April 14, 2011

Mr. W. C. McGlocklin, CPEA
Director of Environmental Affairs
SKF USA Inc.
P.O. Box 352
Lansdale, PA 19446

Subject: Results of First 2011 Monitoring Event
Former Girmes Site - Asheville, North Carolina

Dear Bill:

RMT has conducted the first monitoring event as outlined in our proposal of January 18, 2011, for continued remediation support at the former Girmes Site in Asheville, NC. Sampling was conducted on March 1st and 2nd, 2011. Data from this sampling event are summarized in this letter.

Groundwater samples were collected from three monitoring wells – MW-5A, MW-10, and MW-21. Pore water samples were collected from four locations along Gashes Creek (PW-06, PW-07, PW-10, and PW-11), and surface water samples (SW-02 through SW-04 and SW-08) were collected at locations in the creek adjacent to the pore water sample locations. Samples were analyzed for a select list of VOCs (tetrachloroethene [PCE], trichloroethene [TCE], 1,2-dichloroethene [*cis*-1,2- and *trans*-1,2-DCE], and vinyl chloride). Sampling locations are illustrated on Figure 1; those with a purple label show locations sampled in 2011. Analytical data are summarized in Table 1.

Groundwater Flow Directions

Water levels were measured in 22 wells at the site on March 1, 2011. The water table observed at the site in March 2011 (Figure 2) is generally the same as what has been observed in the past.

Discussion of Analytical Results

TCE and DCE were detected in groundwater samples from all three wells sampled. The concentration of TCE at MW-05A was 4.23 mg/L, lower than the historical range of TCE concentrations detected in the well (4.86 to 9.6 mg/L). TCE was detected at MW-21 at 0.0118 mg/L, a slight increase from a concentration of 0.0093 mg/L observed when the well was last sampled in 2005. The trace concentration of TCE detected at MW-10 (0.00073 mg/L) is essentially the same as concentrations previously reported for the well since 2002. 1,2-DCE was also detected in each of the

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wells, and consists predominantly of *cis*-1,2-DCE (as opposed to *trans*-1,2-DCE) which is indicative of continuing degradation of TCE in groundwater at the site. PCE was not detected in groundwater samples collected from the monitoring wells.

Of the four pore water sampling locations, no VOCs were detected at PW-06, the most upstream location; VOCs were detected at the other three pore water sampling locations. The highest VOC concentrations in pore water samples were reported at location PW-07, adjacent to RW-03 (TCE at 0.0422 mg/L and *cis*-1,2-DCE at 0.0149 mg/L). Concentrations reported at location PW-11 (the most downstream location) were lower compared to PW-07, but were higher than concentrations detected at PW-11 in 2010. Trace concentrations were reported to be present at PW-10, and PW-10 was the only sampling location at which PCE was detected.

VOCs were not detected in the four surface water samples collected at locations adjacent to the pore water sample locations.

Conclusions

VOC-impacted groundwater discharging to the Gashes Creek will not create exceedances of surface water criteria at the concentrations observed in the pore water samples collected adjacent to the creek. VOC concentrations in MW-05A, near the suspected VOC source area, have increased following shutoff of the groundwater recovery system, but are not as high as historical concentrations that have been observed at the well. Based on these observed data, activities at the site remain protective of surface water in Gashes Creek. We therefore recommend the 2011 monitoring program be continued as originally planned.

If you have questions or would like to discuss other site details, please call me at 864.234.9462.

Sincerely,

RMT North Carolina, Inc.

Michael B. Parker

Michael B. Parker, P.E., President
RMT North Carolina, Inc.

