0.11	ug/L	0.11	U	F
0346	Main Hill Seeps	Tritium	1/25/2011	1280	pCi/L	339		F
0346	Main Hill Seeps	Tritium	5/3/2011	987	pCi/L	323		F
0346	Main Hill Seeps	Tritium	7/27/2011	1470	pCi/L	222		FQ
0346	Main Hill Seeps	Tritium	10/24/2011	919	pCi/L	358		JF
0346	Main Hill Seeps	Turbidity	1/25/2011	17.7	NTU			F
0346	Main Hill Seeps	Turbidity	5/3/2011	4.97	NTU			F
0346	Main Hill Seeps	Turbidity	7/27/2011	9.65	NTU			FQ
0346	Main Hill Seeps	Turbidity	10/24/2011	9	NTU			F
0346	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0346	Main Hill Seeps	Vinyl chloride	5/3/2011	0.2	ug/L	0.2	U	F
0346	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	FQ
0346	Main Hill Seeps	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	F
0379	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0379	Main Hill Seeps	cis-1,2-Dichloroethene	5/3/2011	0.1	ug/L	0.1	U	F
0379	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	0.1	ug/L	0.1	U	FQ
0379	Main Hill Seeps	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	FJ
0379	Main Hill Seeps	Dissolved Oxygen	1/25/2011	0.51	mg/L			F
0379	Main Hill Seeps	Dissolved Oxygen	5/3/2011	0.48	mg/L			F
0379	Main Hill Seeps	Dissolved Oxygen	7/27/2011	1.45	mg/L			FQ
0379	Main Hill Seeps	Dissolved Oxygen	10/24/2011	1.43	mg/L			FJ
0379	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	36.5	mV			F
0379	Main Hill Seeps	Oxidation Reduction Potential	5/3/2011	17.5	mV			F
0379	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	58.9	mV			FQ
0379	Main Hill Seeps	Oxidation Reduction Potential	10/24/2011	121.8	mV			FJ
0379	Main Hill Seeps	pH	1/25/2011	7	s.u.			F
0379	Main Hill Seeps	pH	5/3/2011	6.88	s.u.			F
0379	Main Hill Seeps	pH	7/27/2011	7.08	s.u.			FQ
0379	Main Hill Seeps	pH	10/24/2011	6.63	s.u.			FJ
0379	Main Hill Seeps	Specific Conductance	1/25/2011	1993	umhos/cm			F
0379	Main Hill Seeps	Specific Conductance	5/3/2011	1874	umhos/cm			F
0379	Main Hill Seeps	Specific Conductance	7/27/2011	2101	umhos/cm			FQ
0379	Main Hill Seeps	Specific Conductance	10/24/2011	2073	umhos/cm			FJ
0379	Main Hill Seeps	Temperature	1/25/2011	12.82	C			F
0379	Main Hill Seeps	Temperature	5/3/2011	13.13	C			F
0379	Main Hill Seeps	Temperature	7/27/2011	16.51	C			FQ
0379	Main Hill Seeps	Temperature	10/24/2011	14.06	C			FJ
0379	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.4	ug/L	0.2	J	F
0379	Main Hill Seeps	Tetrachloroethene	5/3/2011	0.4	ug/L	0.2	J	F
0379	Main Hill Seeps	Tetrachloroethene	7/27/2011	0.3	ug/L	0.2	J	FQJ
0379	Main Hill Seeps	Tetrachloroethene	10/24/2011	0.39	ug/L	0.2	J	FJ
0379	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0379	Main Hill Seeps	trans-1,2-Dichloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0379	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.2	ug/L	0.2	U	FQ

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0379	Main Hill Seeps	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0379	Main Hill Seeps	Trichloroethene	1/25/2011	1.45	ug/L	0.11		F
0379	Main Hill Seeps	Trichloroethene	5/3/2011	1.42	ug/L	0.11		F
0379	Main Hill Seeps	Trichloroethene	7/27/2011	1.94	ug/L	0.11		FQ
0379	Main Hill Seeps	Trichloroethene	10/24/2011	1.79	ug/L	0.11		FJ
0379	Main Hill Seeps	Tritium	1/25/2011	1420	pCi/L	309		F
0379	Main Hill Seeps	Tritium	5/3/2011	1450	pCi/L	321		F
0379	Main Hill Seeps	Tritium	7/27/2011	1350	pCi/L	222		FQ
0379	Main Hill Seeps	Tritium	10/24/2011	1610	pCi/L	359		FJ
0379	Main Hill Seeps	Turbidity	1/25/2011	7.71	NTU			F
0379	Main Hill Seeps	Turbidity	5/3/2011	38.9	NTU			F
0379	Main Hill Seeps	Turbidity	7/27/2011	79.9	NTU			FQ
0379	Main Hill Seeps	Turbidity	10/24/2011	46.3	NTU			FJ
0379	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0379	Main Hill Seeps	Vinyl chloride	5/3/2011	0.2	ug/L	0.2	U	F
0379	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	FQ
0379	Main Hill Seeps	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	FJ
0601	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	0.46	ug/L	0.1	J	
0601	Main Hill Seeps	cis-1,2-Dichloroethene	5/10/2011	0.66	ug/L	0.1	J	
0601	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	0.5	ug/L	0.1	J	
0601	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	0.64	ug/L	0.1	J	
0601	Main Hill Seeps	Dissolved Oxygen	1/25/2011	8.19	mg/L			
0601	Main Hill Seeps	Dissolved Oxygen	5/10/2011	5.35	mg/L			
0601	Main Hill Seeps	Dissolved Oxygen	7/27/2011	6.8	mg/L			
0601	Main Hill Seeps	Dissolved Oxygen	10/25/2011	3.72	mg/L			
0601	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	145.1	mV			
0601	Main Hill Seeps	Oxidation Reduction Potential	5/10/2011	77.1	mV			
0601	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	63.2	mV			
0601	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	127	mV			
0601	Main Hill Seeps	pH	1/25/2011	7.16	s.u.			
0601	Main Hill Seeps	pH	5/10/2011	7.37	s.u.			
0601	Main Hill Seeps	pH	7/27/2011	7.15	s.u.			
0601	Main Hill Seeps	pH	10/25/2011	6.13	s.u.			
0601	Main Hill Seeps	Radium-226	1/25/2011	1.28	pCi/L	0.59		J

