

10 February 2011

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Division of Environmental Remediation - Region 9
270 Michigan Avenue
Buffalo, New York 14203



RE: Monthly Progress Report – January 2011
Greif, Inc. Facility – Tonawanda, New York
NYSDEC VCP Number V00334-9

***Key Actions
This Period:***

- Performed routine operations and maintenance (O&M) on the Pilot Sub-Slab Depressurization (SSD) system and dense, non-aqueous phase liquid (DNAPL) recovery equipment. Collected and recorded relevant data. Data collected included liquid level measurements in selected Site wells and monitoring points (Table 1), vacuum readings in vacuum monitoring points (Table 2), and treatment system operational data (Table 3). The locations of wells and other monitoring points are presented in Figure 1. A map showing the estimated distribution of vacuum in the sub-slab at the facility on 19 January 2011 is presented in Figure 2.
- Continued evaluation of Pilot SSD System pilot test data and preparation of a report and SSD system design.
- Subcontractor procurement and planning for initiation of remedial soil excavation and associated remedial activities in the Former Varnish UST Area.
- Installed two automatic metering pumps connected to two Pilot SSD System remedial pipes (PG-101 and PG-104) to assist with the collection of water accumulating inside the pipes (likely due to condensation).
- Performed an additional site visit on 27 January 2011 to continue evaluation of the rate of water accumulation inside Pilot SSD System piping and associated corrective action.

***Problems/
Resolutions:***

During the 18 January 2011 site visit, additional water accumulation was observed in the system piping associated with suction point locations SP-05 through SP-08. Decreased and fluctuating vacuum readings similar to those observed during the initial December 2010 O&M site visit were also observed. To address this issue, ERM installed automatic metering pumps and briefly isolating the blower vacuum to discreet sections of the SSD system piping. ERM removed approximately 12-gallons of water from pipe PG-104 and 8-gallons of water from PG-101 using metering pumps. ERM removed an additional 12-gallons of water from PG-104 using focused blower vacuum to pull water into the system knockout pot/de-mister. Subsequent to the water removal, fluctuation in vacuum readings at suction points SP-05 through SP-08 ceased and vacuum reading returned to normal values generally consistent with pervious month's readings.

On 19 January 2011, ERM re-sized tubing associated with the automatic metering pumps with a smaller diameter tubing to evaluate whether this would increase the amount of water collected. The pumps were programmed to run daily for 30-minutes.

On 27 January 2011, ERM performed an additional site visit to determine if the automatic metering pump system was continuing to collect water. During this site visit both pumps were operational, but little water was being pulled out of the system piping as evidenced by the minimal amount of water observed in the associated collection drum. ERM used the blower suction method to remove an additional 7.0-gallons of SVE condensate water from the SSD System piping. Site visits are currently planned on a biweekly basis to monitor and evaluate water collection inside Pilot SSD System remedial piping.

Analytical Data • None.
Received:

Documents Submitted:

- Monthly Progress Report for December 2010 dated 10 January 2011.

Anticipated Actions - February 2011:

- Routine O&M of the Pilot SSD System and DNAPL recovery equipment and adjustment of extraction and recovery parameters as necessary based on Site data and observations.
- Evaluation of SSD System pilot test data and results and preparation of a final design for the SSD System.
- Planning and procurement of subcontractors, supplies, and materials for remedial soil excavation and associated remedial activities in the Former Varnish UST Area.
- Site visits for monitoring or water accumulation in Pilot SSD System pipes PG-101 and PG-104.

NYSDEC-Approved Field Decisions:

- None.