Attachments

cc: Central Files

I:\WPGVL\PJT1\03404\54\001\L0340454001-001.DOCX

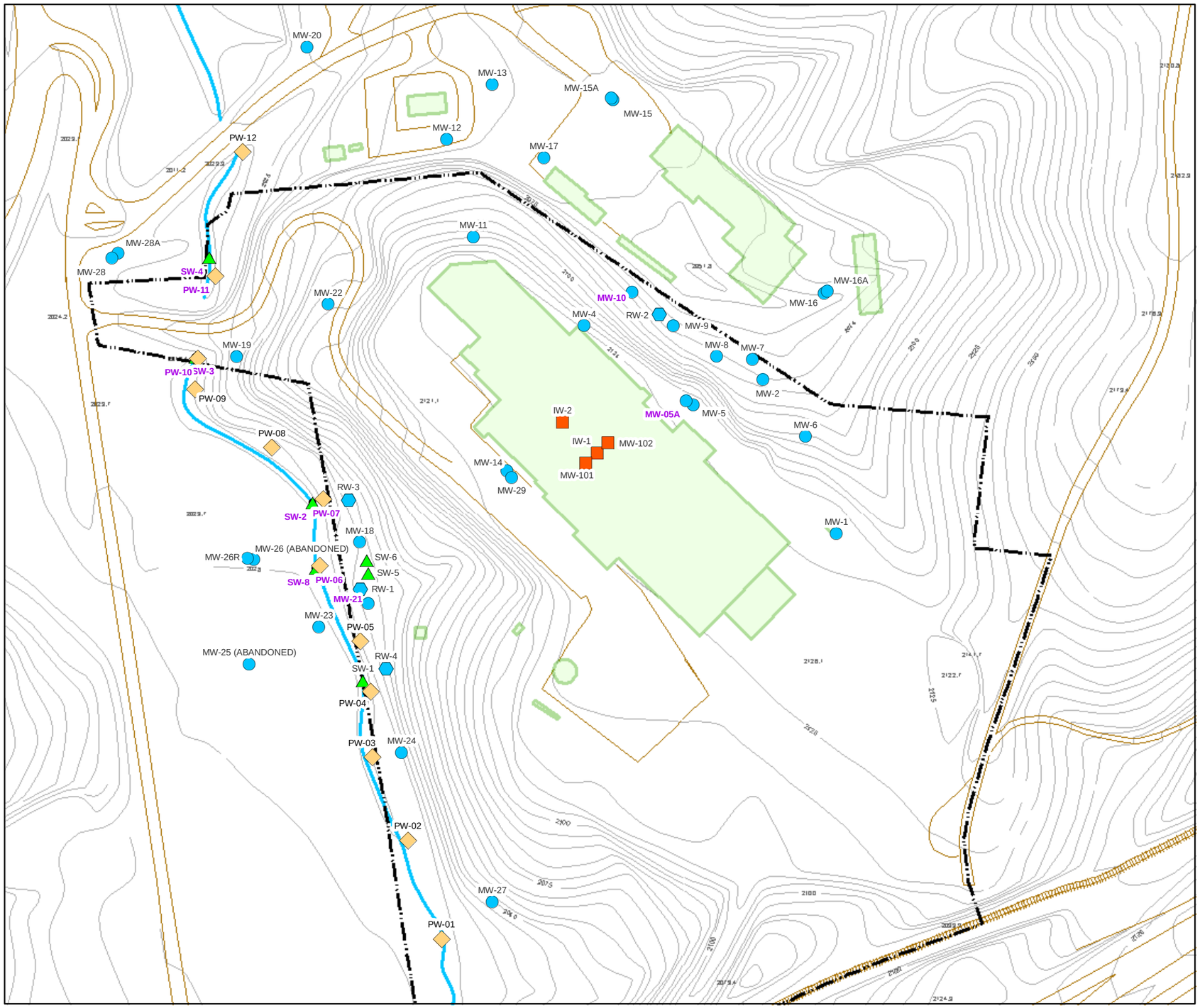
Attachment 1
Table

Table 1
Analytical Results - March 2011
Former Girmes Site
Asheville, NC

Well	PCE	TCE	VC	Total 1,2-DCE	*cis* - 1,2-DCE	*trans* - 1,2-DCE
MW-05A	<0.05	4.23	<0.05	0.185	0.175	<0.05
MW-05A (DU-11101)	<0.001	3.62	<0.001	0.212	0.2	0.0124
MW-10	<0.001	0.00073J	<0.001	0.0195	0.0152	0.0043
MW-21	<0.001	0.0118	<0.001	0.00078J	0.00078J	<0.001
PW-06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PW-07	<0.001	0.0422	0.00089J	0.015	0.0149	<0.001
PW-10	0.0012	0.0018	<0.001	0.00059J	0.00059J	<0.001
PW-11	<0.001	0.0132	<0.001	0.0094	0.0091	<0.001
SW-02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-04	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TBLK-11101	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Concentrations are in mg/L
J - estimated value

Attachment 2
Figures



LEGEND

- Injection Well & Performance Monitoring Well Location
- Monitoring Well Location
- Recovery Well Location
- Surface Water Sampling Location
- Pore Water Sample Location

NOTES

PURPLE LABELS INDICATE SAMPLE COLLECTION DURING THE MARCH 2011 SAMPLING EVENT.