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0601	Main Hill Seeps	Radium-226	5/10/2011	1.63	pCi/L	0.236		
0601	Main Hill Seeps	Radium-226	7/27/2011	0.294	pCi/L	0.453	U	
0601	Main Hill Seeps	Radium-226	10/25/2011	0.649	pCi/L	0.207		
0601	Main Hill Seeps	Radium-228	1/25/2011	0.242	pCi/L	0.564	U	
0601	Main Hill Seeps	Radium-228	5/10/2011	1.01	pCi/L	0.49		J
0601	Main Hill Seeps	Radium-228	7/27/2011	0.533	pCi/L	0.588	U	
0601	Main Hill Seeps	Radium-228	10/25/2011	0.0365	pCi/L	0.615	U	
0601	Main Hill Seeps	Specific Conductance	1/25/2011	2051	umhos/cm			
0601	Main Hill Seeps	Specific Conductance	5/10/2011	1595	umhos/cm			
0601	Main Hill Seeps	Specific Conductance	7/27/2011	1672	umhos/cm			
0601	Main Hill Seeps	Specific Conductance	10/25/2011	1555	umhos/cm			
0601	Main Hill Seeps	Strontium-90	1/25/2011	1.55	pCi/L	0.98	U	
0601	Main Hill Seeps	Strontium-90	5/10/2011	2.01	pCi/L	0.829		J
0601	Main Hill Seeps	Strontium-90	7/27/2011	2.08	pCi/L	0.544		
0601	Main Hill Seeps	Strontium-90	10/25/2011	0.745	pCi/L	0.489		J
0601	Main Hill Seeps	Temperature	1/25/2011	11.59	C			
0601	Main Hill Seeps	Temperature	5/10/2011	15.19	C			
0601	Main Hill Seeps	Temperature	7/27/2011	15.97	C			
0601	Main Hill Seeps	Temperature	10/25/2011	14.63	C			
0601	Main Hill Seeps	Tetrachloroethene	1/25/2011	4.33	ug/L	0.2		
0601	Main Hill Seeps	Tetrachloroethene	5/10/2011	11.5	ug/L	0.2		
0601	Main Hill Seeps	Tetrachloroethene	7/27/2011	9.59	ug/L	0.2		J
0601	Main Hill Seeps	Tetrachloroethene	10/25/2011	9.29	ug/L	0.2		
0601	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	trans-1,2-Dichloroethene	5/10/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	Trichloroethene	1/25/2011	3.94	ug/L	0.11		
0601	Main Hill Seeps	Trichloroethene	5/10/2011	4.62	ug/L	0.11		
0601	Main Hill Seeps	Trichloroethene	7/27/2011	5.78	ug/L	0.11		
0601	Main Hill Seeps	Trichloroethene	10/25/2011	4.95	ug/L	0.11		
0601	Main Hill Seeps	Tritium	1/25/2011	38300	pCi/L	311		
0601	Main Hill Seeps	Tritium	5/10/2011	32700	pCi/L	326		
0601	Main Hill Seeps	Tritium	7/27/2011	54000	pCi/L	214		

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0601	Main Hill Seeps	Tritium	10/25/2011	46200	pCi/L	360		
0601	Main Hill Seeps	Turbidity	7/27/2011	11.8	NTU			
0601	Main Hill Seeps	Turbidity	10/25/2011	6.85	NTU			
0601	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	Vinyl chloride	5/10/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	
0601	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	
0602	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	38	ug/L	0.1		
0602	Main Hill Seeps	cis-1,2-Dichloroethene	4/25/2011	8.11	ug/L	0.1		
0602	Main Hill Seeps	cis-1,2-Dichloroethene	5/10/2011	30.5	ug/L	0.1		
0602	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	22.6	ug/L	0.1		
0602	Main Hill Seeps	Dissolved Oxygen	1/25/2011	11.78	mg/L			
0602	Main Hill Seeps	Dissolved Oxygen	5/10/2011	8.48	mg/L			
0602	Main Hill Seeps	Dissolved Oxygen	10/25/2011	6.29	mg/L			
0602	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	157.9	mV			
0602	Main Hill Seeps	Oxidation Reduction Potential	5/10/2011	72.4	mV			
0602	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	60	mV			
0602	Main Hill Seeps	pH	1/25/2011	7.45	s.u.			
0602	Main Hill Seeps	pH	5/10/2011	7.38	s.u.			
0602	Main Hill Seeps	pH	10/25/2011	6.82	s.u.			
0602	Main Hill Seeps	Specific Conductance	1/25/2011	2314	umhos/cm			
0602	Main Hill Seeps	Specific Conductance	5/10/2011	822	umhos/cm			
0602	Main Hill Seeps	Specific Conductance	10/25/2011	1791	umhos/cm			
0602	Main Hill Seeps	Temperature	1/25/2011	3.29	C			
0602	Main Hill Seeps	Temperature	5/10/2011	18.08	C			
0602	Main Hill Seeps	Temperature	10/25/2011	13.75	C			
0602	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.37	ug/L	0.2	J	
0602	Main Hill Seeps	Tetrachloroethene	4/25/2011	0.33	ug/L	0.2	J	
0602	Main Hill Seeps	Tetrachloroethene	5/10/2011	0.27	ug/L	0.2	J	
0602	Main Hill Seeps	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	
0602	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.48	ug/L	0.2	J	
0602	Main Hill Seeps	trans-1,2-Dichloroethene	4/25/2011	0.2	ug/L	0.2	U	
0602	Main Hill Seeps	trans-1,2-Dichloroethene	5/10/2011	0.28	ug/L	0.2	J	
0602	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.23	ug/L	0.2	J	

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0602	Main Hill Seeps	Trichloroethene	1/25/2011	139	ug/L	0.22		
0602	Main Hill Seeps	Trichloroethene	4/25/2011	49.9	ug/L	0.11		
0602	Main Hill Seeps	Trichloroethene	5/10/2011	70.1	ug/L	0.11		
0602	Main Hill Seeps	Trichloroethene	10/25/2011	16.9	ug/L	0.11		
0602	Main Hill Seeps	Tritium	1/25/2011	10100	pCi/L	307		
0602	Main Hill Seeps	Tritium	5/10/2011	7240	pCi/L	318		
0602	Main Hill Seeps	Tritium	10/25/2011	14500	pCi/L	362		
0602	Main Hill Seeps	Turbidity	10/25/2011	255	NTU			
0602	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	
0602	Main Hill Seeps	Vinyl chloride	4/25/2011	0.22	ug/L	0.2	J	
0602	Main Hill Seeps	Vinyl chloride	5/10/2011	0.2	ug/L	0.2	U	
0602	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	4.48	ug/L	0.1		
0605	Main Hill Seeps	cis-1,2-Dichloroethene	5/10/2011	1.62	ug/L	0.1		
0605	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	7.08	ug/L	0.1		
0605	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	3.22	ug/L	0.1		
0605	Main Hill Seeps	Dissolved Oxygen	1/25/2011	11.38	mg/L			
0605	Main Hill Seeps	Dissolved Oxygen	5/10/2011	9.48	mg/L			
0605	Main Hill Seeps	Dissolved Oxygen	7/27/2011	8.13	mg/L			
0605	Main Hill Seeps	Dissolved Oxygen	10/25/2011	7.95	mg/L			
0605	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	112.3	mV			
0605	Main Hill Seeps	Oxidation Reduction Potential	5/10/2011	47.3	mV			
0605	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	108.4	mV			
0605	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	111	mV			
0605	Main Hill Seeps	pH	1/25/2011	7.19	s.u.			
0605	Main Hill Seeps	pH	5/10/2011	7.87	s.u.			
0605	Main Hill Seeps	pH	7/27/2011	7.24	s.u.			
0605	Main Hill Seeps	pH	10/25/2011	6.64	s.u.			
0605	Main Hill Seeps	Specific Conductance	1/25/2011	3825	umhos/cm			
0605	Main Hill Seeps	Specific Conductance	5/10/2011	1850	umhos/cm			
0605	Main Hill Seeps	Specific Conductance	7/27/2011	2126	umhos/cm			
0605	Main Hill Seeps	Specific Conductance	10/25/2011	1795	umhos/cm			
0605	Main Hill Seeps	Temperature	1/25/2011	6.62	C			
0605	Main Hill Seeps	Temperature	5/10/2011	13.11	C			