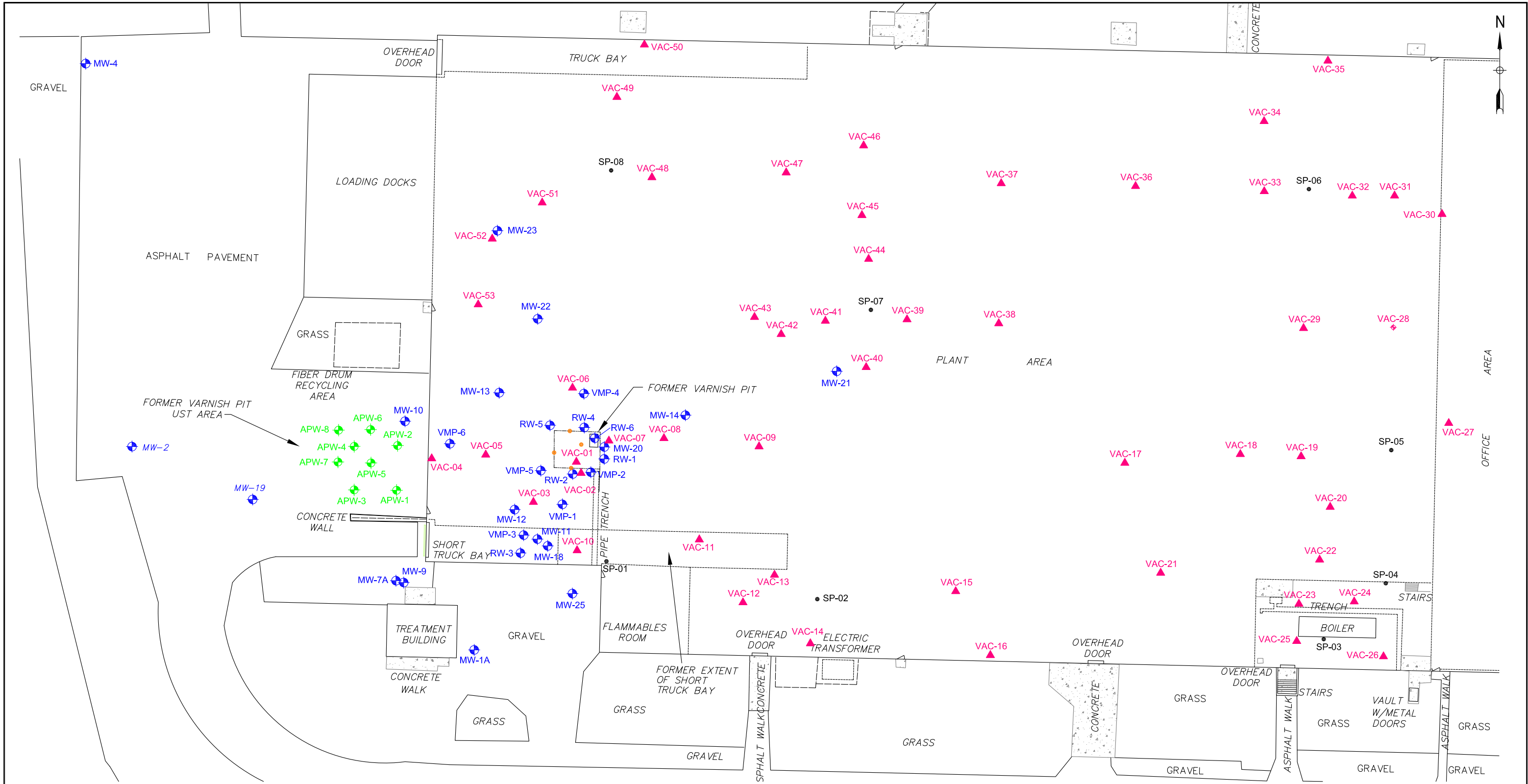
Prepared By:



Jon S. Fox, P.G.
Senior Consultant

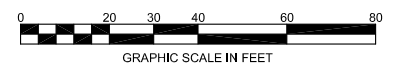
Date: 10 February 2011

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LEGEND

- ▲ Vacuum Monitoring Point Location
- ⊕ Monitoring or Recovery Well Location
- ⊕ Antenna Placement Well
- Suction Point Location
- Horizontal Suction Point 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			
 Environmental Resources Management	SCALE	FIGURE	1
	DATE		
DRAWN:	JOB NO.:	FILE NAME:	
EMF	0112477.01	0112477-01-011	04-Oct-2010

Map Source: Wm. Schutt & Associates, P.C., 37 Central Ave, Lancaster, NY, Survey File: D0135103, WSA Proj: M01351.

