Environmental Resources Management

5788 Widewaters Parkway
DeWitt, New York 13214
315-445-2554
315-445-2543 (fax)

11 April 2013

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 – March 2013
Greif, Inc. Facility – Tonawanda, New York
NYSDEC VCP Number V00334-9

Key Actions This Period:

- Completion of remedial construction for expansion/modifications to the Sub-Slab Depressurization (SSD) System.
- Completed evaluation of laboratory analytical data from recently-collected indoor air and co-located sub-slab vapor samples and concluded that additional expansion of the SSD System is not required.
- Performed routine operations and maintenance (O&M) on the SSD System. Collected and recorded relevant data. Data collected this month included product level measurements (Table 1), vacuum readings in vacuum monitoring points (Table 2), and treatment system operational data (Table 3). The locations of sampling and monitoring points are presented in Figure 1. A map showing the estimated distribution of vacuum beneath the main building's floor slab on 25 March 2013 is presented in Figure 2.
- Continued repairs of monitoring well protective covers.
- Performed waste segregation and characterization activities in preparation for transport of remedial wastes from the Site.
- Performed air emissions evaluation to determine if activated carbon controls are still necessary for SSD System exhaust.
- Completion of the final survey and revision of the previously-submitted legal description for the environmental deed restriction.

Changes/ Problems/ Resolutions:

- Air emission calculations were performed to evaluate if treatment is still needed on vapors extracted by the SSD System prior to emission through the exhaust stack. The calculations are attached at the end of this progress report. Analytical data from samples GREIF-SP-03, GREIF-SP-04, and GREIF-PRE-CARBON collected on 22 January 2013 were used to calculate limits outlined by the NYSDEC DAR-1 Ambient Air Quality Impact Screening Analysis. Analytical results for these samples were summarized in the Monthly Progress Report for February 2013 dated 13 March 2013.

  Suction points SP-03 and SP-04 each have their own radon type in-line fan (Fantech Model HP220) and operate independently of the rest of the system. The emissions from the other nine suction points (SP-01, SP-02, and SP05 through SP-11) are manifolded together and connected to the same blower, and are sampled at sampling port SP-405 located in the mezzanine. The model uses the concentrations of all VOCs detected at the combined influent of SP-405 (i.e., before activated carbon treatment) and the concentrations and flow rates from SP-03 and SP-04. Both the Basic Cavity Impact Analysis and the Point Source Method were run for the existing system.

  The calculated maximum actual annual impact (C_a) and the maximum short term impact (C_{st}) are below their respective Annual Guideline Concentrations (AGCs) and Short-Term Guideline Concentrations (SGCs). Therefore, the existing activated carbon treatment is proposed to be removed from the final system. Please advise us if this is acceptable to the NYSDEC.

Analytical Data Received:

- None.

Documents Submitted:

- Monthly Progress Report for February 2013 dated 13 March 2013.

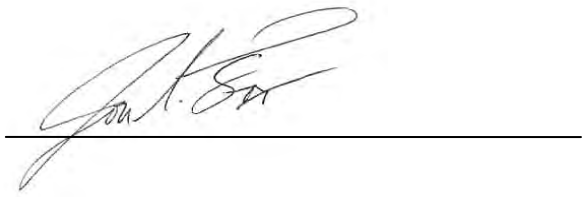
Anticipated Actions – April 2013:

- Greif submitted a revised environmental deed restriction containing a revised legal description and a final survey to the NYSDEC on 5 April 2013.
- Continued evaluation of SSD System test data.
- Continued repair of damaged protective covers for monitoring wells.
- Complete waste characterization, determination, and profiling activities for transport of remedial wastes from the Site.
- Transport of wastes from the Site to permitted disposal facilities.

NYSDEC-Approved Field Decisions:

- None.

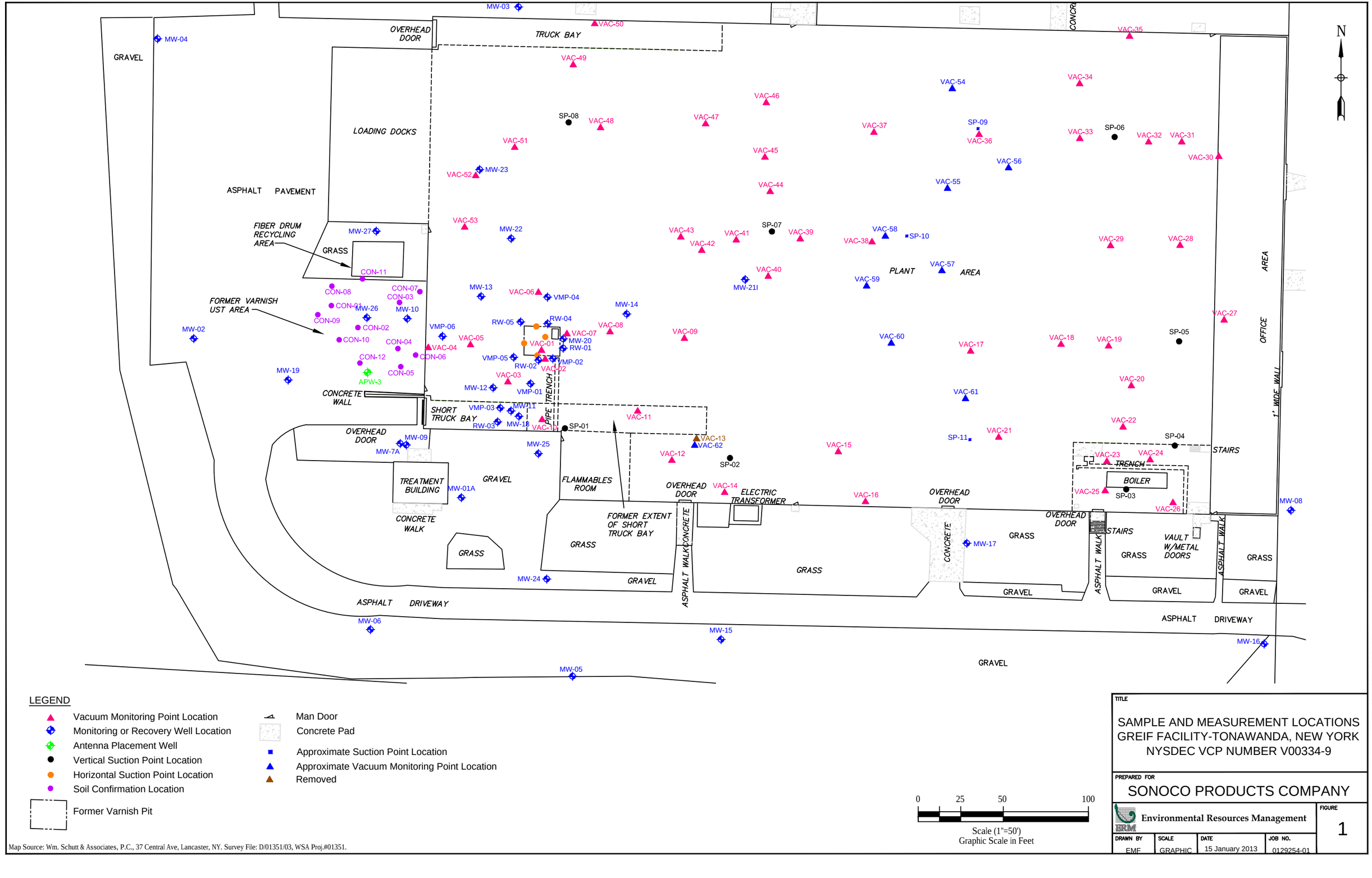
Prepared By:



