

**Environmental  
Resources  
Management**

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15 January 2014

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Division of Environmental Remediation - Region 9  
270 Michigan Avenue  
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RE: Monthly Progress Report - December 2013  
Greif, Inc. Facility - Tonawanda, New York  
NYSDEC VCP Number V00334-9

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***Key Actions  
This Period:***

- Preparation of the Draft Site Management Plan (SMP).
- Preparation of the Draft Final Engineering Report (FER).

***Changes/  
Problems/  
Resolutions:***

- The groundwater sampling event performed in November 2013 was the fourth consecutive semiannual groundwater sampling event. As indicated in Section 4.3.4 of the New York State Department of Environmental Conservation (NYSDEC)-approved Remedial Action Work Plan, future groundwater sampling will be performed every fifth quarter. Therefore, the next groundwater sampling event will be performed in the first quarter of 2015.

***Analytical  
Data Received:***

- Laboratory analytical results from the November 2013 semiannual groundwater sampling event. Groundwater sample locations are presented in Figure 1. Laboratory analytical data from the groundwater sampling event is summarized in Table 1.

***Documents  
Submitted:***

- Monthly Progress Report for November 2013 dated 10 December 2013.

***Anticipated  
Actions -  
January 2014:***

- Perform routine operations and maintenance (O&M) on the Sub-Slab Depressurization (SSD) System.
- Perform routine monitoring of groundwater and

product levels and perform product recovery if necessary.

- Continued preparation of the Draft SMP.
- Continued preparation of the Draft FER.

**NYSDEC-  
Approved Field  
Decisions:**

- None.