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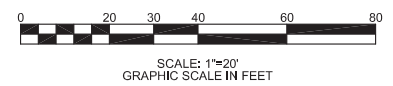


LEGEND

- Horizontal Suction Point Location
- Vertical Suction Point Location
- ▲ Vacuum Monitoring Point Location (vacuum in " H₂O)
- 0.125
- NM Not Measured
- Estimated Extent of Sub-Floor Vacuum
- Former Varnish Pit
- Man Door
- Concrete Pad

NOTES:

1. " H₂O = inches of water column



<p>TITLE</p> <p>SUBSURFACE VACUUM DISTRIBUTION</p> <p>19 JANUARY 2011</p> <p>GREIF FACILITY-TONAWANDA, NEW YORK</p>			
<p>PREPARED FOR</p> <p>SONOCO PRODUCTS COMPANY</p>			
<p>DRAWN:</p> <p>EMF</p>	<p>JOB NO.:</p> <p>0112477.01</p>	<p>FILE NAME:</p> <p>0112477-01-018</p>	<p>SCALE</p> <p>GRAPHIC</p> <p>DATE</p> <p>25-Jan-2011</p>
			<p>FIGURE</p> <p>2</p>

Table 1
Summary of Non-Aqueous Phase Liquid Thicknesses in Wells
Greif Facility - Tonawanda, New York
NYSDEC VCP Number V00334-9

WELL	RW-1 (ft.) (DNAPL)	RW-2 (ft.) (DNAPL)	RW-4 (ft.) (DNAPL)	RW-5 (ft.) (LNAPL)	RW-6 (ft.) (DNAPL)	VMP-2 (ft.) (DNAPL)	VMP-5 (ft.) (DNAPL)	MW-20 (ft.) (DNAPL)	MW-23 (ft.) (LNAPL)
Date									
19-May-08	0.00	0.00	0.00	0.00	NI	0.00	HS	0.09	0.14
30-May-08	0.00	0.16	0.00	0.00	NI	0.00	HS	0.03	0.14
16-Jun-08	0.00	0.14	0.00	0.02	NI	0.00	0.02	0.07	0.13
25-Jun-08	0.00	0.16	0.00	0.02	NI	0.00	HS	0.07	0.26
3-Jul-08	0.00	0.16	0.00	0.02	NI	0.00	HS	0.09	0.18
23-Jul-08	0.00	0.16	0.00	0.02	NI	0.00	HS	0.10	0.09
6-Aug-08	0.03	0.16	0.00	0.04	NI	0.00	HS	0.11	0.09
19-Aug-08	0.03	0.16	0.00	0.04	NI	0.00	HS	0.13	0.11
21-Nov-08	HS	0.11	0.00	0.00	NI	0.00	HS	0.22	0.29
17-Dec-08	HS	0.11	0.00	0.00	NI	0.00	HS	0.24	0.29
14-Jan-09	0.00	0.00	0.00	0.00	NI	0.00	0.00	HS	0.13
26-Feb-09	0.00	0.00	0.00	0.00	NI	0.00	0.00	0.01	0.24
12-Mar-09	0.00	0.00	0.00	0.00	NI	0.00	0.00	0.00	0.09
22-Apr-09	0.00	0.00	0.00	0.00	NI	0.00	0.00	0.00	0.11
13-May-09	0.00	0.00	0.00	0.00	NI	0.00	0.00	0.00	0.09
25-Jun-09	NM	0.00	NM	0.00	NI	0.00	0.00	NM	0.12
17-Jul-09	NM	0.00	NM	0.00	NI	0.00	0.00	NM	0.11
27-Aug-09	0.00	0.00	0.00	0.00	NI	0.00	NM	NM	0.09
25-Sep-09	0.00	0.00	0.00	0.00	NM	0.00	NM	0.04	0.11
16-Oct-09	NM	0.00	0.00	0.00	NM	0.00	NM	NM	0.11
19-Nov-09	NM	0.00	NM	NM	NM	0.00	NM	NM	0.21
17-Dec-09	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.23
14-Jan-10	0.00	0.00	0.00	NM	NM	0.00	0.00	0.01	0.21
17-Feb-10	0.00	0.00	NM	NM	NM	0.00	0.00	0.01	0.17
18-Mar-10	0.00	0.00	0.00	0.00	NM	0.00	0.00	0.01	0.09
13-Apr-10	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.01	0.12
18-May-10	0.00	0.00	0.00	0.00	0.53	0.00	NM	0.01	0.08
15-Jun-10	0.00	0.00	0.00	NM	0.01*	0.00	0.00	0.01	0.07
14-Jul-10	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.07
13-Aug-10	0.00	NM	0.00	NM	0.08	0.00	0.00	HS	0.10
14-Sep-10	0.00	NM	0.00	NM	0.04	0.00	0.00	NM	0.06
14-Oct-10	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.01	0.08
22-Nov-10	0.00	0.00	NM	0.00	0.04	0.00	0.00	0.01	0.14
15-Dec-10	0.00	0.00	0.00	NM	0.01	0.00	NM	0.01	0.09
18-Jan-11	0.00	0.00	0.00	NM	HS	0.00	NM	0.02	0.09