Jon S. Fox, P.G.
Principal Consultant

Date: 11 April 2013

Cc: Larry Pattengill (Sonoco)
Pete Gruene (Sonoco)
Patrick Wolfe (Greif)
George Frazer (Greif)
Gregory Sutton, P.E. (NYSDEC)
James Charles, Esq. (NYSDEC)
Matt Forcucci (NYSDOH)
A. Joseph White (NYSDEC)
John Kuhn (ERM)
John Mohlin, P.E. (ERM)



LEGEND

- Vacuum Monitoring Point Location
- Monitoring or Recovery Well Location
- Antenna Placement Well
- Vertical Suction Point Location
- Horizontal Suction Point Location
- Soil Confirmation Location
- Former Varnish Pit
- Man Door
- Concrete Pad
- Approximate Suction Point Location
- Approximate Vacuum Monitoring Point Location
- Removed

0 25 50 100

Scale (1"=50')
Graphic Scale in Feet

Map Source: Wm. Schutt & Associates, P.C., 37 Central Ave, Lancaster, NY. Survey File: D/01351/03, WSA Proj.#01351.

TITLE

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

PREPARED FOR

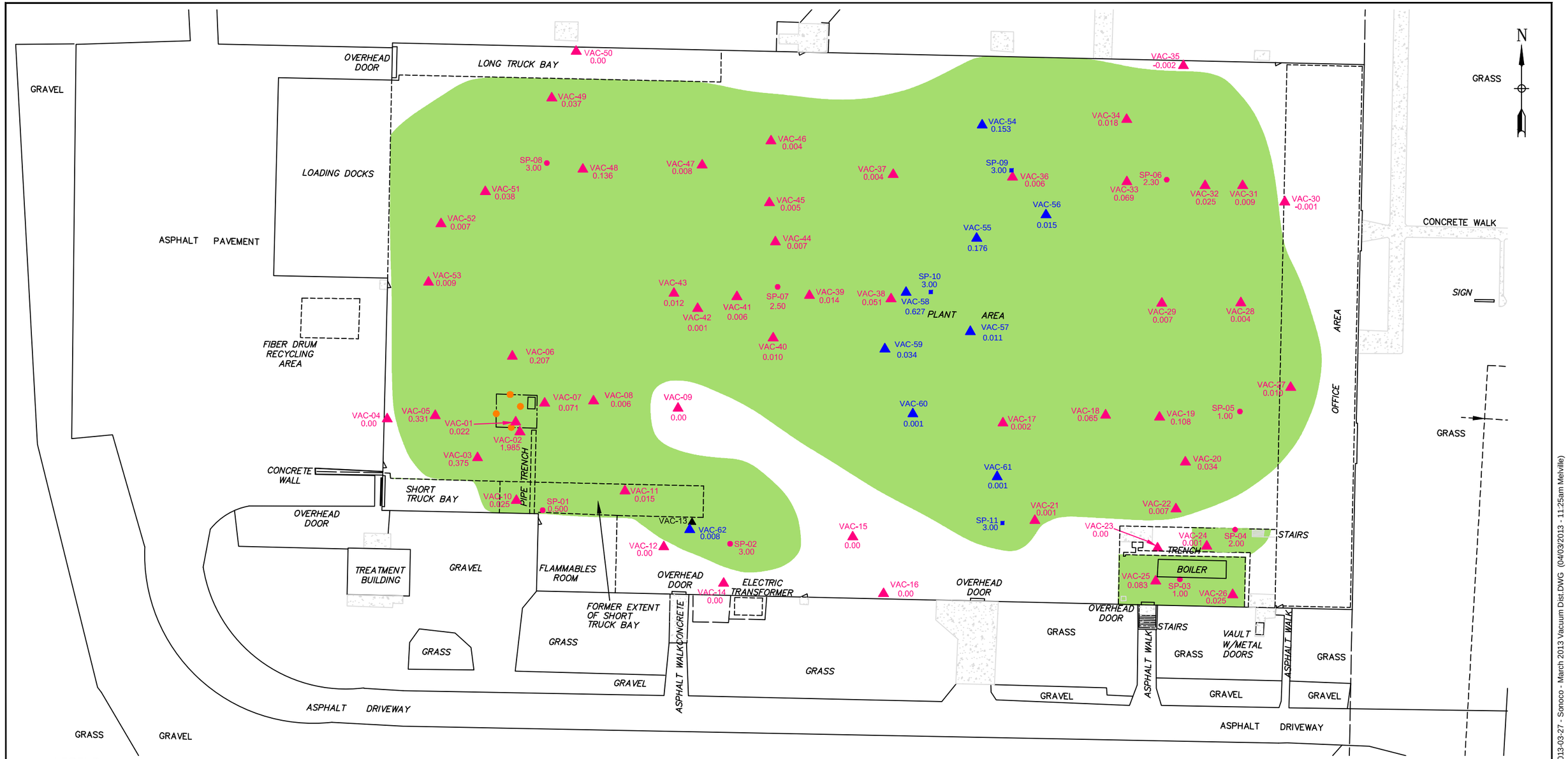
SONOCO PRODUCTS COMPANY

Environmental Resources Management

DRAWN BY	SCALE	DATE	JOB NO.
EMF	GRAPHIC	15 January 2013	0129254-01

FIGURE 1

R:\Scout\Projects\Sonoco - Greif Bros. Facility\CAD\2012\2012-04-09 - Sonoco - Sample Locations - V2.DWG (01/15/2013 - 2:42pm Melville)



LEGEND

- Horizontal Suction Point Location
- Vertical Suction Point Location
- Vacuum Monitoring Point Location (vacuum in " H_2O) — e.g. 0.016
- NM — Not Measured
- Estimated Extent of Sub-Floor Vacuum
- Former Varnish Pit
- Man Door
- Concrete Pad
- Approximate Suction Point Location
- Approximate Vacuum Monitoring Point Location (vacuum in " H_2O) — e.g. 0.013
- Removed

NOTES:

1. " H_2O = inches of water column

Map Source: Wm. Schutt & Associates, P.C., 37 Central Ave, Lancaster, NY. Survey File: D/01351/03, WSA Proj.#01351.