0 200 400

Feet

FORMER GIRMES SITE (SKF USA INC)
ASHEVILLE, NC

SITE MAP

DRAWN BY: JCM	SCALE AS NOTED	PROJECT NO.: 03404.57.001
CHECKED BY: MER		DATE: APRIL 2011
APPROVED BY:		FIGURE NO.: 1

RMT

Patewood Plaza One, Suite 100
30 Patewood Drive
Greenville, SC 29615-3535
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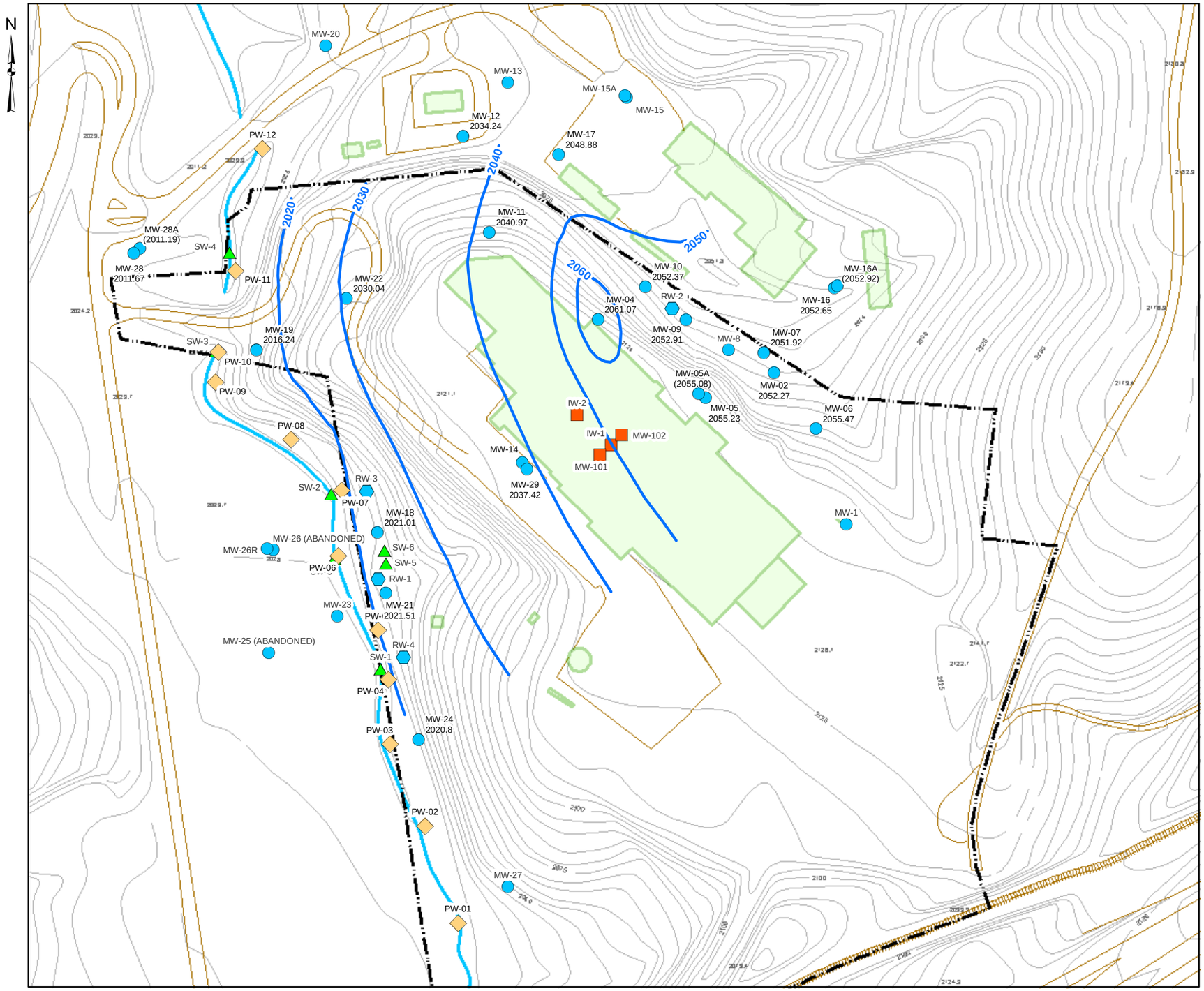
FAX: 864-281-0288

Map Document: (C:\Program Files\ArcGIS\Bin\Templates\RMT_NewLogo_Oct2007\11x17 Landscape_Patewood.mxt)
10/24/2007 -- 8:30:49 AM



LEGEND

- Injection Well & Performance Monitoring Well Location
- Monitoring Well Location
- Recovery Well Location
- Surface Water Sampling Location
- Pore Water Sample Location
- Water Table Elevation Contours

NOTES

PARENTHESES INDICATE LOCATIONS WHERE WATER LEVEL ELEVATIONS WERE NOT USED IN GENERATING CONTOURS.

0 200 400

Feet

FORMER GIRMES SITE (SKF USA INC)
ASHEVILLE, NC

WATER TABLE ELEVATION MAP
MARCH 2011

DRAWN BY: JCM	SCALE AS NOTED	PROJECT NO.: 03404.57.001
CHECKED BY: MER		DATE: APRIL 2011
APPROVED BY:		FIGURE NO.: 2

RMT

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Map Document: (C:\Program Files\ArcGIS\Bin\Templates\RMT_NewLogo_Oct2007\11x17 Landscape_Patewood.mxt)
10/24/2007 -- 8:30:49 AM

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August 9, 2011

Mr. W. C. McGlocklin, CPEA
Director of Environmental Affairs
SKF USA Inc.
PO Box 332
Kulpsville, PA 19443-0332

Subject: Results of Second 2011 Monitoring Event
Former Girmes Site, Asheville, North Carolina

Dear Bill:

TRC Engineers, Inc. (TRC) has conducted the second groundwater monitoring event as outlined in our proposal of January 18, 2011, for continued remediation support at the former Girmes Site in Asheville, North Carolina. Sampling was conducted on July 6th and 7th, 2011. Data from this sampling event are summarized in this letter.

Samples were collected at the same locations as in March 2011 (shown on Figure 1):

- Groundwater samples from three monitoring wells (MW-5A, MW-10, and MW-21);
- Pore water samples from four locations along Gashes Creek (PW-06, PW-07, PW-10, and PW-11); and
- Surface water samples (SW-02 through SW-04 and SW-08) at locations in the creek adjacent to the pore water sample locations.

Samples were analyzed for a select list of volatile organic compounds (VOCs) (tetrachloroethene [PCE], trichloroethene [TCE], 1,2-dichloroethene [*cis*-1,2-DCE and *trans*-1,2-DCE], and vinyl chloride [VC]). Analytical data are summarized in Table 1.

Groundwater Flow Directions

Water levels were measured in 22 wells at the site on July 6, 2011. The water table observed at the site in July 2011 (Figure 2) is similar to that observed in the past.

Discussion of Analytical Results

TCE and DCE were again detected in groundwater samples collected from all three wells sampled during this sampling event, with well MW-5A having the highest VOC concentrations. The DCE consists predominantly of *cis*-1,2-DCE (as opposed to *trans*-1,2-DCE) which is indicative of continuing degradation of TCE in groundwater at the site. PCE and VC were not detected in groundwater samples collected from the monitoring wells.

Constituent concentrations reported are either lower than or within the range of historically concentrations observed at each well. Table 2 lists the historical range (prior to 2011) of PCE, TCE, and cis-1,2-DCE detected in each of the three sampled monitoring wells.