Notes:

All values are reported in feet as measured with an electronic interface probe.

HS - heavy sheen but no measureable thickness.

NM - not measured; was covered with pallets or other surface obstruction.

NI - not installed as of this date.

* - Product level after ERM initiated DNAPL recovery test

Table 2
Summary of Vacuum/Pressure Readings
Greif Inc. Tonawanda, NY
NYSDEC VCP Number V00334-9

Location	Vac-01	Vac-02	Vac-03	Vac-04	Vac-05	Vac-06	Vac-07	Vac-08	Vac-09	Vac-10	Vac-11	Vac-12	Vac-13	Vac-14
Date														
16-Jun-10	0.1175	0.1375	0.1375	0	0.1425	0.1625	0.095	0.0325	0	0.10	0.0950	0	NM	0
14-Jul-10	1.65	1.45	0.47	0	0.68	0.46	0.125	0.0525	0	0.1625	0.16	0	0	0
13-Aug-10	1.3	1.25	0.46	0	0.65	0.45	0.135	0.07	0	0.19	0.175	0	0	NM
14-Sep-10	0.8	NM	0.29	0	0.28	0.195	0.055	0.015	0	NM	0.125	0	0	0
14-Oct-10	0.82	0.84	0.29	0	0.28	0.185	0.05	0.015	0	0.1375	0.12	0	0	NM
22-Nov-10	0.29	2.3	0.49	0	0.35	0.28	0.105	0.0025	0	0.155	0.135	0	NM	NM
16-Dec-10	0.26	2.1	0.42	0	0.2	0.14	0.075	0	0	0.13	0.105	0	0	NM
19-Jan-11	0.77	2	0.41	0	0.24	0.18	0.1	NM	0	0.155	0.125	0	NM	0

Location	Vac-15	Vac-16	Vac-17	Vac-18	Vac-19	Vac-20	Vac-21	Vac-22	Vac-23	Vac-24	Vac-25	Vac-26	Vac-27	Vac-28
Date														
16-Jun-10	0	NM	0.0025	0.25	0.42	0.175	0	0.0075	0	0	0.089	0.020	0.005	0.0175
14-Jul-10	0	0	NM	0.31	0.54	0.205	0	0	NM	NM	NM	NM	0.005	0.01
13-Aug-10	0	0	0.0025	0.31	0.52	NM	0	0	0	0	0.08	0.02	0.005	0.025
14-Sep-10	0	0	0	0.165	0.31	0.075	0	0	0	0	0.08	0.015	0.005	0.005
14-Oct-10	NM	0	0	0.18	0.35	0.105	0	0	0	0	0.08	0.015	0.0025	0.005
22-Nov-10	0	0	0	0.2	0.35	0.1	0	0	0	0	0.08	0.02	0.0025	0.0025
16-Dec-10	0	0	0	0.145	0.29	0.08	0	0	0	0	0.055	0.01	0	0.0025
19-Jan-11	0	0	0	0.15	0.29	0.08	0	0	0	0	0.075	0.02	0	0.0075