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0605	Main Hill Seeps	Temperature	7/27/2011	17.99	C			
0605	Main Hill Seeps	Temperature	10/25/2011	12.99	C			
0605	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	Tetrachloroethene	5/10/2011	0.29	ug/L	0.2	J	
0605	Main Hill Seeps	Tetrachloroethene	7/27/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.31	ug/L	0.2	J	
0605	Main Hill Seeps	trans-1,2-Dichloroethene	5/10/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.28	ug/L	0.2	J	J
0605	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	Trichloroethene	1/25/2011	12.2	ug/L	0.11		
0605	Main Hill Seeps	Trichloroethene	5/10/2011	13.1	ug/L	0.11		
0605	Main Hill Seeps	Trichloroethene	7/27/2011	15.9	ug/L	0.11		
0605	Main Hill Seeps	Trichloroethene	10/25/2011	11.5	ug/L	0.11		
0605	Main Hill Seeps	Tritium	1/25/2011	14900	pCi/L	304		
0605	Main Hill Seeps	Tritium	5/10/2011	11900	pCi/L	320		
0605	Main Hill Seeps	Tritium	7/27/2011	13200	pCi/L	223		
0605	Main Hill Seeps	Tritium	10/25/2011	13100	pCi/L	353		
0605	Main Hill Seeps	Turbidity	7/27/2011	438	NTU			
0605	Main Hill Seeps	Turbidity	10/25/2011	297	NTU			
0605	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	Vinyl chloride	5/10/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	
0605	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	
0606	Main Hill Seeps	cis-1,2-Dichloroethene	5/10/2011	0.1	ug/L	0.1	U	
0606	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	1.59	ug/L	0.1		
0606	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	0.27	ug/L	0.1	J	
0606	Main Hill Seeps	Dissolved Oxygen	1/25/2011	11.27	mg/L			
0606	Main Hill Seeps	Dissolved Oxygen	5/10/2011	6.83	mg/L			
0606	Main Hill Seeps	Dissolved Oxygen	7/27/2011	6.62	mg/L			
0606	Main Hill Seeps	Dissolved Oxygen	10/25/2011	6.99	mg/L			
0606	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	144.9	mV			
0606	Main Hill Seeps	Oxidation Reduction Potential	5/10/2011	66.1	mV			

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0606	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	142.2	mV			
0606	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	123	mV			
0606	Main Hill Seeps	pH	1/25/2011	7.32	s.u.			
0606	Main Hill Seeps	pH	5/10/2011	7.32	s.u.			
0606	Main Hill Seeps	pH	7/27/2011	7.35	s.u.			
0606	Main Hill Seeps	pH	10/25/2011	6.43	s.u.			
0606	Main Hill Seeps	Specific Conductance	1/25/2011	1890	umhos/cm			
0606	Main Hill Seeps	Specific Conductance	5/10/2011	1326	umhos/cm			
0606	Main Hill Seeps	Specific Conductance	7/27/2011	2103	umhos/cm			
0606	Main Hill Seeps	Specific Conductance	10/25/2011	1609	umhos/cm			
0606	Main Hill Seeps	Temperature	1/25/2011	3.96	C			
0606	Main Hill Seeps	Temperature	5/10/2011	12.19	C			
0606	Main Hill Seeps	Temperature	7/27/2011	20.86	C			
0606	Main Hill Seeps	Temperature	10/25/2011	12.37	C			
0606	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	Tetrachloroethene	5/10/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	Tetrachloroethene	7/27/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	trans-1,2-Dichloroethene	5/10/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	Trichloroethene	1/25/2011	0.15	ug/L	0.11	J	
0606	Main Hill Seeps	Trichloroethene	5/10/2011	0.95	ug/L	0.11	J	
0606	Main Hill Seeps	Trichloroethene	7/27/2011	8.72	ug/L	0.11		
0606	Main Hill Seeps	Trichloroethene	10/25/2011	1.8	ug/L	0.11		
0606	Main Hill Seeps	Tritium	1/25/2011	5900	pCi/L	312		
0606	Main Hill Seeps	Tritium	5/10/2011	5760	pCi/L	325		
0606	Main Hill Seeps	Tritium	7/27/2011	11100	pCi/L	215		
0606	Main Hill Seeps	Tritium	10/25/2011	4930	pCi/L	356		
0606	Main Hill Seeps	Turbidity	7/27/2011	109	NTU			
0606	Main Hill Seeps	Turbidity	10/25/2011	137	NTU			
0606	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	Vinyl chloride	5/10/2011	0.2	ug/L	0.2	U	

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0606	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	
0606	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	1.2	ug/L	0.1		
0607	Main Hill Seeps	cis-1,2-Dichloroethene	5/10/2011	0.43	ug/L	0.1	J	
0607	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	1.61	ug/L	0.1		
0607	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	0.81	ug/L	0.1	J	
0607	Main Hill Seeps	Dissolved Oxygen	1/25/2011	6.84	mg/L			
0607	Main Hill Seeps	Dissolved Oxygen	5/10/2011	5.51	mg/L			
0607	Main Hill Seeps	Dissolved Oxygen	7/27/2011	8	mg/L			
0607	Main Hill Seeps	Dissolved Oxygen	10/25/2011	5.05	mg/L			
0607	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	247.7	mV			
0607	Main Hill Seeps	Oxidation Reduction Potential	5/10/2011	63.1	mV			
0607	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	134.5	mV			
0607	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	157	mV			
0607	Main Hill Seeps	pH	1/25/2011	7.12	s.u.			
0607	Main Hill Seeps	pH	5/10/2011	7.27	s.u.			
0607	Main Hill Seeps	pH	7/27/2011	7.3	s.u.			
0607	Main Hill Seeps	pH	10/25/2011	5.98	s.u.			
0607	Main Hill Seeps	Specific Conductance	1/25/2011	3058	umhos/cm			
0607	Main Hill Seeps	Specific Conductance	5/10/2011	1646	umhos/cm			
0607	Main Hill Seeps	Specific Conductance	7/27/2011	1836	umhos/cm			
0607	Main Hill Seeps	Specific Conductance	10/25/2011	1650	umhos/cm			
0607	Main Hill Seeps	Temperature	1/25/2011	11.48	C			
0607	Main Hill Seeps	Temperature	5/10/2011	13.02	C			
0607	Main Hill Seeps	Temperature	7/27/2011	17.81	C			
0607	Main Hill Seeps	Temperature	10/25/2011	14.08	C			
0607	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	Tetrachloroethene	5/10/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	Tetrachloroethene	7/27/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	trans-1,2-Dichloroethene	5/10/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0607	Main Hill Seeps	Trichloroethene	1/25/2011	4.9	ug/L	0.11		
0607	Main Hill Seeps	Trichloroethene	5/10/2011	3.7	ug/L	0.11		
0607	Main Hill Seeps	Trichloroethene	7/27/2011	8.72	ug/L	0.11		
0607	Main Hill Seeps	Trichloroethene	10/25/2011	5.51	ug/L	0.11		
0607	Main Hill Seeps	Tritium	1/25/2011	7040	pCi/L	309		
0607	Main Hill Seeps	Tritium	5/10/2011	3710	pCi/L	337		
0607	Main Hill Seeps	Tritium	7/27/2011	5370	pCi/L	217		
0607	Main Hill Seeps	Tritium	10/25/2011	5690	pCi/L	350		
0607	Main Hill Seeps	Turbidity	7/27/2011	67.1	NTU			
0607	Main Hill Seeps	Turbidity	10/25/2011	69.9	NTU			
0607	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	Vinyl chloride	5/10/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	
0607	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	cis-1,2-Dichloroethene	1/25/2011	0.31	ug/L	0.1	J	
0608	Main Hill Seeps	cis-1,2-Dichloroethene	5/10/2011	0.1	ug/L	0.1	U	
0608	Main Hill Seeps	cis-1,2-Dichloroethene	7/27/2011	0.1	ug/L	0.1	U	
0608	Main Hill Seeps	cis-1,2-Dichloroethene	10/25/2011	0.1	ug/L	0.1	U	
0608	Main Hill Seeps	Dissolved Oxygen	1/25/2011	12.13	mg/L			
0608	Main Hill Seeps	Dissolved Oxygen	5/10/2011	9.57	mg/L			
0608	Main Hill Seeps	Dissolved Oxygen	7/27/2011	6.6	mg/L			
0608	Main Hill Seeps	Dissolved Oxygen	10/25/2011	12.01	mg/L			
0608	Main Hill Seeps	Oxidation Reduction Potential	1/25/2011	82.3	mV			
0608	Main Hill Seeps	Oxidation Reduction Potential	5/10/2011	86.1	mV			
0608	Main Hill Seeps	Oxidation Reduction Potential	7/27/2011	63.1	mV			
0608	Main Hill Seeps	Oxidation Reduction Potential	10/25/2011	84.9	mV			
0608	Main Hill Seeps	pH	1/25/2011	7.75	s.u.			
0608	Main Hill Seeps	pH	5/10/2011	8.03	s.u.			
0608	Main Hill Seeps	pH	7/27/2011	7.97	s.u.			
0608	Main Hill Seeps	pH	10/25/2011	6.75	s.u.			
0608	Main Hill Seeps	Specific Conductance	1/25/2011	2102	umhos/cm			
0608	Main Hill Seeps	Specific Conductance	5/10/2011	1894	umhos/cm			
0608	Main Hill Seeps	Specific Conductance	7/27/2011	1975	umhos/cm			
0608	Main Hill Seeps	Specific Conductance	10/25/2011	2062	umhos/cm			