Of the four pore water sampling locations, no VOCs were detected at PW-06, the most upstream location, or at PW-10 located just upstream of PW-11. The highest VOC concentrations in pore water samples were again reported at location PW-07, though the TCE concentration was detected at an order of magnitude lower than that observed in March 2011.

cis-1,2-DCE was reported at SW-02 (adjacent to PW-07) at an estimated concentration of 0.0002 mg/L. VOCs were not detected in the other three surface water samples collected at locations adjacent to the pore water sample locations.

Conclusions

VOC-impacted groundwater discharging to the Gashes Creek will not create exceedances of surface water criteria at the concentrations observed in the pore water samples collected adjacent to the creek during this sampling event. This is confirmed by the July 2011 surface water sampling results. VOC concentrations in MW-05A, near the suspected VOC source area, have increased following shutoff of the groundwater recovery system, but are not as high as historical concentrations that have been observed at the well. Based on the data collected, activities at the site remain protective of surface water in Gashes Creek. We therefore recommend the 2011 monitoring program be continued as originally planned, with the last sampling event of 2011 taking place during November.

If you have questions or would like to discuss other site details, please call me at 864.234.9462.

Sincerely,

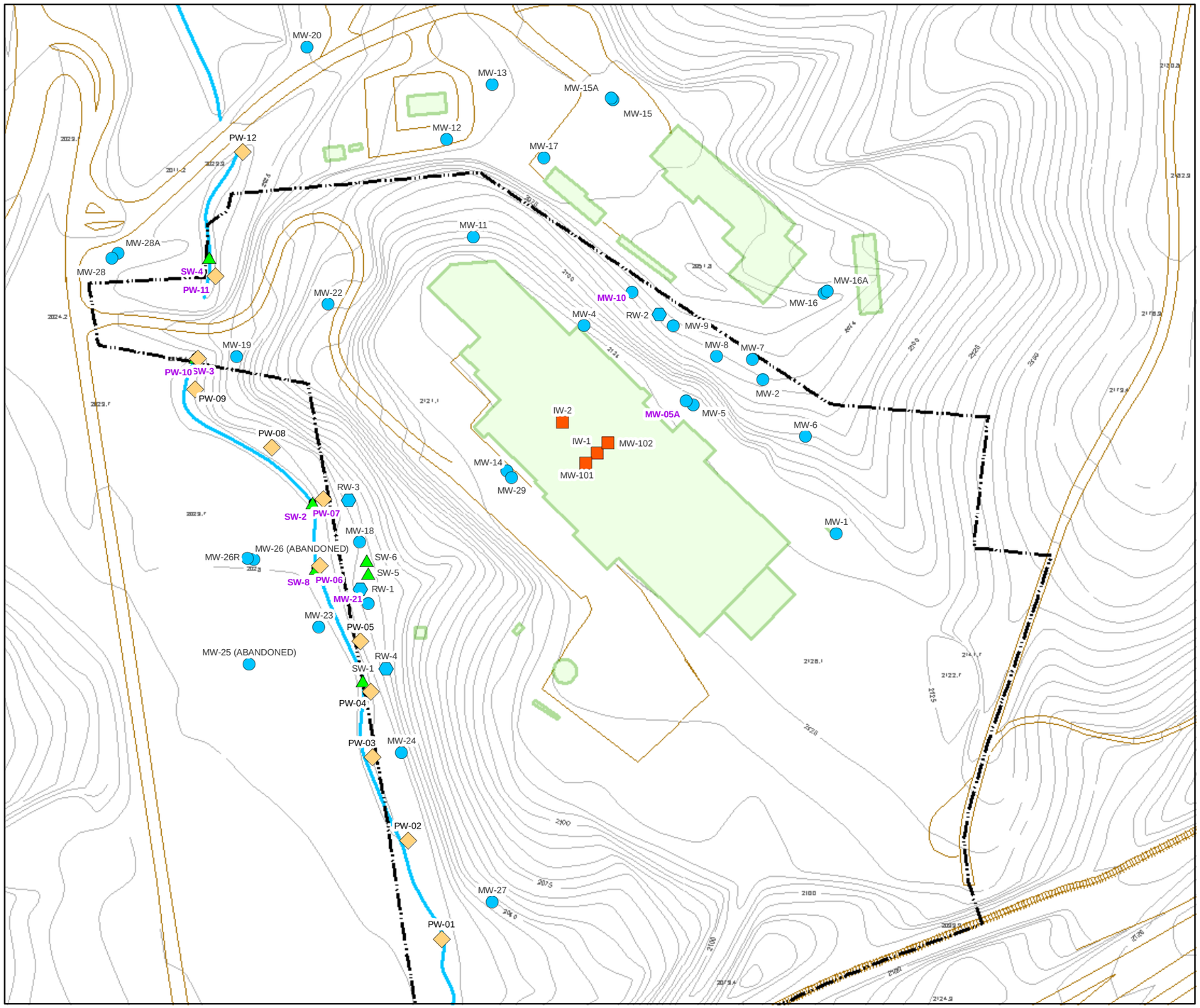
TRC Engineers, Inc.

Michael B. Parker, P.E.
Senior Client Service Manager

Attachments

cc: Central Files

Attachment 1
Figures



LEGEND

- Injection Well & Performance Monitoring Well Location
- Monitoring Well Location
- Recovery Well Location
- Surface Water Sampling Location
- Pore Water Sample Location

NOTES

PURPLE LABELS INDICATE SAMPLE COLLECTION DURING THE MARCH 2011 SAMPLING EVENT.

