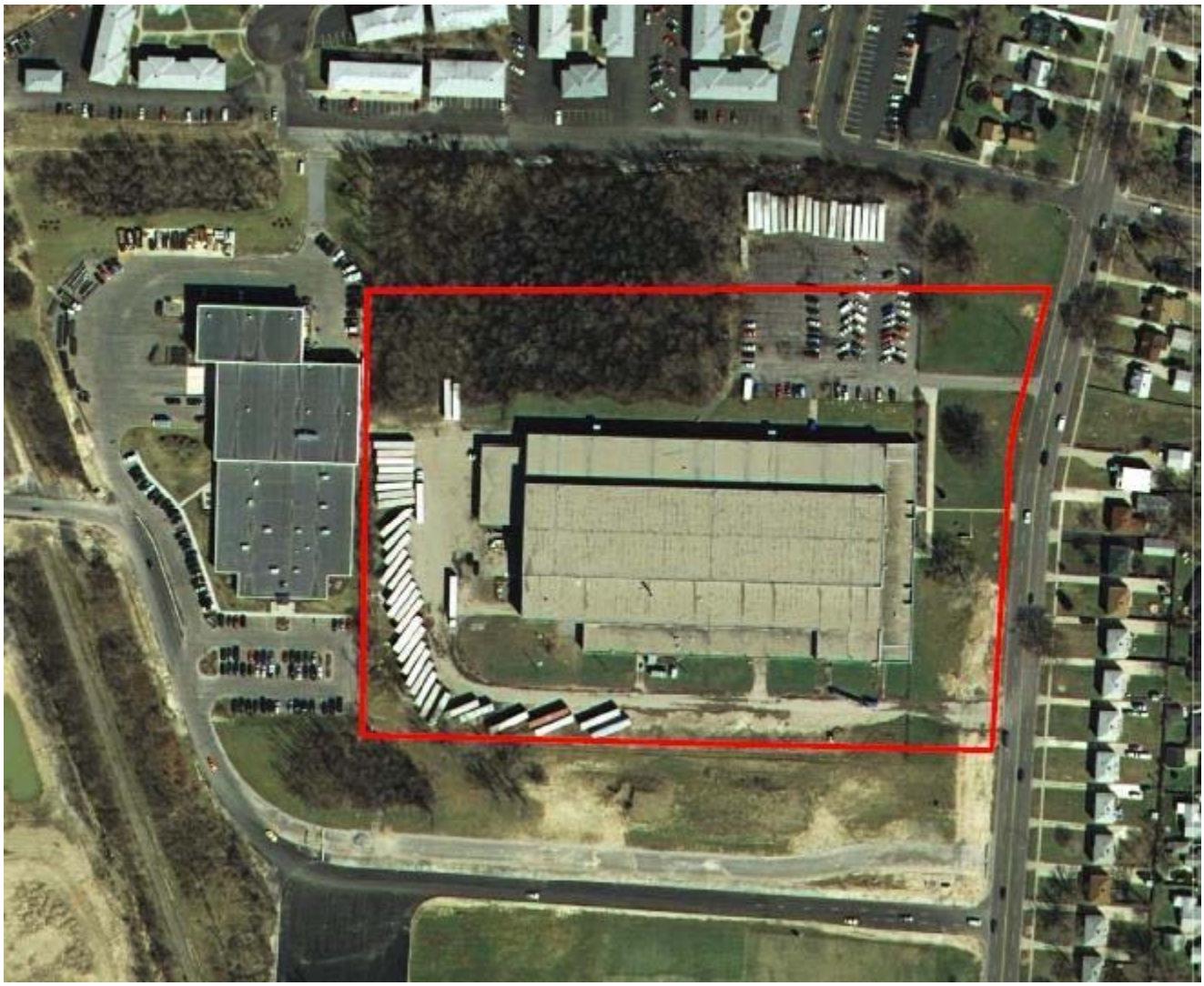

Sonoco Products Company

Vapor Intrusion Evaluation Report

Greif, Inc. Facility
Town of Tonawanda, Erie County, New York
NYSDEC Voluntary Cleanup Program #V00334-9

November 2009

Prepared By:
Environmental Resources Management
5788 Widewaters Parkway
Dewitt, NY 13214

ERM

VAPOR INTRUSION EVALUATION REPORT

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1.0 INTRODUCTION

Environmental Resources Management (ERM) conducted investigation and remediation activities at the Greif, Inc. (Greif) facility located at 2122 Colvin Boulevard in the Town of Tonawanda, Erie County, New York (the Site) on behalf of Sonoco Products Company (Sonoco) pursuant to Voluntary Cleanup Agreement (VCA) Index Number B9-0574-00-03. The Site has been identified by the New York State Department of Environmental Conservation (NYSDEC) as Voluntary Cleanup Program (VCP) Site Number V00334-9. The NYSDEC requested the submittal of a work plan for evaluation of vapor intrusion at the Site.