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0608	Main Hill Seeps	Temperature	1/25/2011	4.23	C			
0608	Main Hill Seeps	Temperature	5/10/2011	17.4	C			
0608	Main Hill Seeps	Temperature	7/27/2011	24.53	C			
0608	Main Hill Seeps	Temperature	10/25/2011	9.09	C			
0608	Main Hill Seeps	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Tetrachloroethene	5/10/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Tetrachloroethene	7/27/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	trans-1,2-Dichloroethene	5/10/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	trans-1,2-Dichloroethene	7/27/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Trichloroethene	1/25/2011	1.98	ug/L	0.11		
0608	Main Hill Seeps	Trichloroethene	5/10/2011	1.12	ug/L	0.11		
0608	Main Hill Seeps	Trichloroethene	7/27/2011	0.23	ug/L	0.11	J	
0608	Main Hill Seeps	Trichloroethene	10/25/2011	0.42	ug/L	0.11	J	
0608	Main Hill Seeps	Tritium	1/25/2011	11900	pCi/L	307		
0608	Main Hill Seeps	Tritium	5/10/2011	8770	pCi/L	318		
0608	Main Hill Seeps	Tritium	7/27/2011	9210	pCi/L	223		
0608	Main Hill Seeps	Tritium	10/25/2011	10200	pCi/L	360		
0608	Main Hill Seeps	Turbidity	7/27/2011	30.6	NTU			
0608	Main Hill Seeps	Turbidity	10/25/2011	1000	NTU		>	
0608	Main Hill Seeps	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Vinyl chloride	5/10/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Vinyl chloride	7/27/2011	0.2	ug/L	0.2	U	
0608	Main Hill Seeps	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	
0124	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/24/2011	0.1	ug/L	0.1	U	F
0124	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0124	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/26/2011	0.1	ug/L	0.1	U	F
0124	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/25/2011	0.1	ug/L	0.1	U	FJ
0124	Wells 0315-0347 Area	Dissolved Oxygen	1/24/2011	0.67	mg/L			F
0124	Wells 0315-0347 Area	Dissolved Oxygen	5/2/2011	2.39	mg/L			F
0124	Wells 0315-0347 Area	Dissolved Oxygen	7/26/2011	3.98	mg/L			F
0124	Wells 0315-0347 Area	Dissolved Oxygen	10/25/2011	1.28	mg/L			F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0124	Wells 0315-0347 Area	Oxidation Reduction Potential	1/24/2011	91	mV			F
0124	Wells 0315-0347 Area	Oxidation Reduction Potential	5/2/2011	105.5	mV			F
0124	Wells 0315-0347 Area	Oxidation Reduction Potential	7/26/2011	89.9	mV			F
0124	Wells 0315-0347 Area	Oxidation Reduction Potential	10/25/2011	156	mV			FJ
0124	Wells 0315-0347 Area	pH	1/24/2011	6.95	s.u.			F
0124	Wells 0315-0347 Area	pH	5/2/2011	6.83	s.u.			F
0124	Wells 0315-0347 Area	pH	7/26/2011	6.87	s.u.			F
0124	Wells 0315-0347 Area	pH	10/25/2011	6.67	s.u.			FJ
0124	Wells 0315-0347 Area	Specific Conductance	1/24/2011	1371	umhos/cm			F
0124	Wells 0315-0347 Area	Specific Conductance	5/2/2011	1372	umhos/cm			F
0124	Wells 0315-0347 Area	Specific Conductance	7/26/2011	1253	umhos/cm			F
0124	Wells 0315-0347 Area	Specific Conductance	10/25/2011	1415	umhos/cm			FJ
0124	Wells 0315-0347 Area	Temperature	1/24/2011	12.9	C			F
0124	Wells 0315-0347 Area	Temperature	5/2/2011	13.56	C			F
0124	Wells 0315-0347 Area	Temperature	7/26/2011	15.32	C			F
0124	Wells 0315-0347 Area	Temperature	10/25/2011	14.85	C			FJ
0124	Wells 0315-0347 Area	Tetrachloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	Tetrachloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	Tetrachloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	Tetrachloroethene	10/25/2011	0.2	ug/L	0.2	U	FJ
0124	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/26/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	FJ
0124	Wells 0315-0347 Area	Trichloroethene	1/24/2011	0.11	ug/L	0.11	U	F
0124	Wells 0315-0347 Area	Trichloroethene	5/2/2011	0.11	ug/L	0.11	U	F
0124	Wells 0315-0347 Area	Trichloroethene	7/26/2011	0.11	ug/L	0.11	U	F
0124	Wells 0315-0347 Area	Trichloroethene	10/25/2011	0.11	ug/L	0.11	U	FJ
0124	Wells 0315-0347 Area	Turbidity	1/24/2011	4.98	NTU			F
0124	Wells 0315-0347 Area	Turbidity	5/2/2011	3.05	NTU			F
0124	Wells 0315-0347 Area	Turbidity	7/26/2011	6.38	NTU			F
0124	Wells 0315-0347 Area	Turbidity	10/25/2011	9.98	NTU			FJ
0124	Wells 0315-0347 Area	Vinyl chloride	1/24/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0124	Wells 0315-0347 Area	Vinyl chloride	7/26/2011	0.2	ug/L	0.2	U	F
0124	Wells 0315-0347 Area	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	FJ
0126	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/24/2011	0.1	ug/L	0.1	U	F
0126	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0126	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/26/2011	0.1	ug/L	0.1	U	FQ
0126	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/25/2011	0.1	ug/L	0.1	U	FJ
0126	Wells 0315-0347 Area	Dissolved Oxygen	1/24/2011	0.58	mg/L			F
0126	Wells 0315-0347 Area	Dissolved Oxygen	5/2/2011	0.47	mg/L			F
0126	Wells 0315-0347 Area	Dissolved Oxygen	7/26/2011	0.96	mg/L			FQ
0126	Wells 0315-0347 Area	Dissolved Oxygen	10/25/2011	1.23	mg/L			FJ
0126	Wells 0315-0347 Area	Oxidation Reduction Potential	1/24/2011	90.8	mV			F
0126	Wells 0315-0347 Area	Oxidation Reduction Potential	5/2/2011	104.6	mV			F
0126	Wells 0315-0347 Area	Oxidation Reduction Potential	7/26/2011	91.3	mV			FQ
0126	Wells 0315-0347 Area	Oxidation Reduction Potential	10/25/2011	151.9	mV			FJ
0126	Wells 0315-0347 Area	pH	1/24/2011	6.87	s.u.			F
0126	Wells 0315-0347 Area	pH	5/2/2011	6.84	s.u.			F
0126	Wells 0315-0347 Area	pH	7/26/2011	6.86	s.u.			FQ
0126	Wells 0315-0347 Area	pH	10/25/2011	6.67	s.u.			FJ
0126	Wells 0315-0347 Area	Specific Conductance	1/24/2011	1463	umhos/cm			F
0126	Wells 0315-0347 Area	Specific Conductance	5/2/2011	1465	umhos/cm			F
0126	Wells 0315-0347 Area	Specific Conductance	7/26/2011	1468	umhos/cm			FQ
0126	Wells 0315-0347 Area	Specific Conductance	10/25/2011	1367	umhos/cm			FJ
0126	Wells 0315-0347 Area	Temperature	1/24/2011	12.63	C			F
0126	Wells 0315-0347 Area	Temperature	5/2/2011	13.77	C			F
0126	Wells 0315-0347 Area	Temperature	7/26/2011	15.46	C			FQ
0126	Wells 0315-0347 Area	Temperature	10/25/2011	14.65	C			FJ
0126	Wells 0315-0347 Area	Tetrachloroethene	1/24/2011	0.91	ug/L	0.2	J	F
0126	Wells 0315-0347 Area	Tetrachloroethene	5/2/2011	0.93	ug/L	0.2	J	F
0126	Wells 0315-0347 Area	Tetrachloroethene	7/26/2011	0.9	ug/L	0.2	J	FQJ
0126	Wells 0315-0347 Area	Tetrachloroethene	10/25/2011	0.82	ug/L	0.2	J	FJ
0126	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/24/2011	0.2	ug/L	0.2	U	F
0126	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0126	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/26/2011	0.2	ug/L	0.2	U	FQ
0126	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/25/2011	0.2	ug/L	0.2	U	FJ