**Prepared By:**

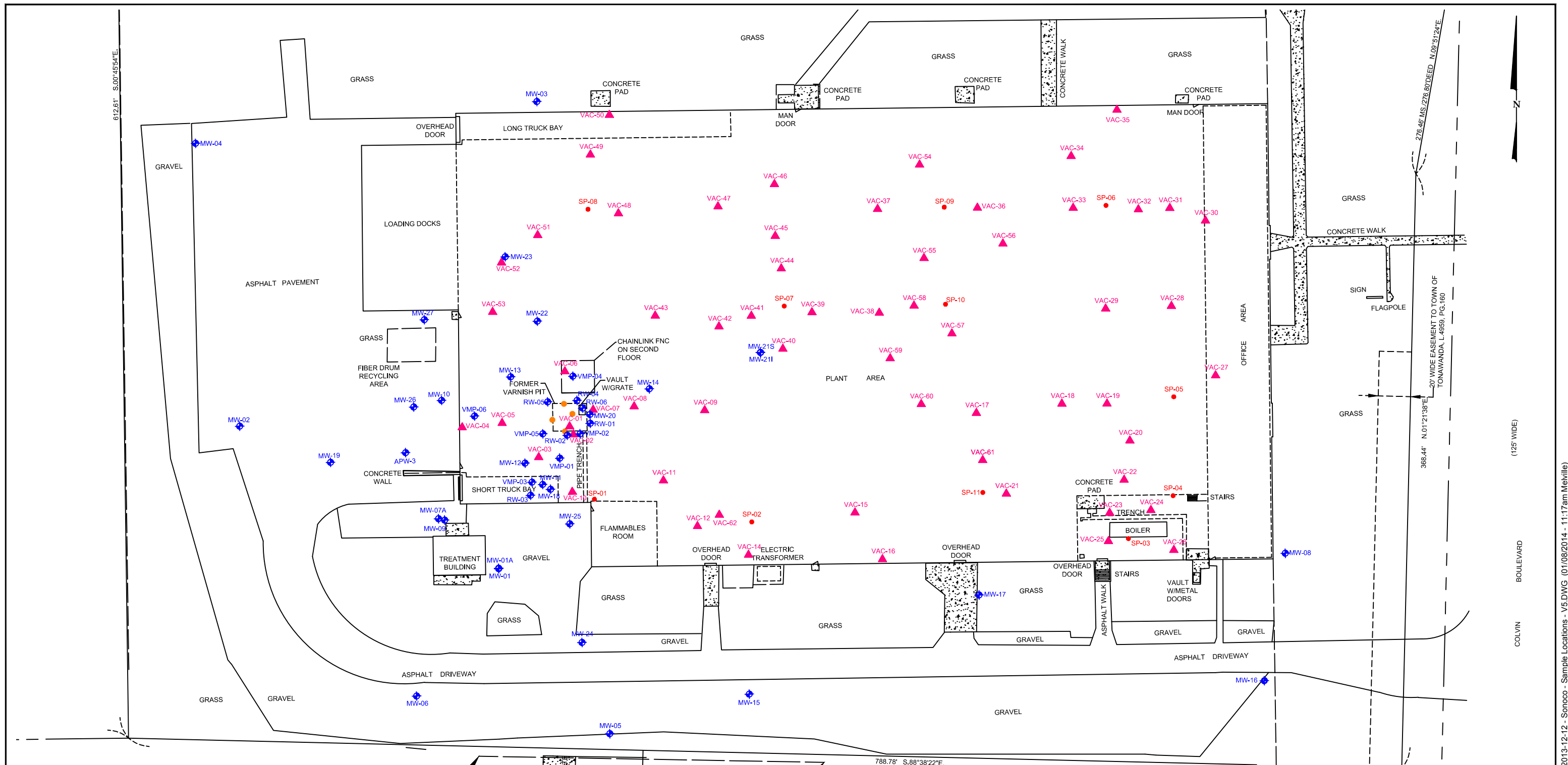


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Jon S. Fox, P.G.  
Principal Consultant and Project Manager

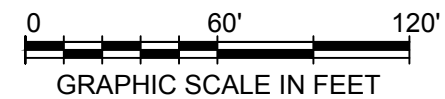
**Date:** 15 January 2014

Cc: Larry Pattengill (Sonoco)  
Pete Gruene (Sonoco)  
Patrick Wolfe (Greif)  
George Frazer (Greif)  
Gregory Sutton, P.E. (NYSDEC)  
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Matt Forcucci (NYSDOH)  
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John Kuhn (ERM)  
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**LEGEND**

- Horizontal Suction Point Location
- Vertical Suction Point Location
- ▲ Vacuum Monitoring Point Location
- ◆ Monitoring Well Location
- Former Varnish Pit
- Man Door
- Concrete Pad



TITLE  
**SAMPLE AND MEASUREMENT LOCATIONS  
 GREIF FACILITY-TONAWANDA, NEW YORK  
 NYSDEC VCP NUMBER V00334-9**

PREPARED FOR  
**SONOCO PRODUCTS COMPANY**

<b>Environmental Resources Management</b>		<b>FIGURE</b>  <b>1</b>	
<small>DRAWN BY</small> EMF	<small>SCALE</small> GRAPHIC		<small>DATE</small> 08 JANUARY 2014

**TABLE 1**  
**SUMMARY OF UNVALIDATED ANALYTICAL RESULTS RECEIVED IN DECEMBER 2013**  
**GROUND WATER SAMPLING EVENT - NOVEMBER 2013**  
**GREIF FACILITY - TONAWANDA, NEW YORK**  
**NYSDEC VCP NUMBER V00334-9**

Sample Designation	APW-3	MW-1A	MW-3	MW-12	MW-13	MW-14	MW-18	MW-19	MW-21I	MW-21S	Standard or Guidance Value
Collection Date	19-Nov-13	19-Nov-13	19-Nov-13	18-Nov-13	18-Nov-13	18-Nov-13	18-Nov-13	19-Nov-13	18-Nov-13	18-Nov-13	
<b>VOCs (µg/L)</b>											
Acetone	<250	<5	<5	<200	<10000	<10000	<5	<5	<10	<5	50
Benzene	<25	<0.5	<0.5	<20	<1000	<1000	<1	<1	<0.5	<1	1
2-Butanone	<250	<5	<5	<200	<10000	<10000	<5	<5	<5	<5	5
Chloroethane	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
Chloroform	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	7
1,1-Dichloroethane	<b>1200</b>	<2.5	<2.5	<b>1200</b>	<b>12000</b>	<b>2500 J</b>	<b>16</b>	<2.5	<2.5	<5	5
1,2-Dichloroethane	<25	<0.5	<0.5	<20	<1000	<1000	<0.5	<0.5	<0.5	<0.5	0.6
1,1-Dichloroethene	<b>860</b>	<0.5	<0.5	<b>460</b>	<b>18000</b>	<b>1400</b>	2.1	<0.5	0.57 J	<0.5	5
cis-1,2-Dichloroethene	<120	<2.5	<2.5	<b>1500</b>	<b>12000</b>	<b>1600</b>	2.7	<2.5	<2.5	<5	5
trans-1,2-Dichloroethene	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
Ethylbenzene	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
Methylene chloride	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
4-Methyl-2-pentanone	<250	<5	<5	<200	<10000	<10000	<5	<5	<5	<10	NS
Tetrachloroethene	<25	<0.5	<0.5	<20	<1000	<1000	<0.5	<0.5	<0.5	<1	0.7
Toluene	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
1,1,1-Trichloroethane	<b>2600</b>	<2.5	<2.5	<b>310</b>	<b>39000</b>	<5000	3.5	<2.5	<2.5	<5	5
1,1,2-Trichloroethane	<75	<1.5	<1.5	<60	<3000	<3000	<1.5	<1.5	<1.5	<3	5
Trichloroethene	<25	<0.5	<0.5	<b>560</b>	<b>71000</b>	<b>73000</b>	3.6	<0.5	<b>84</b>	<b>33</b>	5
1,2,4-Trimethylbenzene	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
Vinyl chloride	<b>18 J</b>	<1	<1	<b>63</b>	<2000	<2000	<b>4</b>	<1	<1	<2	2
o-Xylene	<120	<2.5	<2.5	<100	<5000	<5000	<2.5	<2.5	<2.5	<5	5
Xylene (total)	<120	<2.5	<2.5	<b>33 J</b>	<5000	<5000	<2.5	<2.5	<2.5	<5	5
<b>Other (µg/L)</b>											
Dissolved Organic Carbon	5900	3500	2800	4300	15000	3100	5300	2500	2400	2700	NS
Ethane	2.35	<0.500	<0.500	0.756	3.00	<0.500	<0.500	<0.500	<0.500	<0.500	NS
Ethene	5.17	<0.500	<0.500	2.27	42.4	0.61	0.61	<0.500	<0.500	<0.500	NS
Methane	1270	19.8	6.3	14.1	732	<5	29	<5	6.54	<5	NS
Sulfate	92500	<b>745000</b>	<b>353000</b>	<b>359000</b>	93100	80200	<b>356000</b>	69000	84400	96500	250000