ERM prepared a Work Plan for Vapor Intrusion Evaluation (ERM, 2007) as requested by the NYSDEC. The work plan included investigation and sampling of soil vapor, sub-slab vapor, indoor air, and outdoor ambient air to evaluate the potential for vapor intrusion of Site-related contaminants. The NYSDEC accepted the work plan in November 2007 and initial investigation field work and sampling occurred in December 2007.

ERM submitted a report to the NYSDEC dated October 2008 (ERM, 2008) presenting results and recommendations based on the implementation of the NYSDEC-approved work plan (ERM, 2007). The NYSDEC provided comments on ERM's Vapor Intrusion Evaluation Report (ERM, 2008) in correspondence to ERM dated 23 December 2008 (NYSDEC, 2008). The NYSDEC requested that additional vapor intrusion investigation be performed in the area between the Greif facility and apartment buildings located north of the Site.

This report presents a summary of field work performed and data collected during the initial (2007) and additional (2009) field investigations at the Site. This report also presents revised recommended actions based on the evaluation that are consistent with vapor intrusion guidance from the New York State Department of Health (NYSDOH) dated October 2006 (NYSDOH, 2006) and the Remedial Action Work Plan for the Site dated October 2009 (ERM 2009b).

1.1 SITE DESCRIPTION AND BACKGROUND INFORMATION

The Site consists of an industrial building located on approximately 25-acres in the Town of Tonawanda, Erie County, New York. The Site is located in a mixed industrial/commercial/residential area approximately one-quarter mile south of Highway I-290 (Figure 1). The current and future contemplated use of the Site is restricted commercial. Adjoining properties are as follows:

- North – vacant land (including a former railroad siding and a wooded area) and residential apartments;
- South – a local park/sports fields (Walter M. Kenney Field) and land recently developed into commercial office space;
- East – Colvin Boulevard with single family/duplex homes further east; and
- West – a business park adjacent to a major railroad line formerly traversed by two railroad spurs into the Site.

Figure 2 presents a map showing the general Site layout and locations of selected Site features. The building is surrounded by paved parking areas, storage areas, and landscaped areas. The north, west and east sides of the Site are fenced to restrict access. There are two main gates on the east side of the Site where employees and visitors routinely enter the Site.

Based on information provided by Grief and ERM's review of Site plans, the building was originally constructed starting in 1948. From 1948 to 1985 the Site was owned and operated by Continental Fiber Drum and/or Continental Can Corporation. Historical manufacturing operations at this time consisted of the production of fiber drums but also included production of the metal lids and rims used to seal the fiber drums.

Sonoco acquired the Fiber Drum Division in 1985. The major existing manufacturing operations reportedly continued generally unchanged until the mid-1990s. In 1995, the varnishing and degreasing processes on the metal utilized to produce the lids and rims used in the fiber drums were discontinued. Greif subsequently acquired the Site in May 1998. The Site continues to be used for the manufacture of fiber drums and associated products. Secondary operations include equipment maintenance and administrative activities.

Site topography is relatively flat with an average elevation of approximately 586-feet above mean sea level. The Site is situated approximately 3.5-miles east of the Niagara River and 1.1-miles south of Ellicott Creek in the Erie-Ontario Lowlands physiographic province of western New York State. Topographic relief within one-half mile of the Site is minimal (approximately 15-feet).

Surficial geology in the vicinity of the Site was previously mapped by the New York State Geological Survey (NYSGS) as lacustrine silt and clay. These deposits consist predominantly of varved or laminated, calcareous silt and clay deposited in proglacial lakes with variable thicknesses. Bedrock in the vicinity of the Site consists predominantly of dolostones, shales, and evaporites of the Upper Silurian Salina Group based on

mapping performed by NYSGS. Bedrock at the Site occurs at a depth of approximately 75-feet below ground surface (b.g.s.).

ERM performed subsurface investigation at the Site with the overall objective to evaluate the nature and extent of soil and ground water potentially affected by Site activities. Environmental investigations initially were performed in connection with the purchase of the Site in 1998. The scope of work associated with subsurface investigations generally included installation of soil borings, ground water monitoring wells, and collection of soil, soil vapor, and ground water samples for analysis of selected parameters at an approved environmental laboratory. Soil vapor samples were associated with a passive soil vapor survey and were reported as absolute mass, not as concentrations (ERM, 2001). Detailed information regarding previous environmental investigation at the Site is summarized the Data Gap Investigation Report (ERM, 2003). Detailed information regarding completed Interim Remedial Measures (IRMs) at the Site are summarized in the dense, non-aqueous phase liquid (DNAPL) Recovery IRM Pilot Test Report (ERM, 2005) and Interim Report - Soil Excavation IRM (ERM, 2006).