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0126	Wells 0315-0347 Area	Trichloroethene	1/24/2011	0.11	ug/L	0.11	U	F
0126	Wells 0315-0347 Area	Trichloroethene	5/2/2011	0.11	ug/L	0.11	U	F
0126	Wells 0315-0347 Area	Trichloroethene	7/26/2011	0.11	ug/L	0.11	U	FQ
0126	Wells 0315-0347 Area	Trichloroethene	10/25/2011	0.11	ug/L	0.11	U	FJ
0126	Wells 0315-0347 Area	Turbidity	1/24/2011	0.8	NTU			F
0126	Wells 0315-0347 Area	Turbidity	5/2/2011	3.31	NTU			F
0126	Wells 0315-0347 Area	Turbidity	7/26/2011	11.9	NTU			FQ
0126	Wells 0315-0347 Area	Turbidity	10/25/2011	15.4	NTU			FJ
0126	Wells 0315-0347 Area	Vinyl chloride	1/24/2011	0.2	ug/L	0.2	U	F
0126	Wells 0315-0347 Area	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F
0126	Wells 0315-0347 Area	Vinyl chloride	7/26/2011	0.2	ug/L	0.2	U	FQ
0126	Wells 0315-0347 Area	Vinyl chloride	10/25/2011	0.2	ug/L	0.2	U	FJ
0315	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0315	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0315	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/28/2011	0.1	ug/L	0.1	U	FQ
0315	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	FJ
0315	Wells 0315-0347 Area	Dissolved Oxygen	1/25/2011	0.96	mg/L			F
0315	Wells 0315-0347 Area	Dissolved Oxygen	5/2/2011	2.62	mg/L			F
0315	Wells 0315-0347 Area	Dissolved Oxygen	7/28/2011	1.62	mg/L			FQ
0315	Wells 0315-0347 Area	Dissolved Oxygen	10/24/2011	3.2	mg/L			FJ
0315	Wells 0315-0347 Area	Oxidation Reduction Potential	1/25/2011	30.8	mV			F
0315	Wells 0315-0347 Area	Oxidation Reduction Potential	5/2/2011	64	mV			F
0315	Wells 0315-0347 Area	Oxidation Reduction Potential	7/28/2011	19.7	mV			FQ
0315	Wells 0315-0347 Area	Oxidation Reduction Potential	10/24/2011	157.4	mV			FJ
0315	Wells 0315-0347 Area	pH	1/25/2011	6.96	s.u.			F
0315	Wells 0315-0347 Area	pH	5/2/2011	6.9	s.u.			F
0315	Wells 0315-0347 Area	pH	7/28/2011	7.05	s.u.			FQ
0315	Wells 0315-0347 Area	pH	10/24/2011	6.61	s.u.			FJ
0315	Wells 0315-0347 Area	Specific Conductance	1/25/2011	1575	umhos/cm			F
0315	Wells 0315-0347 Area	Specific Conductance	5/2/2011	1523	umhos/cm			F
0315	Wells 0315-0347 Area	Specific Conductance	7/28/2011	1791	umhos/cm			FQ
0315	Wells 0315-0347 Area	Specific Conductance	10/24/2011	1580	umhos/cm			FJ
0315	Wells 0315-0347 Area	Temperature	1/25/2011	12.48	C			F
0315	Wells 0315-0347 Area	Temperature	5/2/2011	12.84	C			F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0315	Wells 0315-0347 Area	Temperature	7/28/2011	15.68	C			FQ
0315	Wells 0315-0347 Area	Temperature	10/24/2011	13.69	C			FJ
0315	Wells 0315-0347 Area	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0315	Wells 0315-0347 Area	Tetrachloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0315	Wells 0315-0347 Area	Tetrachloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0315	Wells 0315-0347 Area	Tetrachloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0315	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0315	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0315	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0315	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0315	Wells 0315-0347 Area	Trichloroethene	1/25/2011	13.6	ug/L	0.11		F
0315	Wells 0315-0347 Area	Trichloroethene	5/2/2011	8.1	ug/L	0.11		F
0315	Wells 0315-0347 Area	Trichloroethene	7/28/2011	6.23	ug/L	0.11		FQ
0315	Wells 0315-0347 Area	Trichloroethene	10/24/2011	10.7	ug/L	0.11		FJ
0315	Wells 0315-0347 Area	Turbidity	1/25/2011	290	NTU			F
0315	Wells 0315-0347 Area	Turbidity	5/2/2011	462	NTU			F
0315	Wells 0315-0347 Area	Turbidity	7/28/2011	239	NTU			FQ
0315	Wells 0315-0347 Area	Turbidity	10/24/2011	160	NTU			FJ
0315	Wells 0315-0347 Area	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0315	Wells 0315-0347 Area	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F
0315	Wells 0315-0347 Area	Vinyl chloride	7/28/2011	0.2	ug/L	0.2	U	FQ
0315	Wells 0315-0347 Area	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	FJ
0347	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0347	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/2/2011	0.1	ug/L	0.1	U	F
0347	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/28/2011	0.1	ug/L	0.1	U	FQ
0347	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/24/2011	0.1	ug/L	0.1	U	FJ
0347	Wells 0315-0347 Area	Dissolved Oxygen	1/25/2011	0.43	mg/L			F
0347	Wells 0315-0347 Area	Dissolved Oxygen	5/2/2011	0.58	mg/L			F
0347	Wells 0315-0347 Area	Dissolved Oxygen	7/28/2011	1.1	mg/L			FQ
0347	Wells 0315-0347 Area	Dissolved Oxygen	10/24/2011	1.11	mg/L			FJ
0347	Wells 0315-0347 Area	Oxidation Reduction Potential	1/25/2011	55.8	mV			F
0347	Wells 0315-0347 Area	Oxidation Reduction Potential	5/2/2011	72.1	mV			F
0347	Wells 0315-0347 Area	Oxidation Reduction Potential	7/28/2011	48.7	mV			FQ
0347	Wells 0315-0347 Area	Oxidation Reduction Potential	10/24/2011	163.4	mV			FJ