0 200 400

Feet

FORMER GIRMES SITE (SKF USA INC)
ASHEVILLE, NC

SITE MAP

DRAWN BY: JCM	SCALE AS NOTED	PROJECT NO.: 03404.57.001
CHECKED BY: MER		DATE: APRIL 2011
APPROVED BY:		FIGURE NO.: 1

TRC
Patewood Plaza One, Suite 100
30 Patewood Drive
Greenville, SC 29615-3535
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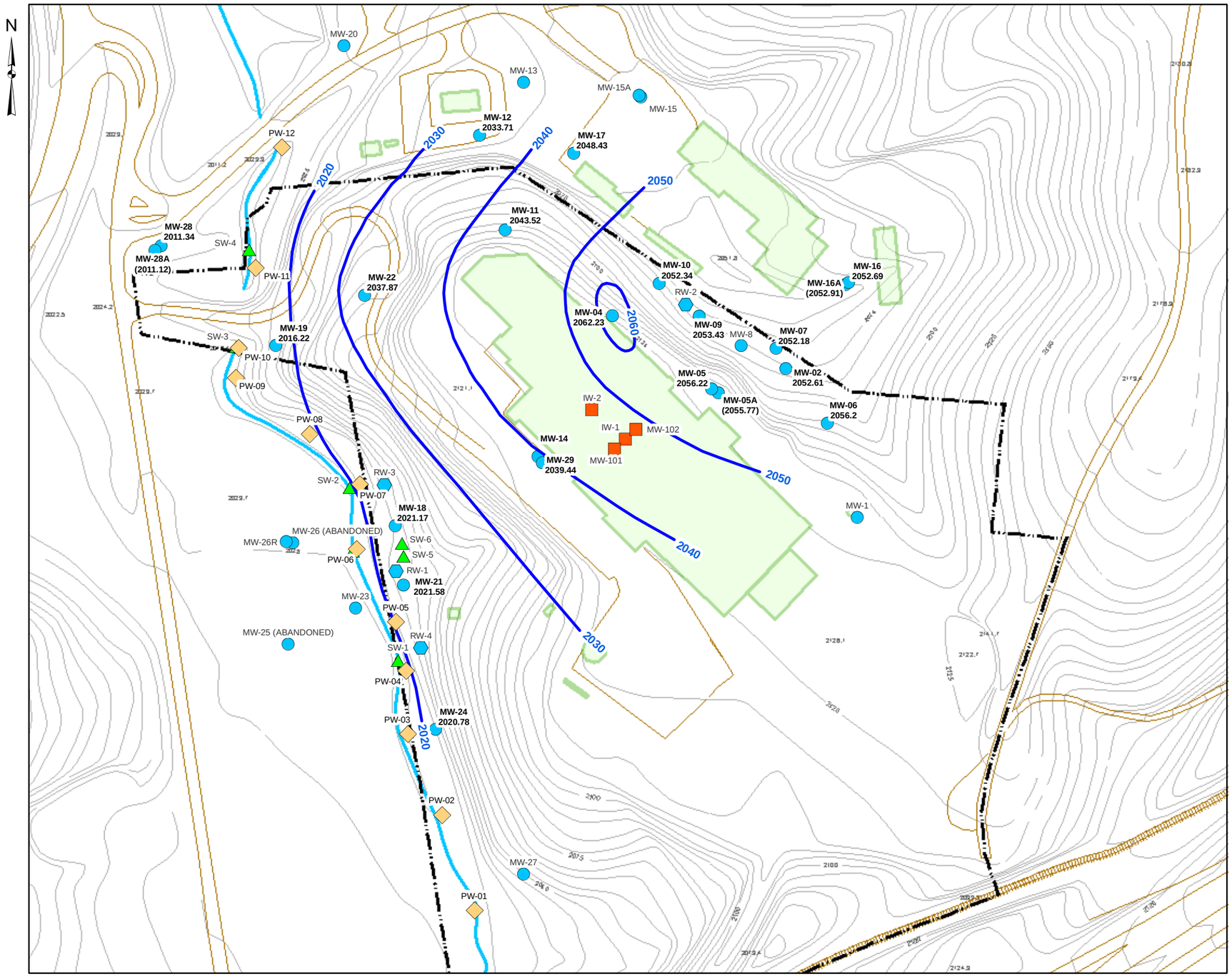
Map Document: (C:\Program Files\ArcGIS\Bin\Templates\RMT_NewLogo_Oct2007\11x17 Landscape_Patewood.mxt)
10/24/2007 -- 8:30:49 AM



LEGEND

- Injection Well & Performance Monitoring Well Location
- Monitoring Well Location
- Recovery Well Location
- Surface Water Sampling Location
- Pore Water Sample Location
- Water Table Elevation Contours

NOTES

PARENTHESES INDICATE LOCATIONS WHERE WATER LEVEL ELEVATIONS WERE NOT USED IN GENERATING CONTOURS.