Several volatile organic compounds (VOCs) of potential concern have been identified in Site soil, soil vapor, and/or ground water samples previously collected beneath or proximal to the main building at the Site. Samples collected for laboratory analysis during the implementation of this Work Plan were analyzed for the specific VOCs listed below that have been previously detected in soil, soil vapor, and/or ground water samples collected at the Site.

- Acetone
- Benzene
- 2-Butanone
- Carbon tetrachloride
- Chloroethane
- Chloroform
- 1,1-Dichloroethane (DCA)
- 1,2-DCA
- 1,1-Dichloroethene (DCE)
- cis-1,2-DCE
- trans-1,2-DCE
- Ethylbenzene
- Methylene chloride
- 4-Methyl-2-pentanone
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene (PCE)
- Toluene

- 1,1,1-Trichloroethane (TCA)
- 1,1,2-TCA
- Trichloroethene (TCE)
- 1,2,4-Trimethylbenzene
- Vinyl chloride
- Xylenes

1.2 CONCEPTUAL SITE MODEL

Previous environmental investigation has shown that VOCs of potential concern are limited to the southwestern portion of the building and adjacent exterior areas in three areas of concern:

1. the Varnish Pit Area;
2. the Former Drum Storage Area; and
3. the Former Varnish Underground Storage Tank (UST) Area.

The locations of these areas of concern are illustrated in Figure 2. Available data indicates that the primary VOCs of potential concern released in these areas are 1,1,1-TCA, TCE, and xylenes.

DNAPL has been observed in the saturated zone in the vicinity of the varnish pit. DNAPL was actively recovered to the extent practicable through an IRM and a recently completed investigation beneath the former varnish pit. There are also lower quantities of light, non-aqueous phase liquid (LNAPL) on top of the saturated zone in the vicinity of monitoring well MW-23 that is also being recovered to the extent practicable. The DNAPL and the LNAPL are derived from the same parent material that is consistent with varnish formerly used in the varnish pit. Degreasing operations also formerly occurred in the vicinity of the varnish pit.

Previous soil vapor sampling and monitoring associated with IRM activities have shown that there are VOCs in soil vapor present beneath the building and that there has been some migration of VOCs in the vapor phase along a 3-inch diameter sanitary sewer line that runs from the Varnish Pit to the north and then east towards Colvin Boulevard.

Two large #2 fuel oil USTs were formerly located outside the facility adjacent to the boiler room. Soil borings previously installed in this area did not reveal elevated concentrations of VOCs and there is no evidence indicating that there are VOCs in soil vapor in this portion of the building. However, this area represents a portion of the building where elevated

concentrations of VOCs in soil vapor, if any, might be present based on the location of the former fuel oil USTs.

2.0 FIELD WORK

The initial investigative field work and associated activities were conducted in December 2007 in general conformance with the NYSDEC-approved Health and Safety Plan (ERM 2004), the NYSDEC-approved Quality Assurance Project Plan (ERM, 2000), and the NYSDEC-approved Work Plan for Vapor Intrusion Evaluation (ERM, 2007). Field data and relevant observations were documented with field notebook, on appropriate sampling forms, and/or with color photographs.

The NYSDEC requested additional evaluation for vapor intrusion in correspondence to Sonoco dated 23 December 2008 (NYSDEC, 2008). The objective of the additional vapor intrusion evaluation requested by the NYSDEC was to investigate for potential VOCs in soil vapor along the northern property boundary of the property to evaluate the potential for off-Site soil vapor migration. The additional investigation work was performed by ERM in 2009 in conformance with the NYSDEC-approved work plan (ERM, 2007) and specific requests from the NYSDEC (NYSDEC, 2008).

2.1 PRE-SAMPLING PREPARATIONS

2.1.1 Initial Investigation

ERM conducted a pre-sampling inspection of the main level of the building on 10 December 2007 (prior to any sampling) to identify and minimize building factors or conditions that may interfere with the proposed investigation. Information on floor slab layout and condition, construction characteristics, general air flow characteristics, HVAC systems, other potentially relevant physical conditions, and potential sources of VOCs inside the main building were described and documented on a building inventory form. Chemicals or other products used in the facility for routine manufacturing and/or maintenance operations were documented on the building inventory form. A calibrated photoionization detector (PID) with an 11.7eV lamp was used to collect readings at selected areas inside the building and recorded on the inventory forms. To the extent practicable, reasonable effort was made to avoid activities inside the building that may interfere with or dilute ambient indoor air within 24 hours before and during the investigation, however the survey and sampling were completed in active manufacturing areas. Sample locations were chosen to minimize sample disturbance by manufacturing actives, to minimize effects of sampling activities on production activities, but yet still be located in areas to complete the objectives of the study. Sample locations were screened for potential subsurface utilities by ERM's geophysical subcontractor New

York Leak Detection of Jamesville, New York (NYLD). Sample locations and selected site features are presented in Figure 3.