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0347	Wells 0315-0347 Area	pH	1/25/2011	6.94	s.u.			F
0347	Wells 0315-0347 Area	pH	5/2/2011	6.9	s.u.			F
0347	Wells 0315-0347 Area	pH	7/28/2011	6.9	s.u.			FQ
0347	Wells 0315-0347 Area	pH	10/24/2011	6.57	s.u.			FJ
0347	Wells 0315-0347 Area	Specific Conductance	1/25/2011	1589	umhos/cm			F
0347	Wells 0315-0347 Area	Specific Conductance	5/2/2011	1452	umhos/cm			F
0347	Wells 0315-0347 Area	Specific Conductance	7/28/2011	1647	umhos/cm			FQ
0347	Wells 0315-0347 Area	Specific Conductance	10/24/2011	1582	umhos/cm			FJ
0347	Wells 0315-0347 Area	Temperature	1/25/2011	12.84	C			F
0347	Wells 0315-0347 Area	Temperature	5/2/2011	13.17	C			F
0347	Wells 0315-0347 Area	Temperature	7/28/2011	16.07	C			FQ
0347	Wells 0315-0347 Area	Temperature	10/24/2011	13.92	C			FJ
0347	Wells 0315-0347 Area	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0347	Wells 0315-0347 Area	Tetrachloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0347	Wells 0315-0347 Area	Tetrachloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0347	Wells 0315-0347 Area	Tetrachloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0347	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0347	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/2/2011	0.2	ug/L	0.2	U	F
0347	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0347	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/24/2011	0.2	ug/L	0.2	U	FJ
0347	Wells 0315-0347 Area	Trichloroethene	1/25/2011	23.2	ug/L	0.11		FJ
0347	Wells 0315-0347 Area	Trichloroethene	5/2/2011	24.5	ug/L	0.11		F
0347	Wells 0315-0347 Area	Trichloroethene	7/28/2011	22.1	ug/L	0.11		FQ
0347	Wells 0315-0347 Area	Trichloroethene	10/24/2011	27.8	ug/L	0.11		FJ
0347	Wells 0315-0347 Area	Tritium	1/25/2011	5730	pCi/L	308		F
0347	Wells 0315-0347 Area	Tritium	5/2/2011	3940	pCi/L	320		F
0347	Wells 0315-0347 Area	Tritium	7/28/2011	2940	pCi/L	216		FQ
0347	Wells 0315-0347 Area	Tritium	10/24/2011	5310	pCi/L	358		FJ
0347	Wells 0315-0347 Area	Turbidity	1/25/2011	33.4	NTU			F
0347	Wells 0315-0347 Area	Turbidity	5/2/2011	98.3	NTU			F
0347	Wells 0315-0347 Area	Turbidity	7/28/2011	128	NTU			FQ
0347	Wells 0315-0347 Area	Turbidity	10/24/2011	45	NTU			FJ
0347	Wells 0315-0347 Area	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0347	Wells 0315-0347 Area	Vinyl chloride	5/2/2011	0.2	ug/L	0.2	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0347	Wells 0315-0347 Area	Vinyl chloride	7/28/2011	0.2	ug/L	0.2	U	FQ
0347	Wells 0315-0347 Area	Vinyl chloride	10/24/2011	0.2	ug/L	0.2	U	FJ
0386	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0386	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/3/2011	0.1	ug/L	0.1	U	F
0386	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/28/2011	0.1	ug/L	0.1	U	FQ
0386	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/26/2011	0.1	ug/L	0.1	U	F
0386	Wells 0315-0347 Area	Dissolved Oxygen	1/25/2011	3.19	mg/L			F
0386	Wells 0315-0347 Area	Dissolved Oxygen	5/3/2011	7.97	mg/L			F
0386	Wells 0315-0347 Area	Dissolved Oxygen	7/28/2011	2.94	mg/L			FQ
0386	Wells 0315-0347 Area	Dissolved Oxygen	10/26/2011	4.74	mg/L			F
0386	Wells 0315-0347 Area	Oxidation Reduction Potential	1/25/2011	101.5	mV			F
0386	Wells 0315-0347 Area	Oxidation Reduction Potential	5/3/2011	111.2	mV			F
0386	Wells 0315-0347 Area	Oxidation Reduction Potential	7/28/2011	105.4	mV			FQ
0386	Wells 0315-0347 Area	Oxidation Reduction Potential	10/26/2011	171.4	mV			F
0386	Wells 0315-0347 Area	pH	1/25/2011	6.83	s.u.			F
0386	Wells 0315-0347 Area	pH	5/3/2011	7.06	s.u.			F
0386	Wells 0315-0347 Area	pH	7/28/2011	6.52	s.u.			FQ
0386	Wells 0315-0347 Area	pH	10/26/2011	6.53	s.u.			F
0386	Wells 0315-0347 Area	Specific Conductance	1/25/2011	1081	umhos/cm			F
0386	Wells 0315-0347 Area	Specific Conductance	5/3/2011	510	umhos/cm			F
0386	Wells 0315-0347 Area	Specific Conductance	7/28/2011	1199	umhos/cm			FQ
0386	Wells 0315-0347 Area	Specific Conductance	10/26/2011	1095	umhos/cm			F
0386	Wells 0315-0347 Area	Temperature	1/25/2011	11.44	C			F
0386	Wells 0315-0347 Area	Temperature	5/3/2011	11.63	C			F
0386	Wells 0315-0347 Area	Temperature	7/28/2011	14.54	C			FQ
0386	Wells 0315-0347 Area	Temperature	10/26/2011	12.7	C			F
0386	Wells 0315-0347 Area	Tetrachloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	Tetrachloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	Tetrachloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0386	Wells 0315-0347 Area	Tetrachloroethene	10/26/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0386	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/26/2011	0.2	ug/L	0.2	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0386	Wells 0315-0347 Area	Trichloroethene	1/25/2011	2.3	ug/L	0.11		F
0386	Wells 0315-0347 Area	Trichloroethene	5/3/2011	0.11	ug/L	0.11	U	F
0386	Wells 0315-0347 Area	Trichloroethene	7/28/2011	2.25	ug/L	0.11		FQ
0386	Wells 0315-0347 Area	Trichloroethene	10/26/2011	1.93	ug/L	0.11		F
0386	Wells 0315-0347 Area	Turbidity	1/25/2011	38	NTU			F
0386	Wells 0315-0347 Area	Turbidity	5/3/2011	31.8	NTU			F
0386	Wells 0315-0347 Area	Turbidity	7/28/2011	35.6	NTU			FQ
0386	Wells 0315-0347 Area	Turbidity	10/26/2011	22.1	NTU			F
0386	Wells 0315-0347 Area	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	Vinyl chloride	5/3/2011	0.2	ug/L	0.2	U	F
0386	Wells 0315-0347 Area	Vinyl chloride	7/28/2011	0.2	ug/L	0.2	U	FQ
0386	Wells 0315-0347 Area	Vinyl chloride	10/26/2011	0.2	ug/L	0.2	U	F
0387	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0387	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/3/2011	0.1	ug/L	0.1	U	F
0387	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/28/2011	0.1	ug/L	0.1	U	FQ
0387	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/26/2011	0.1	ug/L	0.1	U	FJ
0387	Wells 0315-0347 Area	Dissolved Oxygen	1/25/2011	0.51	mg/L			F
0387	Wells 0315-0347 Area	Dissolved Oxygen	5/3/2011	0.43	mg/L			F
0387	Wells 0315-0347 Area	Dissolved Oxygen	7/28/2011	0.73	mg/L			FQ
0387	Wells 0315-0347 Area	Dissolved Oxygen	10/26/2011	1.22	mg/L			FJ
0387	Wells 0315-0347 Area	Oxidation Reduction Potential	1/25/2011	88.3	mV			F
0387	Wells 0315-0347 Area	Oxidation Reduction Potential	5/3/2011	106.5	mV			F
0387	Wells 0315-0347 Area	Oxidation Reduction Potential	7/28/2011	26.2	mV			FQ
0387	Wells 0315-0347 Area	Oxidation Reduction Potential	10/26/2011	142	mV			FJ
0387	Wells 0315-0347 Area	pH	1/25/2011	6.73	s.u.			F
0387	Wells 0315-0347 Area	pH	5/3/2011	6.73	s.u.			F
0387	Wells 0315-0347 Area	pH	7/28/2011	6.68	s.u.			FQ
0387	Wells 0315-0347 Area	pH	10/26/2011	6.45	s.u.			FJ
0387	Wells 0315-0347 Area	Specific Conductance	1/25/2011	1377	umhos/cm			F
0387	Wells 0315-0347 Area	Specific Conductance	5/3/2011	1363	umhos/cm			F
0387	Wells 0315-0347 Area	Specific Conductance	7/28/2011	1398	umhos/cm			FQ
0387	Wells 0315-0347 Area	Specific Conductance	10/26/2011	1348	umhos/cm			FJ
0387	Wells 0315-0347 Area	Temperature	1/25/2011	11.8	C			F
0387	Wells 0315-0347 Area	Temperature	5/3/2011	12.38	C			F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0387	Wells 0315-0347 Area	Temperature	7/28/2011	14.41	C			FQ
0387	Wells 0315-0347 Area	Temperature	10/26/2011	13.47	C			FJ
0387	Wells 0315-0347 Area	Tetrachloroethene	1/25/2011	0.22	ug/L	0.2	J	F
0387	Wells 0315-0347 Area	Tetrachloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0387	Wells 0315-0347 Area	Tetrachloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0387	Wells 0315-0347 Area	Tetrachloroethene	10/26/2011	0.2	ug/L	0.2	U	FJ
0387	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0387	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0387	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0387	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/26/2011	0.2	ug/L	0.2	U	FJ
0387	Wells 0315-0347 Area	Trichloroethene	1/25/2011	0.11	ug/L	0.11	U	F
0387	Wells 0315-0347 Area	Trichloroethene	5/3/2011	0.11	ug/L	0.11	U	F
0387	Wells 0315-0347 Area	Trichloroethene	7/28/2011	0.11	ug/L	0.11	U	FQ
0387	Wells 0315-0347 Area	Trichloroethene	10/26/2011	0.11	ug/L	0.11	U	FJ
0387	Wells 0315-0347 Area	Turbidity	1/25/2011	5.77	NTU			F
0387	Wells 0315-0347 Area	Turbidity	5/3/2011	3.89	NTU			F
0387	Wells 0315-0347 Area	Turbidity	7/28/2011	14.9	NTU			FQ
0387	Wells 0315-0347 Area	Turbidity	10/26/2011	9.57	NTU			FJ
0387	Wells 0315-0347 Area	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0387	Wells 0315-0347 Area	Vinyl chloride	5/3/2011	0.2	ug/L	0.2	U	F
0387	Wells 0315-0347 Area	Vinyl chloride	7/28/2011	0.2	ug/L	0.2	U	FQ
0387	Wells 0315-0347 Area	Vinyl chloride	10/26/2011	0.2	ug/L	0.2	U	FJ
0389	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0389	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/3/2011	0.1	ug/L	0.1	U	F
0389	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/28/2011	0.1	ug/L	0.1	U	FQ
0389	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/26/2011	0.1	ug/L	0.1	U	FJ
0389	Wells 0315-0347 Area	Dissolved Oxygen	1/25/2011	2.77	mg/L			F
0389	Wells 0315-0347 Area	Dissolved Oxygen	5/3/2011	4.05	mg/L			F
0389	Wells 0315-0347 Area	Dissolved Oxygen	7/28/2011	3.48	mg/L			FQ
0389	Wells 0315-0347 Area	Dissolved Oxygen	10/26/2011	3.7	mg/L			FJ
0389	Wells 0315-0347 Area	Oxidation Reduction Potential	1/25/2011	98.9	mV			F
0389	Wells 0315-0347 Area	Oxidation Reduction Potential	5/3/2011	116.6	mV			F
0389	Wells 0315-0347 Area	Oxidation Reduction Potential	7/28/2011	96.7	mV			FQ
0389	Wells 0315-0347 Area	Oxidation Reduction Potential	10/26/2011	182.5	mV			FJ