Location	Vac-29	Vac-30	Vac-31	Vac-32	Vac-33	Vac-34	Vac-35	Vac-36	Vac-37	Vac-38	Vac-39	Vac-40	Vac-41	Vac-42
Date														
16-Jun-10	0.040	0	0	0.040	0.0675	0.0225	NM	0	0.030	NM	0.025	0.0275	0.0525	0.0025
14-Jul-10	NM	NM	NM	NM	0.125	0.0325	0	0	0	NM	0.03	0.0325	NM	0.005
13-Aug-10	0.0725	0	0.0375	0.0875	0.1625	0.05	0	0	0	0	0.05	0.04	0.0875	0.015
14-Sep-10	0.025	0	0.01	0.03	0.06	0.015	0	0	0	0	0.02	0.0075	0.025	0.0025
14-Oct-10	0.025	0	0.005	0.03	0.055	0.01	0	0	0	0	0.01	0.01	0.025	NM
22-Nov-10	0.015	0	0.0025	0.025	0.065	0.01	0	NM	0	0	0.005	NM	0.015	NM
16-Dec-10	0.02	NM	0.005	0.035	0.055	0.015	0	NM	0	0	0.005	NM	0.0125	NM
19-Jan-11	0.02	NM	0.0075	0.03	0.04	0.015	0	0	0	0	0.01	NM	0.0125	NM

Location	Vac-43	Vac-44	Vac-45	Vac-46	Vac-47	Vac-48	Vac-49	Vac-50	Vac-51	Vac-52	Vac-53
Date											
16-Jun-10	0.0025	0.0425	0.015	0.0125	NM	0.2125	0.0925	0	0.080	0.0125	0.0125
14-Jul-10	0	NM	NM	0.0125	NM	0.21	0.0875	NM	0.8	0.0175	0.0225
13-Aug-10	0	NM	NM	NM	NM	0.22	0.0925	0	0.085	NM	0.0225
14-Sep-10	0	NM	NM	0.0025	NM	0.1275	0.05	0	0.04	0.005	0
14-Oct-10	NM	NM	0	NM	NM	0.11	0.0375	0	0.03	0	0
22-Nov-10	0	NM	0	0	NM	0.135	0.0475	0	0.03	0.0025	0
16-Dec-10	0	0.015	0	0	NM	0.09	0.02	0	NM	0	0
19-Jan-11	0	NM	0	0	NM	0.12	0.035	0	0.03	0.0025	0

Notes:

- All vacuum and/or pressure readings are reported in inches of water column ("H2O).
 NM = not measured; was covered with pallets or other surface obstructions

Table 3
Summary of Treatment System Data
Greif Facility - Tonawanda, New York
NYSDEC VCP Number V00334-9
Page 1 of 2