2.1.2 Additional Investigation

ERM and NYLD evaluated the proposed area of additional investigation activities north of well MW- 4 (Figure 4). ERM was unable to access the wooded area north of MW-3 for subsurface utility clearance work due to standing surface water ranging from several inches to over 1-foot in depth. ERM updated the NYSDEC on the Site conditions and conducted a Site walk with the NYSDEC on 14 January 2009. The NYSDEC approved moving the originally contemplated sampling location (north of MW-3) to the eastern edge of the wooded area adjacent to the parking lot. The newly approved sample areas were scanned for potential subsurface obstructions by NYLD. Selected photographs documenting Site conditions encountered and work conducted north of the facility during the additional investigation are presented in Appendix B.

ERM subcontracted Nothnangle Drilling, Inc. of Scottsville, New York (Nothnagle) to install two temporary soil vapor points (SV-07 and SV-08) and two temporary monitoring wells (TW-02 and TW-03) at the NYSDEC approved locations. Continuous soil samples were collected with a Macro-Core ^{Tm} sampling device at each location. Soil samples were screened for VOCS using a calibrated PID with an 11.7eV lamp. Soil was described by an ERM geologist regarding color, texture, density, moisture content, odor, and other pertinent observations. Soil descriptions and other details were recorded on ERM soil boring logs (Appendix A).

Soil vapor monitoring sampling points were installed at a depth of 5-feet below ground surface in conformance with the NYSDEC-approved Work Plan for Vapor Intrusion Evaluation (ERM, 2007). The bentonite seals on each of the soil vapor sampling implants were hydrated and allowed to set overnight. Helium field testing was conducted to evaluate the effectiveness of the seals and to verify that ambient air was not being drawn into the sampling container (Appendix B). Both seals were sound based on the results of the helium field testing. The soil vapor sampling points were purged with a calibrated PID prior to set up of 6-liter Summa canisters. The pump in the PID shut down while purging SV-08 indicating a lack of significant air flow from the formation.

A temporary monitoring well was installed in each soil boring to allow evaluation of ground water quality. Each of the temporary monitoring wells was constructed using 1.5-inch polyvinyl chloride (PVC) with 10-feet of pre-pack well screen and 10-feet of riser. Saturated soil conditions were noted by an ERM geologist at a depth of approximately 12-feet

below ground surface (Appendix A). Therefore, the temporary wells were screened from 8- to 18-feet below ground surface. An additional foot of sand was installed above the pre-pack wells screens and remaining annular space was filled with bentonite and hydrated to provide a competent surface seal. Details of well construction were recorded on ERM monitoring well construction logs (Appendix A).

2.2 SAMPLE COLLECTION

2.2.1 Initial Investigation

Samples were collected during the week of 10 December 2007 using approved methods and procedures described in the NYSDEC-approved work plan (ERM, 2007b). Table 1 presents a summary of samples collected during the vapor intrusion evaluation.

ERM subcontracted TREC Environmental of Spencerport, New York to install six temporary soil vapor points (SV-01 to SV-06) along the perimeter of the Greif facility. Soil vapor points were generally installed adjacent to the property boundary (Figure 3) or were located as close to the property boundary as feasible based on Site conditions and obstructions. Soil vapor locations SV-04 and SV-05 were located approximately 50-feet south of the property line due to the presence of a wet, wooded area between the sample locations and the northern property boundary. Soil vapor sample SV-06 was placed close to the sanitary sewer line from the building to road slightly west of Colvin Boulevard due to subsurface utilities located in the right-of-way along the roadway. This sample was located to evaluate potential vapor migration along the sanitary sewer line. Analytical results for soil vapor samples are summarized in Table 2.

Sub-slab vapor points (SSV-07 to SSV-10; Figure 3) were installed by ERM by drilling holes into the building's concrete floor using an electric hammer drill. Four sub-slab vapor points were installed inside the Greif facility, one in each quadrant of the facility. Sub-slab vapor points were sealed at the surface with bees wax. ERM waited 24-hours to allow the wetted bentonite to expand and tightly seal the borehole before setting up 6-liter Summa canisters for sample collection. All subsurface sampling points were tested with a helium tracer gas to verify that ambient air was not being drawn into the sampling container. Analytical results for sub-slab vapor samples are summarized in Table 3.