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0389	Wells 0315-0347 Area	pH	1/25/2011	6.79	s.u.			F
0389	Wells 0315-0347 Area	pH	5/3/2011	6.73	s.u.			F
0389	Wells 0315-0347 Area	pH	7/28/2011	6.78	s.u.			FQ
0389	Wells 0315-0347 Area	pH	10/26/2011	6.49	s.u.			FJ
0389	Wells 0315-0347 Area	Specific Conductance	1/25/2011	1247	umhos/cm			F
0389	Wells 0315-0347 Area	Specific Conductance	5/3/2011	1314	umhos/cm			F
0389	Wells 0315-0347 Area	Specific Conductance	7/28/2011	1364	umhos/cm			FQ
0389	Wells 0315-0347 Area	Specific Conductance	10/26/2011	1141	umhos/cm			FJ
0389	Wells 0315-0347 Area	Temperature	1/25/2011	11.35	C			F
0389	Wells 0315-0347 Area	Temperature	5/3/2011	11.97	C			F
0389	Wells 0315-0347 Area	Temperature	7/28/2011	15.17	C			FQ
0389	Wells 0315-0347 Area	Temperature	10/26/2011	12.74	C			FJ
0389	Wells 0315-0347 Area	Tetrachloroethene	1/25/2011	0.44	ug/L	0.2	J	F
0389	Wells 0315-0347 Area	Tetrachloroethene	5/3/2011	0.25	ug/L	0.2	J	F
0389	Wells 0315-0347 Area	Tetrachloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0389	Wells 0315-0347 Area	Tetrachloroethene	10/26/2011	0.29	ug/L	0.2	J	FJ
0389	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0389	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0389	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/28/2011	0.2	ug/L	0.2	U	FQ
0389	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/26/2011	0.2	ug/L	0.2	U	FJ
0389	Wells 0315-0347 Area	Trichloroethene	1/25/2011	0.99	ug/L	0.11	J	F
0389	Wells 0315-0347 Area	Trichloroethene	5/3/2011	0.54	ug/L	0.11	J	F
0389	Wells 0315-0347 Area	Trichloroethene	7/28/2011	0.24	ug/L	0.11	J	FQ
0389	Wells 0315-0347 Area	Trichloroethene	10/26/2011	0.72	ug/L	0.11	J	FJ
0389	Wells 0315-0347 Area	Turbidity	1/25/2011	30.3	NTU			F
0389	Wells 0315-0347 Area	Turbidity	5/3/2011	122	NTU			F
0389	Wells 0315-0347 Area	Turbidity	7/28/2011	176	NTU			FQ
0389	Wells 0315-0347 Area	Turbidity	10/26/2011	51.1	NTU			FJ
0389	Wells 0315-0347 Area	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0389	Wells 0315-0347 Area	Vinyl chloride	5/3/2011	0.2	ug/L	0.2	U	F
0389	Wells 0315-0347 Area	Vinyl chloride	7/28/2011	0.2	ug/L	0.2	U	FQ
0389	Wells 0315-0347 Area	Vinyl chloride	10/26/2011	0.2	ug/L	0.2	U	FJ
0392	Wells 0315-0347 Area	cis-1,2-Dichloroethene	1/25/2011	0.1	ug/L	0.1	U	F
0392	Wells 0315-0347 Area	cis-1,2-Dichloroethene	5/3/2011	0.1	ug/L	0.1	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0392	Wells 0315-0347 Area	cis-1,2-Dichloroethene	7/28/2011	0.1	ug/L	0.1	U	F
0392	Wells 0315-0347 Area	cis-1,2-Dichloroethene	10/26/2011	0.1	ug/L	0.1	U	F
0392	Wells 0315-0347 Area	Dissolved Oxygen	1/25/2011	3.1	mg/L			F
0392	Wells 0315-0347 Area	Dissolved Oxygen	5/3/2011	9.54	mg/L			F
0392	Wells 0315-0347 Area	Dissolved Oxygen	7/28/2011	3.97	mg/L			F
0392	Wells 0315-0347 Area	Dissolved Oxygen	10/26/2011	5.02	mg/L			F
0392	Wells 0315-0347 Area	Oxidation Reduction Potential	1/25/2011	150.5	mV			F
0392	Wells 0315-0347 Area	Oxidation Reduction Potential	5/3/2011	113.6	mV			F
0392	Wells 0315-0347 Area	Oxidation Reduction Potential	7/28/2011	100.4	mV			F
0392	Wells 0315-0347 Area	Oxidation Reduction Potential	10/26/2011	186	mV			F
0392	Wells 0315-0347 Area	pH	1/25/2011	6.73	s.u.			F
0392	Wells 0315-0347 Area	pH	5/3/2011	7.61	s.u.			F
0392	Wells 0315-0347 Area	pH	7/28/2011	6.68	s.u.			F
0392	Wells 0315-0347 Area	pH	10/26/2011	6.46	s.u.			F
0392	Wells 0315-0347 Area	Specific Conductance	1/25/2011	1153	umhos/cm			F
0392	Wells 0315-0347 Area	Specific Conductance	5/3/2011	146	umhos/cm			F
0392	Wells 0315-0347 Area	Specific Conductance	7/28/2011	1202	umhos/cm			F
0392	Wells 0315-0347 Area	Specific Conductance	10/26/2011	1102	umhos/cm			F
0392	Wells 0315-0347 Area	Temperature	1/25/2011	11.76	C			F
0392	Wells 0315-0347 Area	Temperature	5/3/2011	11.92	C			F
0392	Wells 0315-0347 Area	Temperature	7/28/2011	14.95	C			F
0392	Wells 0315-0347 Area	Temperature	10/26/2011	13.25	C			F
0392	Wells 0315-0347 Area	Tetrachloroethene	1/25/2011	0.32	ug/L	0.2	J	F
0392	Wells 0315-0347 Area	Tetrachloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	Tetrachloroethene	7/28/2011	0.27	ug/L	0.2	J	FJ
0392	Wells 0315-0347 Area	Tetrachloroethene	10/26/2011	0.32	ug/L	0.2	J	F
0392	Wells 0315-0347 Area	trans-1,2-Dichloroethene	1/25/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	trans-1,2-Dichloroethene	5/3/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	trans-1,2-Dichloroethene	7/28/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	trans-1,2-Dichloroethene	10/26/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	Trichloroethene	1/25/2011	0.14	ug/L	0.11	J	F
0392	Wells 0315-0347 Area	Trichloroethene	5/3/2011	0.11	ug/L	0.11	U	F
0392	Wells 0315-0347 Area	Trichloroethene	7/28/2011	0.11	ug/L	0.11	U	F
0392	Wells 0315-0347 Area	Trichloroethene	10/26/2011	0.11	ug/L	0.11	U	F