0 200 400

Feet

FORMER GIRMES SITE (SKF USA INC)
ASHEVILLE, NC

WATER TABLE ELEVATION MAP
JULY 2011

DRAWN BY: JCM	SCALE AS NOTED	PROJECT NO.: 03404.57.001
CHECKED BY: MER		DATE: AUGUST 2011
APPROVED BY: MBP		FIGURE NO.: 2

TRC
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30 Patewood Drive
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Path: P:_COSTPT\03404\54\ArcGIS_10\Figure 2 - WaterTable_07-2011.mxd
Date Saved: 8/5/2011 10:11:14 AM

Attachment 2
Tables

Table 1
Analytical Results – July
Former Girmes Site, Asheville, North Carolina

LOCATION	VOC					
	PCE	TCE	1,2-DCE	*cis*-1,2-DCE	*trans*-1,2-DCE	VC
MW-05A	<0.025	3.2	0.155	0.149	<0.025	<0.025
MW-05A (DU-11301)	<0.025	3.05	0.139	0.132	<0.025	<0.025
MW-10	<0.001	0.00054 J	0.0133	0.0103	0.003	<0.001
MW-21	<0.001	0.0195	0.00079 J	0.00079 J	<0.001	<0.001
PW-06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PW-07	<0.001	0.0071	0.0288	0.0285	<0.001	0.0013
SW-02	<0.001	<0.001	<0.001	0.0002 J	<0.001	<0.001
PW-10	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PW-11	<0.001	0.0043	0.0062	0.0061	<0.001	<0.001
SW-04	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TBLK-11301	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Concentrations in mg/L.
J Estimated concentration.

Table 2
Historical VOC Concentrations at Wells Sampled in 2011
Former Girmes site, Asheville, North Carolina

WELL	HISTORICAL RANGE		
	PCE	TCE	*cis*-1,2-DCE
MW-05A	ND	4.86 - 9.6	0.124 - 0.203
MW-10	ND	0.00079 - 0.038	0.0085 - 0.031
MW-21	ND	0.0014 - 0.42	0.0078 - 0.0079

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January 6, 2012

Mr. W. C. McGlocklin, CPEA
Director of Environmental Affairs
SKF USA Inc.
PO Box 352
Lansdale, PA 19446-0352

Subject: Results of Third 2011 Monitoring Event
Former Girmes Site, Asheville, North Carolina

Dear Bill:

TRC Engineers, Inc. (TRC) has conducted the third groundwater monitoring event as outlined in our proposal of January 18, 2011, for continued remediation support at the former Girmes Site in Asheville, North Carolina. Sampling was conducted on November 18th and December 2nd, 2011. Data from this sampling event are summarized in this letter.

Samples were collected at the same locations as sampled previously in March and July 2011 (shown on Figure 1):

- Groundwater samples from three monitoring wells (MW-5A, MW-10, and MW-21);
- Pore water samples from four locations along Gashes Creek (PW-06, PW-07, PW-10, and PW-11); and
- Surface water samples (SW-02 through SW-04 and SW-08) at locations in the creek adjacent to the pore water sample locations.

Samples were analyzed for a select list of volatile organic compounds (VOCs) (tetrachloroethene [PCE], trichloroethene [TCE], 1,2-dichloroethene [*cis*-1,2-DCE and *trans*-1,2-DCE], and vinyl chloride [VC]). Analytical data are summarized in Table 1.

Groundwater Flow Directions

Water levels were measured in 22 wells at the site on November 18, 2011. The water table observed at the site in November 2011 (Figure 2) is similar to that observed in the past.

Discussion of Analytical Results

Groundwater

TCE and DCE were again detected in groundwater samples collected from all three wells that were sampled (MW-5A, MW-10, and MW-21), with well MW-5A continuing to have the highest VOC concentrations. The DCE consists predominantly of *cis*-1,2-DCE (as opposed to *trans*-1,2-DCE), which indicates continuing degradation of TCE in groundwater at the site. PCE and VC were not detected in groundwater samples collected from these wells. Constituent concentrations reported are either lower than or within the range of historical concentrations observed at each well, with one exception. The concentrations of cis-1,2-DCE found in monitoring well MW-21 (0.0015 mg/L and 0.0017 mg/L) were slightly higher than previously measured (0.0079 mg/L). Table 2 lists the historical range (June 1996 to July 2011) of PCE, TCE, and cis-1,2-DCE detected in each of the three sampled monitoring wells.

Pore Water Samples

No VOCs were detected in the pore water sample collected at location PW-06, the most upstream location. VOCs were detected in pore water samples collected at the remaining three locations. The highest VOC concentration was reported at location PW-11.

Surface Water

VOCs were not detected in any of the surface water samples collected at locations adjacent to the pore water sample locations.

Conclusions

The December 2011 surface water sampling results confirm that VOC-impacted groundwater discharging to the Gashes Creek will not create exceedances of surface water criteria at the concentrations observed in the pore water samples collected adjacent to the creek during this sampling event. VOC concentrations in MW-05A, near the suspected VOC source area, have increased following shutoff of the groundwater recovery system, but are not as high as historical concentrations that have been observed at the well. Based on the data collected, activities at the site remain protective of surface water in Gashes Creek. We therefore recommend continuing the monitoring program as planned with the first sampling event of 2012 taking place during March.

If you have questions or would like to discuss other site details, please call me at 864.234.9462.