The outdoor air sample (OA-01; Figure 3) was located in an up-wind direction during the sampling interval. The wind was blowing from the northeast on the date of sampling. The sample canister was placed

outside a chain-linked fence approximately 6-feet above the ground level on the northeast corner of the facility's employee parking lot. Analytical results for the outdoor air sample are summarized in Table 4.

Four indoor air samples (IA-07 through IA-10; Figure 3) were co-located with sub-slab vapor samples and assigned similar numerical identifiers.

Sub-slab sample	Indoor air sample	Duplicate
SSV-07	IA-07	IA-7/DUP-1
SSV-08	IA-08	SSV-08/DUP-2
SSV-09	IA-09	-------
SSV-10	IA-10	-------

ERM located these samples away from areas that had any visual floor cracks, away from drafty areas, and did not place indoor air samples under ventilation ducts. ERM recorded such information, such as distance from duct openings, open doors, etc. on field data collection sheets.

Duplicate samples were collected at one soil vapor, sub-slab vapor and indoor air location (Table 1 and Figure 3). The indoor air duplicate sample was placed side-by-side with the corresponding sample while the soil vapor and sub-slab vapor samples were connected to the subsurface sample via an above-ground tube using an air-tight "tee" connector. Analytical results for indoor air samples are summarized in Table 4.

Flow into Summa canisters was controlled by laboratory pre-set 24-hour flow controllers. Valves on all Summa canisters were opened on 11 December 2007. On the morning of 12 December 2007, ERM personnel visually checked the pressure gauges on the Summa canisters and shut the valves on those that had low vacuum (< 3-inches Hg). ERM continued to check the gauges throughout the day and shut valves when they reached low vacuum or reached the end of the 24-hour sampling period.

Upon completion of sample collection activities, ERM removed the temporary sampling points and plugged the borings with sand and bentonite. ERM patched sub-slab vapor boreholes with a fast setting, non-shrinking epoxy. Samples were subsequently shipped with chain of custody documentation to the project laboratory for analysis.

2.2.2 Additional Investigation

2.2.2.1 Active Soil Vapor Sampling

ERM discussed the detection limits required for the soil gas survey at the Site with the proposed environmental laboratory, Paradigm

Environmental Services, Inc. (Paradigm) of Rochester, New York (Paradigm). Paradigm is a NYSDOH-approved environmental laboratory. Samples were proposed for analysis of Site-specific VOCs of potential concern by United States Environmental Protection Agency (USEPA) Method TO-15. ERM received writing verification from Paradigm that they are capable of detecting VOCs and reporting them at the appropriate reporting limits specified in NYSDOH (2006).

Following the successful helium testing of the soil vapor sample points on 28 January 2009, 6-liter Summa canisters were set up to collect a 24-hour soil vapor sample. ERM also attempted to collect a duplicate sample from SV-08 for quality control purposes. The canisters were set up and periodically checked throughout the 24-hour sample period.

Tubing for the soil vapor points was pulled after the sample collection period of approximately 24 hours was completed. Each of the Summa canisters were removed from the field and picked up at the Site by Paradigm on 29 January 2009 for transport to the laboratory under chain of custody.

ERM noted almost no drop in vacuum at the canister set at sample location SV-08 and also very little drop in vacuum at location SV-07, suggesting there is little to no effective porosity or permeability in the unsaturated zone in these areas. Sample SV-08 was deemed unusable due to lack of vacuum loss during sample collection. Additionally, the laboratory measured the vacuum on the canisters prior to analysis according to standard sample receipt and handling techniques. Paradigm advised ERM that the vacuum measurement on both canisters at the laboratory were significantly lower than the final vacuum reading recorded in the field. The laboratory tested the flow regulator and vacuum gauges used during the sample event at the Site and reported there were no issues with the regulator or vacuum gauges. However, sample SV-07 was also deemed unusable by ERM due to the discrepancy between the final field and laboratory vacuum readings.

2.2.2.2 Passive Soil Vapor Sampling

ERM discussed the inability to collect a sufficient soil vapor volume using Summa canisters from the predominately clay soil matrix at locations SV-07 and SV-08 with Michael Hinton, P.E. and Nicole Bonsteel, P.E. of the NYSDEC. Based on these discussions, ERM proposed to re-sample soil vapor at these locations using a passive axial sorbent tube methodology. The NYSDEC approved the proposed modification to the soil vapor sampling at locations SV-07 and SV-08 in correspondence dated 24 February 2009 and requested a sampling period of one week.

ERM re-mobilized to the Site on 2 March 2009 to install the passive axial sorbent tubes. ERM advanced additional soil borings at the locations of SV-07 and SV-08 (Figure 4); however, shallow ground water was encountered at both locations at a depth of 2-inches below ground surface. The NYSDEC was on Site to observe these Site conditions. The Site conditions were subsequently re-evaluated on two separate occasions in early March 2009. However, shallow ground water persisted in these areas. Therefore, collection of soil vapor samples at these locations was not possible. ERM contacted the NYSDEC and it was agreed that collection of soil vapor samples at these locations was not practicable based on the observed Site conditions.