TITLE

SUBSURFACE VACUUM DISTRIBUTION
25 MARCH 2013
GREIF FACILITY-TONAWANDA, NEW YORK

PREPARED FOR

SONOCO PRODUCTS COMPANY

Environmental Resources Management

DRAWN BY	SCALE	DATE	JOB NO.	FIGURE
EMF	GRAPHIC	03 April 2013	0194591.06	2

R:\Scout\Projects\Sonoco - Greif Bros. Facility\CAD\2013\2013-03-27 - Sonoco - March 2013 Vacuum Dist.DWG (04/03/2013 - 11:25am Melville)

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
21-Feb-11	NM	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.04
11-Mar-11	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.04	0.03
21-Apr-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
24-May-11	0.00	0.00	0.00	NM	0.15	0.3	0.00	0.1	0.1
21-June-11	0.00	0.00	0.00	0.00	0.1	0.00	0.00	0.03	0.08
21-July-11	0.00	0.00	0.00	NM	HS	0.00	0.00	0.01	0.06
29-Aug-11	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	HS
26-Sept-11	0.00	NM	0.00	0.00	0.10	0.00	NM	0.04	HS
28-Oct-11	0.00	0.00	NM	0.00	0.03	0.00	0.00	0.02	HS
18-Nov-11	0.00	0.00	NM	NM	HS	0.00	0.00	0.01	0.04
22-Dec-11	0.00	0.00	NM	NM	0.03	0.00	0.00	0.02	0.06
20-Jan-12	0.00	0.00	0.00	0.00	HS	0.00	0.00	0.02	HS
21-Feb-12	0.00	0.00	0.00	0.00	HS	0.00	0.00	0.03	HS
16-Mar-12	0.00	0.00	0.00	0.00	HS	0.00	0.00	HS	0.15
20-Apr-12	0.00	0.00	NM	NM	HS	0.00	0.00	0.02	0.02
17-May-12	0.00	0.00	0.00	0.00	1.06	0.00	0.00	0.01	0.03
20-Jun-12	0.00	0.00	0.00	0.00	HS	0.00	0.00	0.01	0.04
20-Jul-12	NM	0.00	NM	0.00	HS	0.00	0.00	NM	0.02
21-Aug-12	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.12	0.19
14-Sept-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.09
17-Oct-12	0.00	0.00	0.00	0.00	0.11	0.00	NM	0.14	0.09
20-Nov-12	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	HS
19-Dec-12	0.00	0.00	NM	0.00	HS	0.00	0.00	0.03	0.06
24-Jan-13	0.00	0.00	0.00	0.00	HS	0.00	0.00	0.03	0.09
22-Feb-13	NM	NM	NM	NM	NM	NM	NM	NM	NM
25-Mar-13	0.00	0.00	NM	NM	0.04	0.00	0.00	0.04	HS

Notes:

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

HS - heavy sheen but no measureable thickness.

NM - not measured

NI - not installed as of this date.

* - Product level after ERM initiated DNAPL recovery test

Table 2
Summary of Vacuum 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
21-Feb-11	1.35	1.8	0.4	0	NM	0.17	0.1	0	0	NM	0.12	NM	0	0
11-Mar-11	1.8	2.25	0.5	0	NM	0.22	NM	0.01	0	NM	0.12	0	0	NM
21-Apr-11	1.35	2	0.45	0	0.25	0.2	0.1025	0	0	0.155	0.135	0	0	0
24-May-11	2.15	2.05	0.47	0	0.35	0.28	0.1325	0.0275	0	0.1625	0.15	0	NM	0
21-Jun-11	2.05	2.1	0.46	0	0.45	0.4	0.165	0.0575	0	0.19	0.18	0	NM	0
21-Jul-11	2.55	2.25	0.46	0	0.62	0.55	0.2	0.1	0	0.21	0.21	0	0	0
29-Aug-11	2.3	2.2	0.44	0	0.48	0.4	0.155	0.055	0	0.15	0.145	0	0	0
26-Sep-11	1.3	NM	0.46	0	0.44	0.36	0.155	0.06	0	0.1775	0.16	0	0.0025	0
28-Oct-11	1	1.6	0.33	0	0.2125	0.195	0.0925	0.005	0	0.1125	0.1	0	0	0
18-Nov-11	NM	1.3	0.28	0	0.135	0.13	0.06	0.005	0	0.1	0.09	0	0	0
22-Dec-11	1.58	1.464	0.343	0	0.245	0.171	0.069	0.008	0	0.114	0.097	0.002	0.006	0
20-Jan-12	1.395	1.432	0.315	0	0.249	0.174	0.067	0.008	0	0.108	0.094	0.005	0.01	0
21-Feb-12	1.464	1.22	0.244	0	0.179	0.128	0.041	0.004	0	0.102	0.09	0.001	0.003	0
16-Mar-12	1.102	1.438	0.227	0	0.267	0.206	0.051	0.011	0	NM	0.101	0	0.006	0
20-Apr-12	1.81	NM	0.844	0.001	0.241	NM	0.057	0.007	0	0.104	0.1	0.002	0.003	0
17-May-12	1.421	1.364	0.306	0	0.265	0.185	0.059	0.01	0.01	NM	0.01	0.001	0.006	NM
20-Jun-12	1.783	1.861	0.439	0	0.247	0.375	0.107	0.038	0.002	NM	0.161	0.002	0.009	0
20-Jul-12	1.621	1.781	0.439	0	0.247	0.331	0.048	0.035	0	NM	0.1	0.001	0.007	0
21-Aug-12	1.591	1.846	0.436	0	0.241	0.242	0.092	NM	0	0.145	0.145	0.002	0.007	0.003
14-Sep-12	2.06	2.43	0.618	0	0.57	0.441	0.139	0.047	0.002	0.204	0.167	0.002	0.008	0
17-Oct-12	1.486	1.578	0.366	0	0.22	0.172	0.055	0.006	0	0.12	0.111	0	0.004	0
20-Nov-12	1.539	1.498	0.349	0	0.266	0.142	0.057	0.007	0	0.126	0.116	0.002	NM	0
11-Dec-12	1.348	1.275	0.3	0	0.2	0.148	0.05	0.007	0	0.106	0.096	0.002	NM	-0.001
24-Jan-13	0.009	1.957	0.454	0	0.281	0.173	0.08	0.009	0	0.023	0.022	0.004	NM	0
22-Feb-13	0.024	1.99	0.457	0	0.311	0.2	0.077	0.01	0	0.025	0.018	0.002	NM	0
25-Mar-13	0.022	1.985	0.375	0	0.331	0.207	0.071	0.006	0	NM	0.015	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
21-Feb-11	0.005	0	NM	0.18	0.35	NM	0	0.0125	0	0	0.0675	0.035	0.015	0.01
11-Mar-11	0	0	0	0.1875	0.34	0.12	0	0	0	0	0.08	0.0.25	0.01	0.02
21-Apr-11	0	0	0	0.18	0.32	0.105	0	0.01	0	0	0.08	0.0325	0.01	0.0125
24-May-11	0	0	0	0.215	0.36	0.1475	0	0	0	0	0.0775	0.03	0.015	0.0175
21-Jun-11	0	0	NM	0.23	0.39	0.16	0	0	0	0	0.085	0.03	0.02	0.02
21-Jul-11	0	0	NM	0.24	0.39	0.17	0	0.0175	0	0	0.1	0.025	0.02	0.035
29-Aug-11	0	0	NM	0.21	0.32	0.12	0	0	0	0	0.09	0.0225	0.0175	0.02
26-Sep-11	0	0	NM	0.205	0.32	0.12	0.0025	0	0	0	0.0725	0.025	0.0175	0.0175
28-Oct-11	0	0	0	0.15	0.24	0.0525	0	0	0	0	0.08	0.03	0.01	0.01
18-Nov-11	0	0	0	0.14	0.21	0.06	0	0.0075	0	0	0.085	0.0275	0.015	0.015
22-Dec-11	0	0	0.003	0.138	0.227	0.06	0	0.01	0	0.003	0.083	0.024	0.012	0.009
20-Jan-12	0	0	0.001	0.135	0.222	0.064	0	0.01	0	0	0.078	0.022	0.01	0.007
21-Feb-12	0	0	0.001	0.105	0.186	0.045	-0.001	0.006	0	0	0.077	0.021	0.01	0.004
16-Mar-12	0	0	0.001	0.0153	0.256	0.085	-0.001	0.005	0	0	0.061	0.023	0.014	0.009
20-Apr-12	0	0	0.001	0.141	0.202	0.051	0	0.003	0	0	0.075	0.001	0.017	0.014
17-May-12	0	0	0.001	0.131	0.007	0.062	0	0	0	0.001	0.079	0.022	0.017	0.006
20-Jun-12	0	0	0.001	0.128	0.16	0.003	0	0.003	0	0.004	0.098	0	0.022	0.017
20-Jul-12	0	0	0.004	0.105	0.201	0.083	0	0.001	0	0.003	0.093	0.029	0.016	0.013
21-Aug-12	0	0	0.003	0.131	0.171	0.072	0	0	0	0.004	0.091	0.026	0.012	0.009
14-Sep-12	0	0	0.007	NM	NM	NM	0	0.009	0	0.004	0.093	0.023	0.015	0.015
17-Oct-12	0	0	0.001	0.123	0.212	0.07	0	0.001	0	0.004	0.081	0.024	0.009	0.006
20-Nov-12	0	0	0.001	0.122	0.207	0.067	-0.001	0.004	0	0.004	0.085	0.025	0.01	0.005
11-Dec-12	0	0	NM	0.082	0.139	0.019	0	0.005	0	0.002	0.079	0.023	0.008	0.005
24-Jan-13	0	-0.001	0.003	0.067	0.114	0.038	0	0.011	0	0.002	0.081	0.026	0.007	0.006
22-Feb-13	0	0	0.001	0.065	0.111	0.037	0	0.009	0	0.001	0.078	0.027	0.009	0.004
25-Mar-13	0	0	0.002	0.065	0.108	0.034	0.001	0.007	0	0.001	0.083	0.025	0.01	0.004