Sincerely,

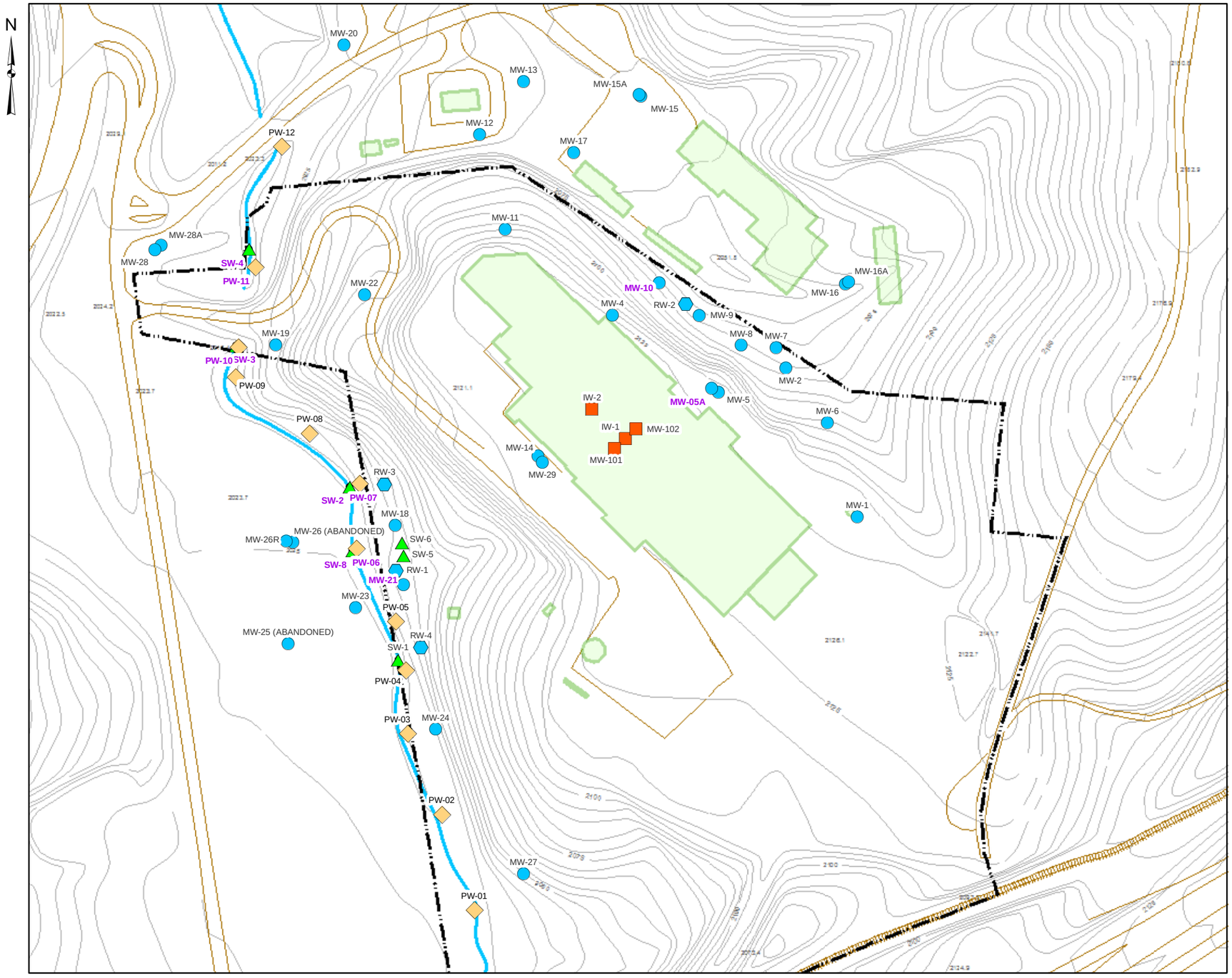
TRC Engineers, Inc.

Michael B. Parker, P.E.
Senior Client Service Manager

Attachments

cc: Central Files

Attachment 1
Figures



LEGEND

- Injection Well & Performance Monitoring Well Location
- Monitoring Well Location
- Recovery Well Location
- Surface Water Sampling Location
- Pore Water Sample Location

NOTES

PURPLE LABELS INDICATE SAMPLE COLLECTION DURING THE MARCH 2011 SAMPLING EVENT.

0 200 400
Feet

FORMER GIRMES SITE (SKF USA INC)
ASHEVILLE, NC

SITE MAP

DRAWN BY: JCM	SCALE AS NOTED	PROJECT NO.: 004440.0.0.1
CHECKED BY: DOM		DATE: DECEMBER 2011
APPROVED BY: MBP		FIGURE NO.: 1

