

10 January 2010

Michael J. Hinton, P.E.
Environmental Engineer 2
New York State Department of Environmental Conservation
Division of Environmental Remediation - Region 9
270 Michigan Avenue
Buffalo, New York 14203



RE: Monthly Progress Report – December 2010
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 16 December 2010 is presented in Figure 2.
- Evaluation of SSD system pilot test data and preparation of a report and final SSD system design.
- Subcontractor procurement and planning for initiation of remedial soil excavation and associated remedial activities in the Former Varnish UST Area.
- Evaluation of water accumulation in two SSD system remedial pipes beneath the treatment building (pipes labeled PG-101 and PG-104).

***Problems/
Resolutions:***

During the 15 December 2010 site visit, decreased and fluctuating vacuum readings were observed at several suction point locations (SP-05 through SP-08). ERM investigated the cause of this issue while on site and determined that water had accumulated in two PVC pipes labeled PG-101 and PG-104. These pipes connect

suction points SP-05 through SP-08 to the Pilot SSD System blower located in the treatment building.

Flexible polyurethane tubing was inserted through the sampling ports for pipes PG-104 and PG-101 at the piping manifold inside of the treatment building to access the accumulated water. ERM removed approximately 5.5 gallons of water from PG-101 and approximately 6.0 gallons of water from PG-104. Subsequent to the water removal, vacuum readings appeared consistent with previous month's readings.

To evaluate the speed of water accumulation in PG-101 and PG-104, ERM performed an additional O&M site visit the following week on 21 December 2010. Decreased and fluctuating vacuum readings were again observed at several suction point locations. The same methodology for removing water from PG-101 and PG-104 was used on 21 December 2010. ERM removed approximately 2.0 gallons of water from PG-101 and approximately 4.0 gallons of water from PG-104 on 21 December 2010. Consistency of vacuum readings at the remedial system vault and inside the treatment building suggests that the piping is intact. The timing of the water accumulation consistent with the onset of colder weather suggests that the water accumulation may be due to condensation inside SSD system piping.

ERM is continuing to evaluate solutions to the water accumulation issue in PG-101 and PG-104. A site visit is planned for 18 January 2011 to evaluate the feasibility of using metering pumps and timers to set up an automatic water recovery system.

Analytical Data Received: • None.

Documents Submitted: • Monthly Progress Report for November 2010 dated 15 December 2010.

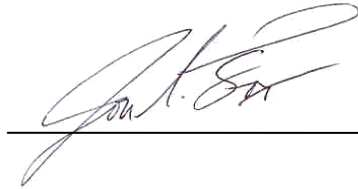
***Anticipated
Actions -
January 2011:***

- 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 visit for evaluation and development of a solution to manage water accumulation in SSD System pipes PG-101 and PG-104.

***NYSDEC-
Approved Field
Decisions:***

- None.