Location	Program	Analyte	Sample Date	Result	Units	DL	Laboratory Qualifier	Validation Qualifier
0392	Wells 0315-0347 Area	Turbidity	1/25/2011	1.28	NTU			F
0392	Wells 0315-0347 Area	Turbidity	5/3/2011	4.61	NTU			F
0392	Wells 0315-0347 Area	Turbidity	7/28/2011	9.97	NTU			F
0392	Wells 0315-0347 Area	Turbidity	10/26/2011	2.15	NTU			F
0392	Wells 0315-0347 Area	Vinyl chloride	1/25/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	Vinyl chloride	5/3/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	Vinyl chloride	7/28/2011	0.2	ug/L	0.2	U	F
0392	Wells 0315-0347 Area	Vinyl chloride	10/26/2011	0.2	ug/L	0.2	U	F

LAB QUALIFIERS:

*	Replicate analysis not within control limits.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic: 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
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P	> 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X,Y,Z	Laboratory defined 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.	Q Qualitative result due to sampling technique. R Unusable result.
U	Parameter analyzed for but was not detected.	X Location is undefined.

Appendix C

March/April 2011 Monitoring Well Inspection Photographs

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Well 0118

Well 0138

Well 0124

Well 0126

Wells 0301 and 0311

Well 0346

Well 0347

Well 0379

Wells 0386 and 0389

Wells 0387 and 0392

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