TRC
Patewood Plaza One, Suite 100
30 Patewood Drive
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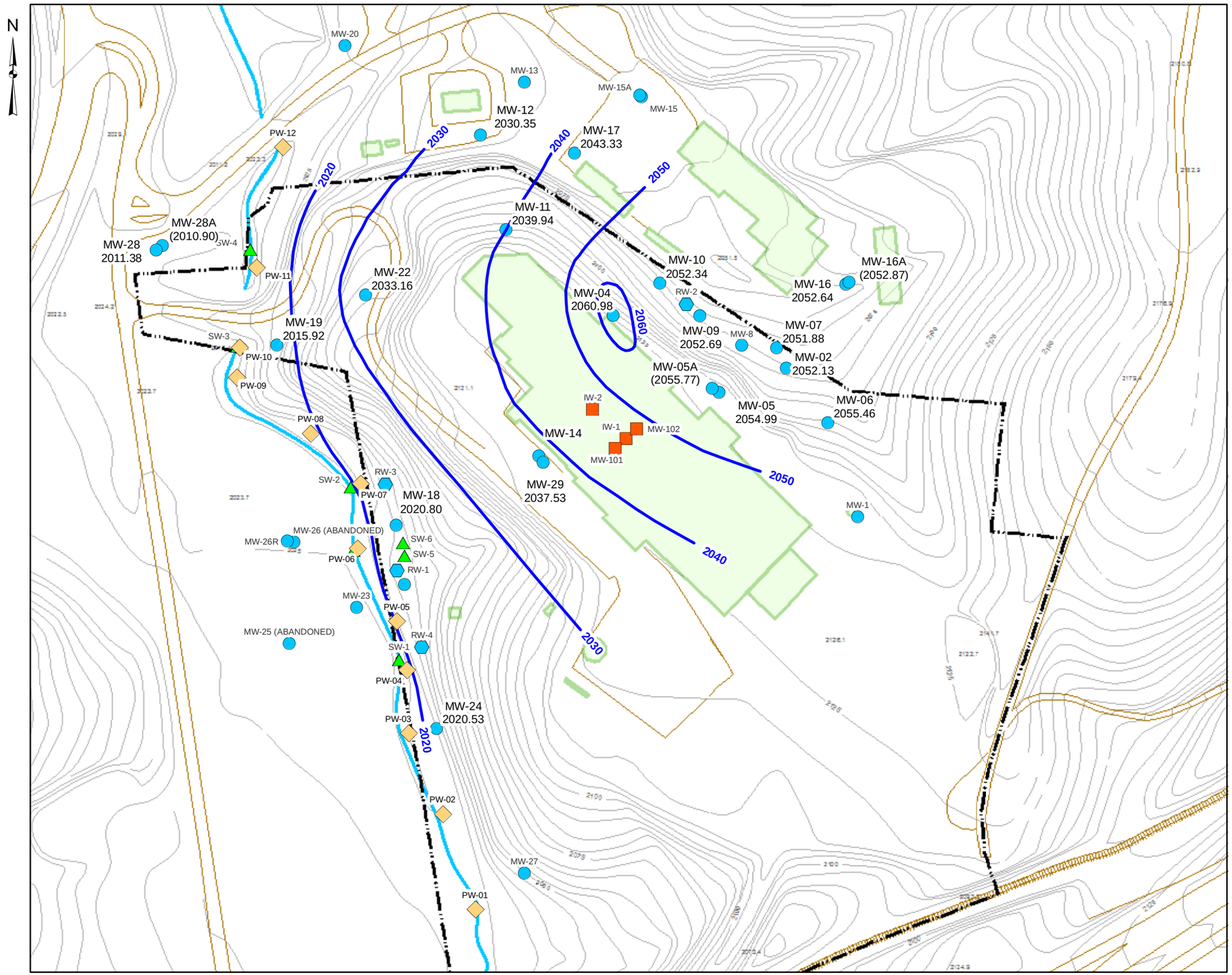
FAX: 864-281-0288

Path: P:_COSTPT\03404\54\ArcGIS_10\Figure 1 - Base Map_12-2011.mxd
Date Saved: 12/19/2011 11:09:23 AM



LEGEND

- Injection Well & Performance Monitoring Well Location
- Monitoring Well Location
- Recovery Well Location
- Surface Water Sampling Location
- Pore Water Sample Location
- Water Table Elevation Contours

NOTES

PARENTHESES INDICATE LOCATIONS WHERE WATER LEVEL ELEVATIONS WERE NOT USED IN GENERATING CONTOURS.

0 200 400

Feet

FORMER GIRMES SITE (SKF USA INC)
ASHEVILLE, NC

WATER TABLE ELEVATION MAP
NOVEMBER 2011

DRAWN BY: JCM	SCALE AS NOTED	PROJECT NO.: 004440.0.0.1
CHECKED BY: DOM		DATE: JANUARY 2012
APPROVED BY: MBP		FIGURE NO.: 2

TRC
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30 Patewood Drive
Greenville, SC 29615-3535
Phone: 864-281-0030
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Path: P:_COSTPT\03404\54\ArcGIS_10\Figure 2 - WaterTable_11-2011.mxd
Date Saved: 1/5/2012 3:19:57 PM

Attachment 2
Tables

Table 1
Analytical Results - November and December 2011
Former Girmes Site, Asheville, North Carolina

SAMPLE LOCATIONS	PCE	TCE	VC	Total 1,2-DCE	*cis*-1,2-DCE	*trans*-1,2-DCE
Groundwater						
MW-05A	<0.02	**3.46**	<0.02	**0.144**	**0.137**	<0.02
MW-10	<0.001	**0.001**	<0.001	**0.0237**	**0.0184**	**0.0053**
MW-21	<0.001	**0.0188**	<0.001	**0.0015**	**0.0015**	<0.001
MW-21 (DU-11401)	<0.001	**0.0156**	<0.001	**0.0017**	**0.0017**	<0.001
Pore Water						
PW-06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PW-07	<0.001	**0.00097 J**	<0.001	**0.0011**	**0.0011**	<0.001
PW-10	<0.001	**0.0017**	<0.001	**0.001**	**0.001**	<0.001
PW-11	<0.001	**0.0063**	<0.001	<0.001	<0.001	<0.001
Surface Water						
SW-02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-04	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SW-08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
QC Samples						
TBLK-11401	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TBLK-11402	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Concentrations are in mg/L
J - estimated value

Table 2
Historical VOC Concentrations at Wells Sampled in 2011
Former Girmes site, Asheville, North Carolina

WELL	HISTORICAL RANGE		
	PCE	TCE	*cis*-1,2-DCE
MW-05A	ND	3.2 - 9.6	0.124 - 0.203
MW-10	ND	0.00054 - 0.038	0.0085 - 0.031
MW-21	ND	0.0014 - 0.42	0.00078 - 0.00079