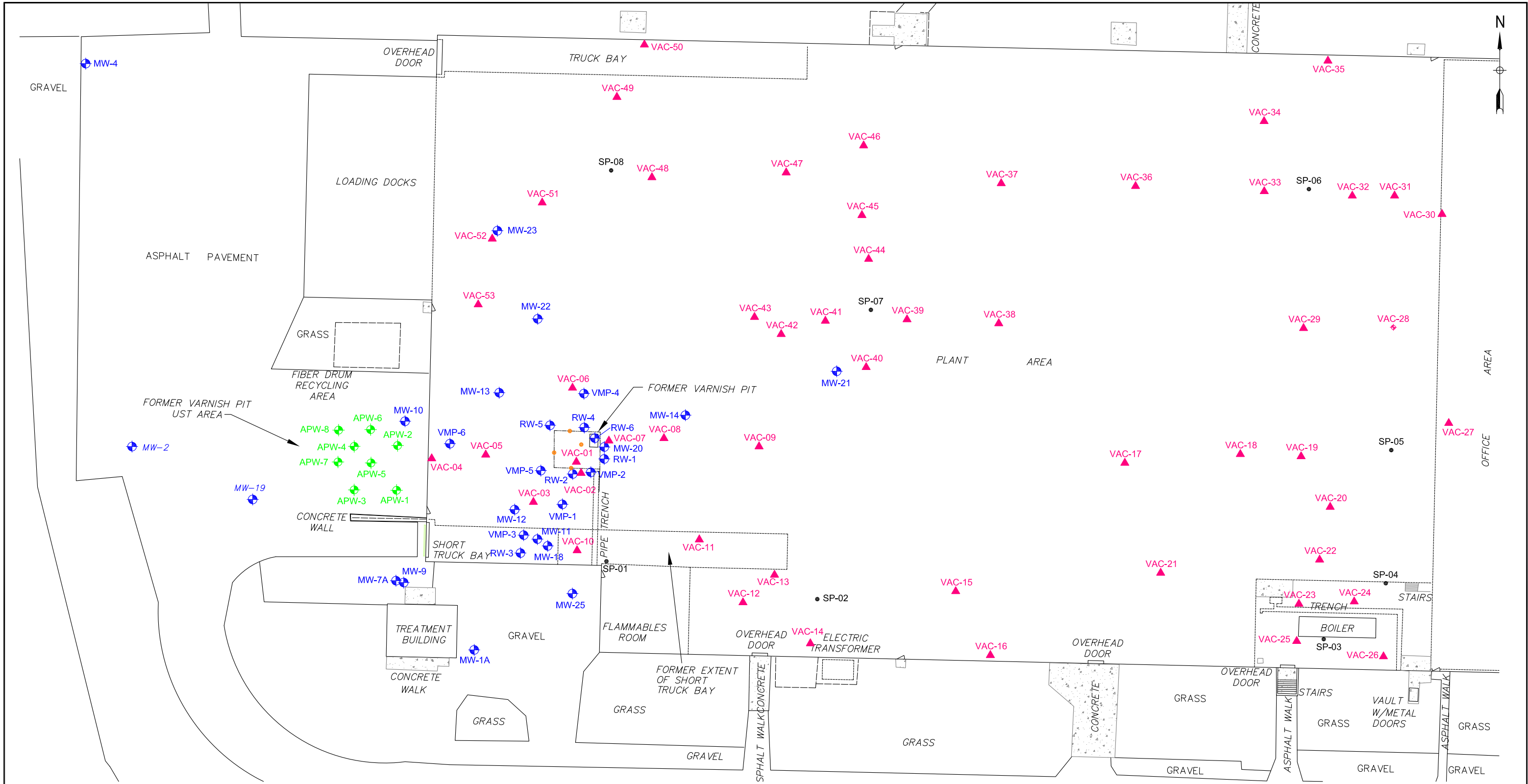
Prepared By:



Jon S. Fox, P.G.
Senior Consultant

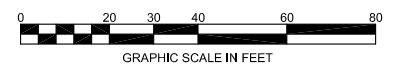
Date: 10 January 2011

Cc: Robert Powell, C.S.P., A.R.M. (Sonoco)
Pete Gruene (Sonoco)
Patrick Wolfe (Greif)
James Charles, Esq. (NYSDEC)
Matt Forcucci (NYSDOH)
Gregory Sutton, P.E. (NYSDEC)
A. Joseph White (NYSDEC)
John Mohlin, P.E. (ERM)
Rob Sents (ERM)



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.

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

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

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

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

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

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
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Location	Header Vacuum						Header Air Flow					
	PG-101	PG-102	PG-103	PG-104	PG-105	PG-106	PG-101	PG-102	PG-103	PG-104	PG-105	PG-106
Units	" H ₂ O	" H ₂ O	" H ₂ O	" H ₂ O	" H ₂ O	" H ₂ O	cfm	cfm	cfm	cfm	cfm	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

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

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