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

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
21-Feb-11	0.015	0	0.01	0.035	0.0325	NM	NM	0	0	0.0025	0.015	0.01	0.0175	NM
11-Mar-11	0.02	0	0.02	0.0425	0.0625	0.03	0	0	0	0	0.0225	0.02	0.02	NM
21-Apr-11	0.0175	0	0.01	0.035	0.06	NM	NM	0	0	0	0.01	0.005	0.0125	0
24-May-11	0.0325	0	0.0225	0.0525	0.075	NM	NM	0	0	NM	0.0125	NM	0.035	0
21-Jun-11	0.04	0	0.03	0.075	0.11	0.04	NM	0	0	0	0	0.0225	0.0425	0
21-Jul-11	0.055	0	0.05	0.1025	0.17	0.06	0	0.0125	0	0	0.0325	0.035	0.08	0.0075
29-Aug-11	0.0375	0	0.0325	0.07	0.13	0.0375	0	0	0	0	NM	0.02	0.035	0.05
26-Sep-11	0.045	0	0.03	0.06	0.1175	0.035	0	0	NM	0	0	NM	NM	0.01
28-Oct-11	NM	0	0.0075	0.0375	0.0775	0.0775	NM	0	0	0	0.0075	0.005	0.01	NM
18-Nov-11	NM	0	0.01	0.0325	0.065	0.0175	NM	0	0	0	0.0075	0	0.01	NM
22-Dec-11	0.014	0.005	0.012	0.032	0.077	0.021	0	0	0	0	0.008	0.011	0.014	0.001
20-Jan-12	0.011	-0.003	0.012	0.032	0.064	0.018	0	0	0	0	0.007	0.008	0.012	0.001
21-Feb-12	0.009	-0.002	0.007	0.023	0.054	0.016	NM	0	0	0	0.006	0.007	0.009	NM
16-Mar-12	0.013	0	0.013	0.034	0.076	0.02	0	0	0	0	0.01	0.011	0.017	NM
20-Apr-12	0.019	0.007	0.015	0.035	0.021	0	0	0	0	0	0.689	0.119	0.001	NM
17-May-12	0.004	0.005	0.008	0.025	0.071	0.016	NM	0.001	0	0	0.001	0.01	0.009	NM
20-Jun-12	0.027	0	0.008	0.073	0.135	0.038	NM	0.004	0	0.001	NM	0.016	0.03	0.033
20-Jul-12	0.022	0.001	0.023	NM	0.102	0.026	NM	0.001	0	0.001	0.012	0.016	0.019	NM
21-Aug-12	0.019	0	0.016	0.037	0.091	0.025	NM	0.001	0	0	0.001	0.013	0.002	0.001
14-Sep-12	0.032	0	0.013	0.064	0.138	0.037	0	0.002	0	0	0.013	0.017	0.032	0.004
17-Oct-12	0.014	-0.001	0.009	0.025	0.071	0.02	0	0	0	0	0.011	0.009	0.03	0.002
20-Nov-12	0.014	0	0.01	0.008	0.063	0.019	0	0	0	0	0.009	0.009	0.033	0.001
11-Dec-12	0.01	-0.001	0.007	0.005	0.045	0.013	NM	0.002	0.001	0.017	0.008	0.007	0.01	0.002
24-Jan-13	0.009	-0.003	0.012	0.032	0.066	0.017	-0.003	0.007	0.004	0.053	0.013	0.015	0.019	0.004
22-Feb-13	0.007	0	0.01	0.031	0.067	0.019	-0.01	0.007	0.005	0.066	0.015	0.015	0.017	0.001
25-Mar-13	0.007	-0.001	0.009	0.025	0.069	0.018	-0.002	0.006	0.004	0.051	0.014	0.01	0.006	0.001