2.2.2.3 Ground Water Sampling

Two temporary monitoring wells were installed in the NYSDEC-approved locations on 27 January 2009 (Figure 4). Soil boring logs and well construction details for the temporary monitoring wells are presented in Appendix A. Each of the newly install wells was checked for water levels on 27 March and 29 March 2009 and were found to be "dry" on both dates. During a subsequent Site visit on the 2 March 2009, ground water was observed in temporary well TW-02 but ground water was still not present in temporary well TW-03. These observations indicate that there is very low permeability in soil located between the Greif facility and the apartments to the north. A ground water sample was collected from temporary well TW-02 using low flow purging and sampling methods after the field parameters dissolved oxygen, pH, conductivity, and temperature stabilized for three consecutive measurements. Drawdown of the water column in TW-02 did not stabilize due to very slow recharge from the formation. The low flow data sheet for sampling of temporary well TW-02 is presented in Appendix A. Temporary well TW-03 remained dry during the sampling event and therefore a ground water sample could not be collected from this well.

2.3 ANALYTICAL METHODS AND REPORTING

Vapor samples and blind duplicate samples collected during the initial investigation were submitted to Spectrum Analytical Laboratories (Spectrum) of Agawam, Massachusetts (Spectrum). Spectrum is a NYSDOH-approved environmental laboratory. Initial investigation vapor samples were analyzed for Site-specific VOCs of potential concern by USEPA Method TO-15. Spectrum was advised that analyses for samples collected during the initial investigation shall achieve detections limits of at least 1.0 µg /m^3 for each compound, with the exception of sub-slab vapor samples, which shall achieve detection limits of 0.25 µg /m^3 for

TCE. A copy of the laboratory analytical report for initial investigation samples is presented in Appendix C.

Additional investigation soil vapor samples collected at locations SV-07 and SV-08 were submitted to Paradigm for analysis of Site-specific VOCs of potential concern by USEPA Method TO-15. However, these samples were deemed unusable due to the considerations discussed above in Section 2.2.2.1.

Passive soil vapor samples proposed for collection using axial sorbent tubes were proposed for analysis at Vapor Trail Analytics of Kendall, New York (VTA). VTA is a NYSDOH-approved environmental laboratory. These samples were proposed for analysis of Site-specific VOCs of potential concern using USEPA Method TO-17 as approved by the NYSDEC. USEPA Method TO-17 is an approved analytical method listed in NYSDOH (2006). However, passive soil vapor samples could not be collected at locations SV-07 and SV-08 due to the Site conditions mentioned above in Section 2.2.2.2.

The ground water sample collected from temporary well TW-02 was analyzed for Site-specific VOCs of potential concern by USEPA Method 8260. The ground water sample was analyzed at Paradigm. A copy of the laboratory analytical report for the ground water sample collected at the Site is presented in Appendix C.

ERM's Project QA/QC Officer reviewed the laboratory analytical report for the initial investigation samples and prepared a Data Usability Summary Report (DUSR) in conformance with NYSDEC guidance. The DUSR for initial investigation samples is presented in Appendix D. A DUSR was not prepared for the ground water sample collected from temporary well TW-02 because VOCs were not detected in this sample.

3.0 SAMPLING RESULTS

3.1 SOIL VAPOR

3.1.1 Initial Investigation

Low concentrations of the VOCs 1,1,1-TCA and TCE were detected in soil vapor sample SV-01 at concentrations of 30.6 and 14 micrograms per cubic meter ($\mu g/m^3$), respectfully (Table 2). These concentrations convert to 0.006 and 0.002 parts-per-million (ppm), respectively.

VOCs of potential concern were not detected in soil vapor sample SV-02.

Very low concentrations of 12 compounds of potential concern were detected in soil vapor sample SV-03 (Table 2) at concentrations ranging from 0.8 to 3.3 $\mu g/m^3$ (0.000 to 0.001 ppm). The VOCs detected in this sample are consistent with the VOCs detected in the outdoor ambient air sample (see Section 3.3). VOCs were not detected in the associated duplicate sample (DUP-3).

A total of six compounds of potential concern were detected in soil vapor samples SV-04 and SV-05 at concentrations ranging from 1.8 to 37.8 $\mu g/m^3$ (0.001 to 0.016 ppm). The predominant VOCs detected in these samples were 1,1,1-TCA, TCE, and acetone. The concentrations of 1,1,1-TCA and TCE in these samples are similar to the concentrations detected in soil vapor sample SV-01.