**NOTES:**

All analyte concentrations are reported in micrograms per liter (parts per billion) unless otherwise noted.

**Bold** Represents an exceedance of standard.

J = Indicates an estimated value.

NS = No standard or guidance value.

<= Analyte was Non-detect.

TABLE 1 (Continued)  
SUMMARY OF UNVALIDATED ANALYTICAL RESULTS RECEIVED IN DECEMBER 2013  
GROUND WATER SAMPLING EVENT - NOVEMBER 2013  
GREIF FACILITY - TONAWANDA, NEW YORK  
NYSDEC VCP NUMBER V00334-9

Sample Designation	MW-22	DUP-01	MW-24	MW-25	MW-26	MW-27	RW-5	VMP-6	Standard or Guidance Value
Collection Date	18-Nov-13	18-Nov-13	19-Nov-13	19-Nov-13	19-Nov-13	19-Nov-13	18-Nov-13	18-Nov-13	
<b>VOCs (µg/L)</b>									
Acetone	<5	<5	<200	<5	<5	<5	5300 J	<120	50
Benzene	<0.5	<0.5	17 J	0.31 J	<0.5	<0.5	<1200	5.4 J	1
2-Butanone	<5	<5	<200	<5	<5	<5	<12000	<120	5
Chloroethane	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	<62	5
Chloroform	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	<62	7
1,1-Dichloroethane	7.10	7.80	<100	3.1	2.0 J	21	20000	<62	5
1,2-Dichloroethane	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<1200	<12	0.6
1,1-Dichloroethene	0.53	0.55	<20	<0.5	<0.5	1.7	35000	<12	5
cis-1,2-Dichloroethene	1.30 J	1.40 J	2600.00	5.30	<2.5	<2.5	120000	<62	5
trans-1,2-Dichloroethene	<2.5	<2.5	<100	<2.5	<0.5	<2.5	<6200	<62	5
Ethylbenzene	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	1600	5
Methylene chloride	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	<62	5
4-Methyl-2-pentanone	<5	<5	<200	<5	<5	<5	<12000	<120	NS
Tetrachloroethene	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<1200	<12	0.7
Toluene	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	<62	5
1,1,1-Trichloroethane	<2.5	<2.5	<100	<2.5	2.9	1.4 J	150000	<62	5
1,1,2-Trichloroethane	<1.5	<1.5	<60	<1.5	<1.5	<1.5	<3800	<38	5
Trichloroethene	48	52	1700	<0.5	<0.5	2.9	940 J	5.7 J	5
1,2,4-Trimethylbenzene	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	140	5
Vinyl chloride	<1	<1	730	15	<1	<1	1600 J	<25	2
o-Xylene	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	320	5
p/m-Xylene	<2.5	<2.5	<100	<2.5	<2.5	<2.5	<6200	1900	5
<b>Other (µg/L)</b>									
Dissolved Organic Carbon	3000	2800	9900	3500	3400	5200	140000	17000	NS
Ethane	<0.500	<0.500	88.30	4.54	<0.500	<0.500	190	3.60	NS
Ethene	<0.500	<0.500	150	11.4	<0.500	<0.500	55.3	<0.500	NS
Methane	8.33	8.84	631	342	<5	180	57.5	2510	NS
Sulfate	659000	646000	356000	2860000	2820000	124000	275000	14300	250000

**NOTES:**

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