Location	Vac-43	Vac-44	Vac-45	Vac-46	Vac-47	Vac-48	Vac-49	Vac-50	Vac-51	Vac-52	Vac-53	Vac-54	Vac-55	Vac-56
Date														
16-Jun-10	0.0025	0.0425	0.015	0.0125	NM	0.2125	0.0925	0	0.080	0.0125	0.0125	NI	NI	NI
14-Jul-10	0	NM	NM	0.0125	NM	0.21	0.0875	NM	0.8	0.0175	0.0225	NI	NI	NI
13-Aug-10	0	NM	NM	NM	NM	0.22	0.0925	0	0.085	NM	0.0225	NI	NI	NI
14-Sep-10	0	NM	NM	0.0025	NM	0.1275	0.05	0	0.04	0.005	0	NI	NI	NI
14-Oct-10	NM	NM	0	NM	NM	0.11	0.0375	0	0.03	0	0	NI	NI	NI
22-Nov-10	0	NM	0	0	NM	0.135	0.0475	0	0.03	0.0025	0	NI	NI	NI
16-Dec-10	0	0.015	0	0	NM	0.09	0.02	0	NM	0	0	NI	NI	NI
19-Jan-11	0	NM	0	0	NM	0.12	0.035	0	0.03	0.0025	0	NI	NI	NI
21-Feb-11	0	0.0325	0.01	0	0	0.125	0.035	0	0.03	0	0	NI	NI	NI
11-Mar-11	0	NM	0.02	NM	0.005	0.16	0.0575	NM	0.05	0.03	0.01	NI	NI	NI
21-Apr-11	0	NM	0	NM	0	0.1375	0.045	NM	0.025	0	0	NI	NI	NI
24-May-11	0	0.03	0.005	NM	0.0075	0.175	0.06	0	0.055	0.005	0.0125	NI	NI	NI
21-Jun-11	NM	NM	0.0175	NM	0.02	0.195	0.0675	0	0.065	0.0175	0.03	NI	NI	NI
21-Jul-11	0.0125	0.0525	0.0375	0.025	0.035	0.235	0.0875	0	0.07	0.02	0.06	NI	NI	NI
29-Aug-11	0	0.0325	NM	NM	NM	0.185	0.07	0	0.06	0.03	0.09	NI	NI	NI
26-Sep-11	0.0075	NM	0.005	NM	0.0125	0.17	0.07	0	0.055	0.175	0.0325	NI	NI	NI
28-Oct-11	0	0.0075	0	NM	0.0075	0.1225	0.03	0	0.03	0	0.0025	NI	NI	NI
18-Nov-11	0	NM	0	0	0	0.09	0.03	0	0.0275	0.005	0.005	NI	NI	NI
22-Dec-11	0.001	0.014	0.001	0.004	0.005	0.131	0.036	0.001	0.034	0.009	0.01	NI	NI	NI
20-Jan-12	0.001	0.012	0.004	0.004	0.006	0.131	0.037	0.001	0.031	0.007	0.007	NI	NI	NI
21-Feb-12	0.002	NM	0.003	0.002	0.004	0.114	0.026	0.001	0.026	0.008	0.009	NI	NI	NI
16-Mar-12	NM	0.016	0.008	0.004	0.008	0.124	0.034	0.001	0.032	0.017	0.014	NI	NI	NI
20-Apr-12	0.001	0.014	0.006	0.001	0.003	NM	0.031	0.001	0.03	0.009	0.014	NI	NI	NI
17-May-12	NM	0.01	0.005	0.003	0.006	0.11	0.031	0	0.032	0.005	0.011	NI	NI	NI
20-Jun-12	NM	0.027	0.014	0.009	0.003	0.164	0.06	0	0.054	0.019	0.039	NI	NI	NI
20-Jul-12	NM	0.024	0.002	0.009	0.005	0.151	0.035	0	0.033	0.013	0.032	NI	NI	NI
21-Aug-12	0.003	0.019	0.008	0.003	0.006	0.147	0.045	0	0.044	0.01	0.02	NI	NI	NI
14-Sep-12	NM	0.03	0.013	0.01	NM	0.164	0.061	0	0.059	0.02	0.4	NI	NI	NI
17-Oct-12	0.001	0.014	0.004	0.008	0.004	0.108	0.03	0	0.03	0.004	0.007	NI	NI	NI
20-Nov-12	NM	0.016	0.004	0.009	0.005	0.118	0.033	0	0.037	0.004	0.008	NI	NI	NI
11-Dec-12	0.001	0.01	0.003	0.003	NM	0.084	0.02	0	0.021	0.002	0.005	0.055	0.065	0.006
24-Jan-13	0.001	0.02	0.009	0.006	0.007	0.147	0.044	0.002	0.04	0.01	0.008	0.158	0.178	0.012
22-Feb-13	0.001	0.016	0.005	0.008	0.008	0.134	0.04	0	0.037	0.007	0.01	0.156	0.186	0.011
25-Mar-13	0.002	0.007	0.005	0.004	NM	0.136	0.037	0	0.038	0.007	0.009	0.153	0.176	0.015

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

Location	Vac-57	Vac-58	Vac-59	Vac-60	Vac-61	Vac-62
Date						
16-Jun-10	NI	NI	NI	NI	NI	NI
14-Jul-10	NI	NI	NI	NI	NI	NI
13-Aug-10	NI	NI	NI	NI	NI	NI
14-Sep-10	NI	NI	NI	NI	NI	NI
14-Oct-10	NI	NI	NI	NI	NI	NI
22-Nov-10	NI	NI	NI	NI	NI	NI
16-Dec-10	NI	NI	NI	NI	NI	NI
19-Jan-11	NI	NI	NI	NI	NI	NI
21-Feb-11	NI	NI	NI	NI	NI	NI
11-Mar-11	NI	NI	NI	NI	NI	NI
21-Apr-11	NI	NI	NI	NI	NI	NI
24-May-11	NI	NI	NI	NI	NI	NI
21-Jun-11	NI	NI	NI	NI	NI	NI
21-Jul-11	NI	NI	NI	NI	NI	NI
29-Aug-11	NI	NI	NI	NI	NI	NI
26-Sep-11	NI	NI	NI	NI	NI	NI
28-Oct-11	NI	NI	NI	NI	NI	NI
18-Nov-11	NI	NI	NI	NI	NI	NI
22-Dec-11	NI	NI	NI	NI	NI	NI
20-Jan-12	NI	NI	NI	NI	NI	NI
21-Feb-12	NI	NI	NI	NI	NI	NI
16-Mar-12	NI	NI	NI	NI	NI	NI
20-Apr-12	NI	NI	NI	NI	NI	NI
17-May-12	NI	NI	NI	NI	NI	NI
20-Jun-12	NI	NI	NI	NI	NI	NI
20-Jul-12	NI	NI	NI	NI	NI	NI
21-Aug-12	NI	NI	NI	NI	NI	NI
14-Sep-12	NI	NI	NI	NI	NI	NI
17-Oct-12	NI	NI	NI	NI	NI	NI
20-Nov-12	NI	NI	NI	NI	NI	NI
11-Dec-12	0.003	0.174	0.013	0	0.002	0.084
24-Jan-13	0.011	0.557	0.036	0.002	0.001	0.005
22-Feb-13	0.012	0.63	0.035	0.001	0	0.008
25-Mar-13	0.011	0.627	0.034	0.001	0.001	NM

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.
NI = Not installed.

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

	Header Vacuum			Header Air Flow			Pre-Carbon			Post-Carbon			
Location	**MAN-1**	**MAN-2**	**MAN-3**	**MAN-1**	**MAN-2**	**MAN-3**	**Pressure**	**Temp**	**PID**	**Pressure**	**Temp**	**PID**	**Flow**
Units	**" H_2O**	**" H_2O**	**" H_2O**	**cfm**	**cfm**	**cfm**	**" H_2O**	**°F**	**ppm**	**" H_2O**	**°F**	**ppm**	**cfm**
Date													
24-Jan-13	3.55	3.6	3.35	297.92	162.68	370.44	23	94.5	0.0	0.789	118	0.0	417.48
22-Feb-13	3.4	3.4	3.3	252.84	147	299.88	22	96	0.0	0.794	120	0.0	295.96
25-Mar-13	3	3.2	3.1	241.08	148.96	319.48	28	97	0.7	0.67	118	0.0	386.12

Location Key

MAN-1 = Suction Pits 01, 02, interior former varnish pit, and horizontal suction points through former varnish pit's north, west, and south walls.
MAN-2 = Suction Pits 05 and 11.
MAN-3 = Suction Pits 06, 07, 08, 09, and 10

Notes:

- Vacuum and pressure data is reported in inches of water.
- Air flow data is based on measured air velocity and is reported in cubic feet per minute.
- Temperature data is reported in degrees farenheit.