The canister for sample SV-06 apparently collected soil vapor at a slightly higher than suggested rate. Six compounds of potential concern were detected in this sample at concentrations ranging from 4.4 to 212 $\mu g/m^3$ (0.001 to 0.039 ppm). The predominant VOCs detected in this sample were 1,1,1-TCA and acetone.

Several VOCs of potential concern were detected in soil vapor samples, particularly at locations SV-01, SV-04, SV-05, and SV-06. However, the VOCs detected in soil vapor samples were also typically detected in the outdoor ambient air sample collected from the up-wind side of the Site.

3.1.2 Additional Investigation

A review of soil boring logs indicates the Site soil north of the Greif facility consists predominately of very low permeability silty clay and clayey silts. Other than topsoil below standing water pooled over much of the wooded area at the surface, saturated soil was observed at a depth of

approximately 12 feet below ground surface. Visual, olfactory, or PID field screening evidence of potential contamination was not observed at locations SV-07 and SV-08.

As previously discussed, soil vapors samples could not be collected at locations SV-07 and SV-08 due to a combination of the extremely low permeability soil and standing or perched water at or near the surface. The absence of elevated PID readings and VOC-like odors and the very low permeability of the soil in the area between the Greif facility and the apartments to the north suggests that VOCs have not migrated from areas of concern at the Site towards the north.

3.2 SUB-SLAB VAPOR

One or more compounds of potential concern were detected in all four sub-slab vapor samples. Six compounds of potential concern were detected at relatively high concentrations in sub-slab vapor sample SSV-07. The predominant VOCs detected at this location were 1,1,1-TCA and TCE. The VOCs 1,1,1-TCA and TCE were detected at concentrations of 23,897 and 9,940 $\mu g/m^3$ (4.38 and 1.448 ppm) in sample SSV-07, respectively.

Significant differences were observed in results between sub-slab vapor sample SSV-08 and its duplicate, DUP-2. Twelve VOCs of potential concern were detected in sample SV-08 at concentrations ranging from 1.1 to 15.3 $\mu g/m^3$ (0.000 to 0.006 ppm). However, seven VOCs of potential concern were detected in duplicate sample DUP-2 at concentrations ranging from 313 to 32,500 $\mu g/m^3$ (0.083 to 4.734 ppm). The predominant VOCs detected in sample DUP-2 were TCE, 1,1,1-TCA, and 1,1-DCE. The project laboratory suggested to ERM that there may have been a malfunction of the regulator or tubing associated with sample SSV-08, which contained VOCs at concentrations generally three orders of magnitude less than the concentrations detected in sample DUP-2. Therefore it is possible that ambient indoor air may have diluted sub-slab vapors in the sample collection canister for location SSV-08. ERM interprets the analytical results for sample DUP-2 as being more representative of sub-slab vapor concentrations at location SSV-08.

Three VOCs of potential concern were detected in sub-slab vapor sample SSV-09 at concentrations ranging from 15 to 797 $\mu g/m^3$ (0.006 to 0.146 ppm). The predominant VOCs detected were 1,1,1-TCA and TCE. Acetone was also detected in this sample.

TCE was the only VOC detected in sub-slab vapor sample SSV-10 and it was detected at a concentration of 225 $\mu g/m^3$ (0.033 ppm).

3.3 OUTDOOR AIR

Twelve compounds of potential concern were detected from the ambient outdoor air sample at concentrations ranging from 0.9 to 6.3 µg/m^3 (0.000 to 0.003 ppm), indicating that many compounds of potential concern at the Site are typically present in air at and around the facility. VOCs detected in the outdoor ambient air sample include:

- acetone;
- benzene;
- 2-butanone;
- carbon tetrachloride;
- ethylbenzene;
- methylene chloride;
- PCE;
- toluene;
- 1,1,1-TCA;
- TCE;
- m- and p-xylenes; and
- o-xylene.

3.4 INDOOR AIR

One or more VOCs of potential concern were detected in the indoor air samples. Four VOCs were detected at low concentrations ranging from 5.9 to 12.8 µg/m^3 (0.001 to 0.005 ppm) in the indoor air sample collected from indoor air sample IA-07. Results for the associated blind duplicate sample (sample DUP-1) were generally consistent. Five VOCs were detected at concentrations ranging from 2.3 to 36 µg/m^3 (0.001 to 0.007 ppm).

Acetone was the only VOC detected in indoor air sample IA-08 and it was detected at a concentration of 14 µg/m^3 (0.006 ppm).

Acetone was the only VOC detected in indoor air sample IA-09 and it was detected at a concentration of 20.4 µg/m^3 (0.009 ppm).

The VOCs methylene chloride and toluene were the only VOCs detected at indoor air sample IA-10 and they were detected at concentrations of 3.6 and 6.9 µg/m^3 (0.001 and 0.002 ppm), respectively.