Location Units	Header Vacuum						Header Air Flow					
	PG-101 " H ₂ O	PG-102 " H ₂ O	PG-103 " H ₂ O	PG-104 " H ₂ O	PG-105 " H ₂ O	PG-106 " H ₂ O	PG-101 cfm	PG-102 cfm	PG-103 cfm	PG-104 cfm	PG-105 cfm	PG-106 cfm
Date												
17-Dec-09	NF	-11.5	NM	NF	NF	NF	NF	NM	NM	NF	NF	NF
14-Jan-10	NF	-40	NM	NF	NF	NF	NF	94	NM	NF	NF	NF
17-Feb-10	NF	-4.2	NM	NF	NF	NF	NF	16	NM	NF	NF	NF
18-Mar-10	NF	-1.95	NM	NF	NF	NF	NF	15	NM	NF	NF	NF
13-Apr-10	NF	-2.85	-13.0	NF	NF	NF	NF	73	233	NF	NF	NF
18-May-10	NF	-3.95	-13.0	NF	NF	NF	NF	83	212	NF	NF	NF
15-Jun-10	NF	-2.60	-15.5	NF	NF	NF	NF	65	225	NF	NF	NF
14-Jul-10	NM	-1.75	-4.10	NM	NM	NF	NM	26	75	NM	NM	NF
13-Aug-10	-3.75	-1.30	-3.75	-3.70	-3.75	NF	67	19	73	65	82	NF
14-Sep-10	-3.15	-0.85	-3.25	-3.15	-3.2	NF	68	18	74	65	72	NF
14-Oct-10	-3.45	-0.91	-3.50	-3.45	-3.55	NF	70	32	76	66	72	NF
22-Nov-10	-4.05	-0.30	-4.15	-4.00	-4.2	NF	76	14	80	70	82	NF
16-Dec-10	-4.05	-0.30	-4.05	-3.95	-4.05	NF	70	14	85	75	94	NF
19-Jan-11	-3.55	-0.85	-3.60	-3.55	-3.6	NF	82	39	135	92	164	NF

Location Key

PG-101 = Suction Pits 05, 06, 07 and 08 (pipe 1 of 2).

PG-102 = interior of former varnish pit.

PG-103 = horizontal suction points through former varnish pit's north, west, and south walls.

PG-104 = Suction Pit 05, 06, 07, and 08 (pipe 2 of 2).

PG-105 = Suction Pit 01 and 02.

PG-106 = not connected.

Notes:

- Vacuum and pressure data are reported in inches of water; negative data represent vacuum; positive data represent pressure.
- Air flow data are based on measured air velocity and are reported in cubic feet per minute.
- NM = not measured
- NF = no flow as the piping associated with these measurement locations was not open/ connected at the time of measurement.

Table 3 (Continued)
Summary of Treatment System Data
Greif Facility - Tonawanda, New York
NYSDEC VCP Number V00334-9
Page 2 of 2

Location Units	Pre-Carbon			Mid-Carbon		Post-Carbon		
	Pressure " H ₂ O	Temp °F	PID ppm	Temp °F	PID ppm	Temp °F	PID ppm	Flow cfm
Date								
17-Dec-09	+10.5	103	0.0	98	0.0	67	0.0	120
14-Jan-10	+7.5	114	46.5	102	18.7	91	13.9	73
17-Feb-10	+9.5	114	0.0	111	0.0	99	0.0	88
18-Mar-10	+9.0	115	0.0	108	0.0	98	0.0	98
13-Apr-10	+9.0	118	4.7	109	2.0	98	1.1	225
18-May-10	+8.5	108	3.0	103	2.2	94	1.7	220
15-Jun-10	+10.0	114	3.3	103	0.0	89	0.0	245
14-Jul-10	+11.0	112	5.2	106	4.1	98	1.9	263
13-Aug-10	+10.5	118	2.6	112	2.0	103	1.3	255
14-Sep-10	+13.0	100	2.2	90	1.1	NM	0.5	461
14-Oct-10	+15.5	104	0.3	104	0.0	NM	0.0	475
22-Nov-10	+15.5	102	0.4	97	0.0	94	0.0	490
16-Dec-10	+15.5	94	15.1	89	11.8	88	3.2	493
19-Jan-11	+16.5	94	1.0	88	1.1	86	0.2	516

Notes:

- Vacuum and pressure data are reported in inches of water; negative data represent vacuum; positive data represent pressure.
- Air flow data are based on measured air velocity and are reported in cubic feet per minute.
- Temperature reported in degrees Fahrenheit.
- PID = photoionization detector reading reported in parts per million.
- NM = not measured