Section II - Basic Cavity Impact Analysis

Use this method only if the shortest distance from the building to the property line is less than 3 times the building height (h_b). Cavity impacts would then occur to offsite receptors.

Emission Point: SP-03
h_b - building height (ft): 33.29167 If the physical stack height is greater than 1.5 h_b, no annual or short term cavity impacts occur from this source.

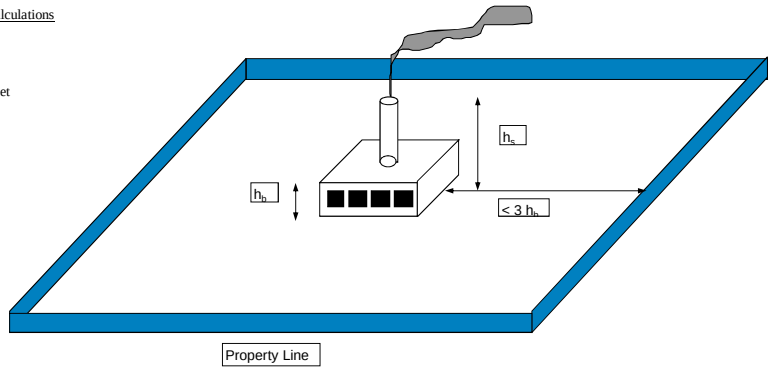
Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_c (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
Ethylbenzene	00100-41-4	1.42E-06	0.01	0.00	0.00	1000	54000
m,p Xylenes	108-38-3/106-42-3	5.30E-06	0.05	0.00	0.00	100	4300
o Xylene	00095-47-6	7.57E-07	0.01	0.00	0.00	100	4300
2 Butanone	00078-93-3	3.41E-06	0.03	0.00	0.00	5000	13000
Acetone	00067-64-1	7.21E-06	0.06	0.00	0.01	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Annual Cavity Impact
C_c (µg/m^3) = $(1.72*Q_a)/(h_b^2)$
where Q_a is in lbs/yr and h_b is in feet

Short Term Cavity Impact
C_{st} (µg/m^3) = $(904000*Q)/(h_b^2)$
where Q is lbs/hr and h_b is in feet



	ug/m3	ug/m3 to ug/ft3	ug/ft3 to lbs/ft3	fpm	cfm	lb/min	min/hr	lb/hr
		0.0283127	2.20E-09	1220	106.46499		60	
Ethylbenzene	3.57	0.1010763	2.226E-10			2.37E-08		1.422E-06
m,p Xylenes	13.3	0.3765589	8.29E-10			8.83E-08		5.298E-06
o Xylene	1.9	0.0537941	1.185E-10			1.261E-08		7.569E-07
2 Butanone	8.55	0.2420736	5.332E-10			5.677E-08		3.406E-06
Acetone	18.1	0.5124599	1.129E-09			1.202E-07		7.21E-06

Section III - Point Source Method - Conservative Approach

Use this method only if the stack height to building height ratio is less than 1.5 (no credit given for plume rise rise due to buoyancy or momentum).

Emission Point	SP-03
h_e - stack height (ft)	35.29167

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_a (µg/m^3)	C_p (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
Ethylbenzene	00100-41-4	1.42E-06	0.01	2.46E-05	2.46E-05	0.002	1000	54000
m,p Xylenes	08-38-3/106-42-	5.30E-06	0.05	9.17E-05	9.16E-05	0.006	100	4300
o Xylene	00095-47-6	7.57E-07	0.01	1.31E-05	1.31E-05	0.001	100	4300
2 Butanone	00078-93-3	3.41E-06	0.03	5.90E-05	5.89E-05	0.004	5000	13000
Acetone	00067-64-1	7.21E-06	0.06	1.25E-04	1.25E-04	0.008	30000	180000

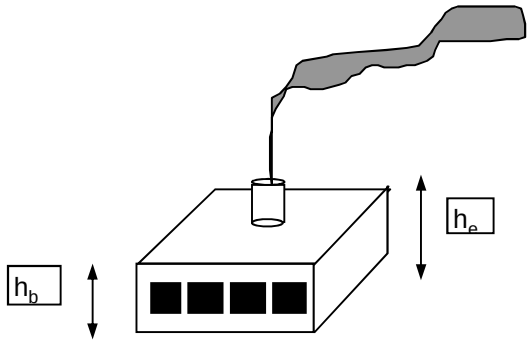
Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Maximum Actual Annual Impact
C_a (µg/m^3) = $(6.0*Q_a)/(h_e^{2.25})$
where Q_a is in lbs/yr and h_e is in feet

Maximum Potential Annual Impact
C_p (µg/m^3) = $(52500*Q)/(h_e^{2.25})$
where Q is lbs/hr and h_e is in feet

Maximum Short Term Impact
C_{st} (µg/m^3) = C_p * 65



Section II - Basic Cavity Impact Analysis

Use this method only if the shortest distance from the building to the property line is less than 3 times the building height (h_b). Cavity impacts would then occur to offsite receptors.

Emission Point: SP-04

h_b - building height (ft): 33.29167 If the physical stack height is greater than 1.5 h_b, no annual or short term cavity impacts occur from this source.

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_c (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
Trichloroethylene	00079-01-6	2.41E-07	0.002	0.0000	0.00	0.5	14000
2 Butanone	00078-93-3	6.74E-07	0.006	0.0000	0.00	5000	13000
Acetone	00067-64-1	7.66E-07	0.007	0.00	0.00	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Annual Cavity Impact

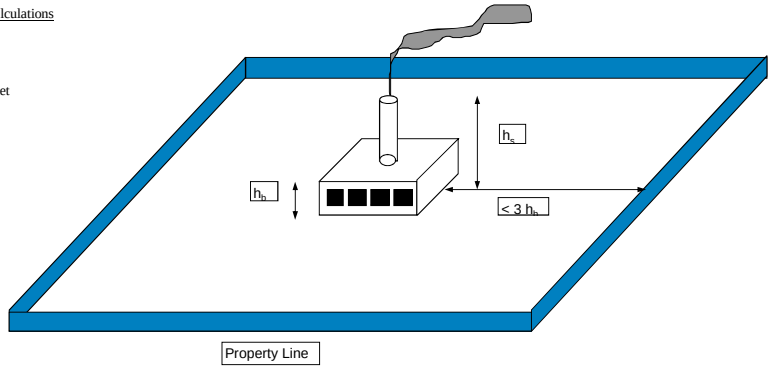
C_c (µg/m^3) = $(1.72*Q_a)/(h_b^2)$

where Q_a is in lbs/yr and h_b is in feet

Short Term Cavity Impact

C_{st} (µg/m^3) = $(904000*Q)/(h_b^2)$

where Q is lbs/hr and h_b is in feet



	ug/m3	ug/m3 to ug/ft3	ug/ft3 to lbs/ft3	fpm	cfm	lb/min	min/hr	lb/hr
		0.0283127	2.20E-09	230	20.071269		60	
Trichloroethylene	3.21	0.0908838	2.002E-10			4.018E-09		2.411E-07
2 Butanone	8.97	0.2539649	5.594E-10			1.123E-08		6.737E-07
Acetone	10.2	0.2887896	6.361E-10			1.277E-08		7.66E-07

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Section III - Point Source Method - Conservative Approach

Use this method only if the stack height to building height ratio is less than 1.5 (no credit given for plume rise rise due to buoyancy or momentum).

Emission Point	SP-04
h_e - stack height (ft)	35.29167

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_a (µg/m^3)	C_p (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
Trichloroethylene	00079-01-6	2.41E-07	0.002	4.17E-06	4.17E-06	0.0003	0.5	14000
2 Butanone	00078-93-3	6.74E-07	0.006	1.17E-05	1.17E-05	0.0008	5000	13000
Acetone	00067-64-1	7.66E-07	0.007	1.33E-05	1.32E-05	0.0009	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Maximum Actual Annual Impact

C_a (µg/m^3) = $(6.0*Q_a)/(h_e^{2.25})$

where Q_a is in lbs/yr and h_e is in feet

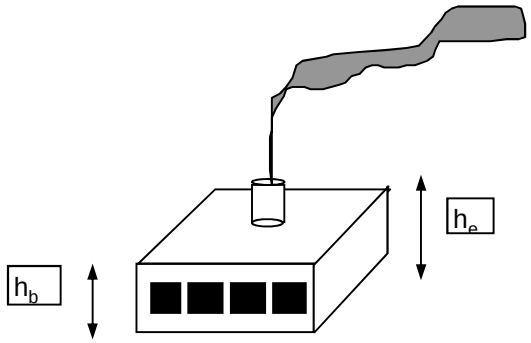
Maximum Potential Annual Impact

C_p (µg/m^3) = $(52500*Q)/(h_e^{2.25})$

where Q is lbs/hr and h_e is in feet

Maximum Short Term Impact

C_{st} (µg/m^3) = C_p * 65



Section II - Basic Cavity Impact Analysis

Use this method only if the shortest distance from the building to the property line is less than 3 times the building height (h_b). Cavity impacts would then occur to offsite receptors.

Emission Point: SP-405 (carbon inlet)

h_b - building height (ft): 33.29167 If the physical stack height is greater than 1.5 h_b, no annual or short term cavity impacts occur from this source.

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_c (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
1,1,1 Trichloroethane	00071-55-6	4.96E-03	43.42	0.0674	4.04	5000	9000
1,1 Dichloroethane	00075-34-3	1.51E-04	1.32	0.0021	0.12	0.63	--
1,1 Dichloroethylene	00075-35-4	5.63E-04	4.94	0.0077	0.46	70	--
1,2,4 Trimethylbenzene	00095-63-6	1.24E-05	0.11	0.0002	0.01	6	--
cis 1,2 Dichloroethylene	00156-59-2	1.70E-04	1.49	0.0023	0.14	63	--
Trichloroethylene	00079-01-6	3.60E-03	31.54	0.0489	2.94	0.5	14000
2 Butanone	00078-93-3	2.92E-05	0.26	0.0004	0.02	5000	13000
Acetone	00067-64-1	3.96E-05	0.35	0.0005	0.03	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Annual Cavity Impact

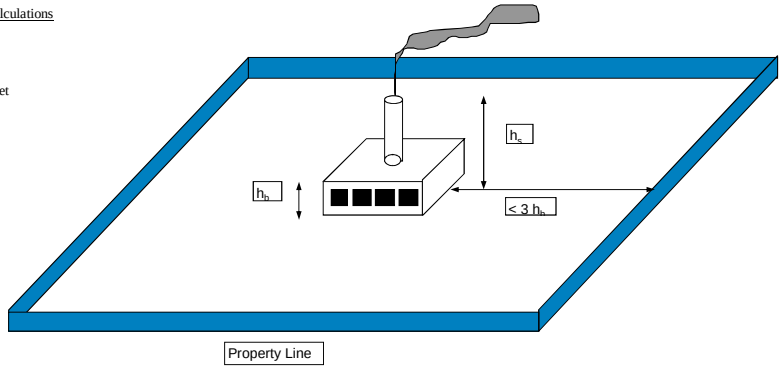
C_c (µg/m^3) = (1.72*Q_a)/(h_b^2)

where Q_a is in lbs/yr and h_b is in feet

Short Term Cavity Impact

C_{st} (µg/m^3) = (904000*Q)/(h_b^2)

where Q is lbs/hr and h_b is in feet



	ug/m3	ug/m3 to ug/ft3	ug/ft3 to lbs/ft3	cfm	lb/min	min/hr	lb/hr
		0.0283127	2.20E-09	297		60	
1,1,1 Trichloroethane	4460	126.27465	2.78138E-07		8.261E-05		0.0049564
1,1 Dichloroethane	136	3.8505274	8.48E-09		2.52E-06		0.0002
1,1 Dichloroethylene	507	14.35454	3.16E-08		9.39E-06		0.0006
1,2,4 Trimethylbenzene	11.2	0.3171023	6.98E-10		2.07E-07		0.0000
cis 1,2 Dichloroethylene	153	4.3318433	9.54151E-09		2.834E-06		0.00017
Trichloroethylene	3240	91.733153	2.02055E-07		6.001E-05		0.0036006
2 Butanone	26.3	0.744624	1.64014E-09		4.871E-07		2.923E-05
Acetone	35.6	1.0079322	2.22011E-09		6.594E-07		3.956E-05

Section III - Point Source Method - Conservative Approach

Use this method only if the stack height to building height ratio is less than 1.5 (no credit given for plume rise rise due to buoyancy or momentum).

Emission Point	SP-405 (carbon inlet)
h_e - stack height (ft)	35.29167

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_a ($\mu g/m^3$)	C_p ($\mu g/m^3$)	C_{st} ($\mu g/m^3$)	AGC ($\mu g/m^3$)	SGC ($\mu g/m^3$)
1,1,1 Trichloroethane	00071-55-6	4.96E-03	43.42	0.086	0.086	5.57	5000	9000
1,1 Dichloroethane	00075-34-3	1.51E-04	1.32	0.003	0.003	0.17	0.63	--
1,1 Dichloroethylene	00075-35-4	5.63E-04	4.94	0.010	0.010	0.63	70	--
,2,4 Trimethylbenzene	00095-63-6	1.24E-05	0.11	0.000	0.000	0.01	6	--
s 1,2 Dichloroethylene	00156-59-2	1.70E-04	1.49	0.003	0.003	0.19	63	--
Trichloroethylene	00079-01-6	3.60E-03	31.54	0.062	0.062	4.05	0.5	14000
2 Butanone	00078-93-3	2.92E-05	0.26	0.001	0.001	0.03	5000	13000
Acetone	00067-64-1	3.96E-05	0.35	0.001	0.001	0.04	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Maximum Actual Annual Impact

C_a ($\mu g/m^3$) = $(6.0*Q_a)/(h_e^{2.25})$

where Q_a is in lbs/yr and h_e is in feet

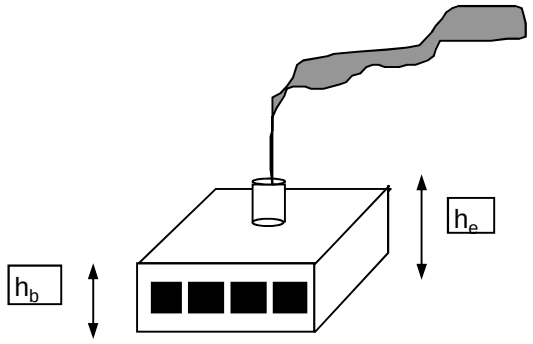
Maximum Potential Annual Impact

C_p ($\mu g/m^3$) = $(52500*Q)/(h_e^{2.25})$

where Q is lbs/hr and h_e is in feet

Maximum Short Term Impact

C_{st} ($\mu g/m^3$) = C_p * 65



AIRGUIDE-XL™

Section II - Basic Cavity Impact Analysis

Use this method only if the shortest distance from the building to the property line is less than 3 times the building height (h_b). Cavity impacts would then occur to offsite receptors.

Emission Point: SP-03, 04, 405

h_b - building height (ft): Mixed

If the physical stack height is greater than 1.5 h_b, no annual or short term cavity impacts occur from this source.

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_c (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
1,1,1 Trichloroethane	00071-55-6	4.96E-03	43.42	0.0674	4.04	5000	9000
1,1 Dichloroethane	00075-34-3	1.51E-04	1.32	0.0021	0.12	0.63	--
1,1 Dichloroethylene	00075-35-4	5.63E-04	4.94	0.0077	0.46	70	--
1,2,4 Trimethylbenzene	00095-63-6	1.24E-05	0.11	0.0002	0.01	6	--
cis 1,2 Dichloroethylene	00156-59-2	1.70E-04	1.49	0.0023	0.14	63	--
Ethylbenzene	00100-41-4	1.42E-06	0.01	0.0000	0.00	1000	54000
m,p Xylenes	108-38-3/106-42-3	5.30E-06	0.05	0.0001	0.00	100	4300
o Xylene	00095-47-6	7.57E-07	0.01	0.0000	0.00	100	4300
Trichloroethylene	00079-01-6	3.60E-03	31.54	0.0490	2.94	0.5	14000
2 Butanone	00078-93-3	3.33E-05	0.29	0.0005	0.03	5000	13000
Acetone	00067-64-1	4.75E-05	0.42	0.0006	0.04	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Annual Cavity Impact

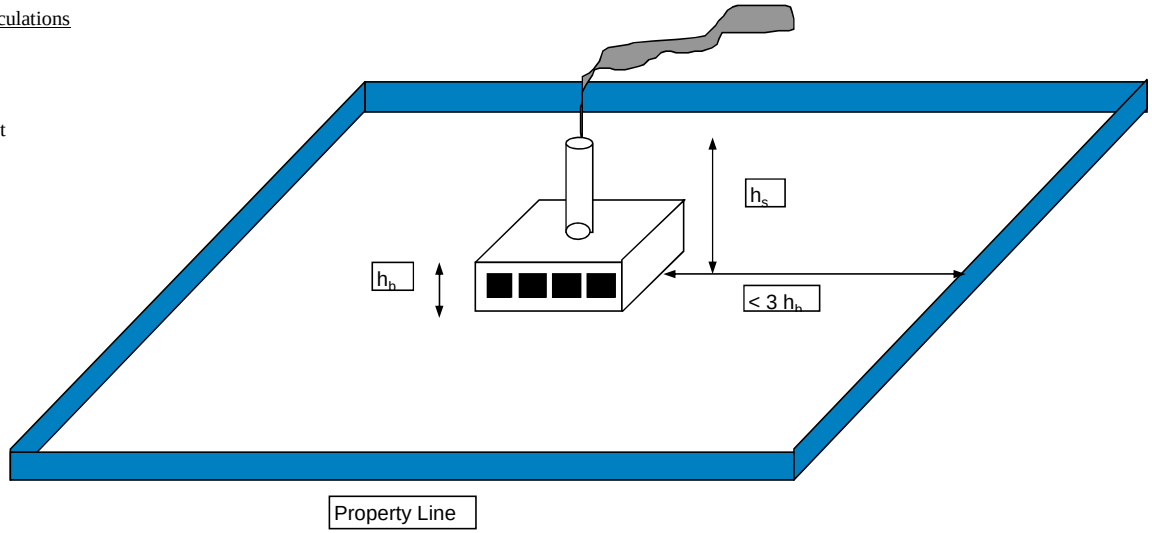
C_c (µg/m^3) = $(1.72*Q_a)/(h_b^2)$

where Q_a is in lbs/yr and h_b is in feet

Short Term Cavity Impact

C_{st} (µg/m^3) = $(904000*Q)/(h_b^2)$

where Q is lbs/hr and h_b is in feet



Section III - Point Source Method - Conservative Approach

Use this method only if the stack height to building height ratio is less than 1.5 (no credit given for plume rise rise due to buoyancy or momentum).

Emission Point	SP-03, 04, 405
h_e - stack height (ft)	Mixed

Contaminant	CAS Number	Q (lb/hr)	Q_a (lb/yr)	C_a (µg/m^3)	C_p (µg/m^3)	C_{st} (µg/m^3)	AGC (µg/m^3)	SGC (µg/m^3)
1,1,1 Trichloroethane	00071-55-6	0.0050	43.42	0.086	0.086	5.57	5000	9000
1,1 Dichloroethane	00075-34-3	0.0002	1.32	0.003	0.003	0.17	0.63	--
1,1 Dichloroethylene	00075-35-4	0.0006	4.94	0.010	0.010	0.63	70	--
1,2,4 Trimethylbenzene	00095-63-6	0.0000	0.11	0.000	0.000	0.01	6	--
cis 1,2 Dichloroethylene	00156-59-2	0.0002	1.49	0.003	0.003	0.19	63	--
Ethylbenzene	00100-41-4	0.0000	0.01	0.000	0.000	0.00	1000	54000
m,p Xylenes	08-38-3/106-42-	0.0000	0.05	0.000	0.000	0.01	100	4300
o Xylene	00095-47-6	0.0000	0.01	0.000	0.000	0.00	100	4300
Trichloroethylene	00079-01-6	0.0036	31.54	0.062	0.062	4.05	0.5	14000
2 Butanone	00078-93-3	0.0000	0.29	0.001	0.001	0.04	5000	13000
Acetone	00067-64-1	0.0000	0.42	0.001	0.001	0.05	30000	180000

Note: Input values only into gray cells.

Equations Used For Airguide-1 Calculations

Maximum Actual Annual Impact

C_a (µg/m^3) = $(6.0*Q_a)/(h_e^{2.25})$

where Q_a is in lbs/yr and h_e is in feet

Maximum Potential Annual Impact

C_p (µg/m^3) = $(52500*Q)/(h_e^{2.25})$

where Q is lbs/hr and h_e is in feet

Maximum Short Term Impact

C_{st} (µg/m^3) = C_p * 65