The project laboratory advised ERM that indoor air samples could not be analyzed to the desired low detection limits due to relatively elevated levels of target and non-target compounds present in the sample. Field screening data and chemical inventory sheets suggest it is likely that these VOCs are present as a result of the manufacturing processes and associated operations that occur routinely in the Greif facility.

3.5 GROUND WATER

VOCs were not detected in the ground water sample collected from temporary well TW-02 located between the Greif facility and the apartments to the north. These data support a conclusion that VOCs have not migrated in soil vapor or ground water from Site areas of concern towards the north.

4.0 DECISION MATRICES AND RECOMMENDED ACTIONS

The NYSDOH (2006) developed decision matrices for evaluation of vapor intrusion at sites in New York State. To date, a total of four compounds, all of which are compounds of potential concern at the Site, have been assigned to a decision matrix. The four compounds are:

- carbon tetrachloride;
- PCE;
- 1,1,1-TCA; and
- TCE.

TCE and carbon tetrachloride have been assigned to NYSDOH Matrix 1. PCE and 1,1,1-TCA have been assigned to NYSDOH Matrix 2. The matrices compare sub-slab and indoor air concentrations of a compound as a basis for a decision regarding further investigation, monitoring, or potential remedial action. The detection of compounds of potential concern in indoor air samples does not necessarily mean that vapor intrusion from the sub-slab into indoor air is occurring, particularly when these compounds are detected in outdoor ambient air. Additionally, a recommendation for mitigation based on evaluation of data according to procedures outlined in NYSDOH (2006) does not necessarily indicate that vapor intrusion from the sub-slab into indoor air is actively occurring at a facility.

As outlined in NYSDOH (2006), the decision matrices are generic and site-specific conditions regarding source and extent of affected media, building construction, layout, land use, and other conditions potentially relevant to vapor intrusion should be considered in the development of recommended actions. Relevant considerations are summarized below.

Condition of the Building Floor Slab

The concrete floor in the building appears to be intact and without significant pathways for sub-slab vapor to enter the facility. Some minor cracks were observed; however, observed cracks appear to be filled with a sealant-type material.

Source and Extent of Affected Media

Based on investigative activities performed to date, known subsurface sources of VOCs of potential concern at the Site are limited to affected areas in the southwestern portion of the Site. These areas include:

- the Varnish Pit Area;
- the Former Varnish UST Area; and
- the previously-remediated Former Drum Storage Area/Soil Boring GB-10 Area.

The varnish pit at the Site formerly contained aboveground storage tanks for virgin varnish and a varnish dip tank. The varnish pit measured approximately 20-feet wide by 30-feet long and it is approximately 8.5-feet deep (Figure 3). The varnish pit has been inactive since May 1995 and it was recently abandoned and filled by Greif to provide additional room for manufacturing operations. Slotted PVC piping was installed inside and around the varnish pit before the pit was backfilled for eventual connection to a planned future sub-slab depressurization (SSD) system. A concrete floor with a vapor barrier was installed over the former varnish pit which eliminated the varnish pit as a potential source of VOCs inside the building.

Southwest of the building is the Former Drum Storage Area and Soil Boring GB-10 Area (Figure 2). VOCs of potential concern are present in this area. Concentrations of VOCs in this area were significantly reduced to the satisfaction of the NYSDEC through implementation of a successful soil excavation IRM (ERM, 2006).

The Former Varnish UST Area is located outside and just west of the building. The main VOC of potential concern associated with this area is xylenes. Chlorinated solvents were generally not detected at concentrations requiring remediation in soil samples collected from this area.

Other sources of compounds of potential concern were identified in chemical products that are routinely used inside the building during ERM's pre-sample survey. These compounds were typically listed as ingredients in common chemicals used by maintenance and production personnel in the plant. These potential sources of VOCs in indoor air were documented on the sample collection sheets. Production operations were ongoing during the sampling period; therefore, it is reasonable to assume that some or all of these chemicals were actively being used during the sample collection period.

Completed and Proposed Remedial Actions

Completed remedial actions at the Site include excavation of grossly-affected soil in the Former Drum Storage Area and Soil Boring GB-10 Area in 2005. Additionally, a vacuum-enhanced DNAPL recovery system operated in the Varnish Pit Area. This system removed DNAPL,

contaminated ground water, and soil vapor from beneath the southwestern portion of the building. Liquid recovery was terminated in May 2008 following removal of recoverable DNAPL from the vicinity of the varnish pit. Vapor extraction has been operational in the vicinity of the varnish pit since March of 2007. This causes a negative pressure that has been documented beneath the southwestern portion of the building's concrete floor. Vapor extraction continues from a recovery well near the varnish pit in order to maintain some sub-slab de-pressurization until a full-scale system can be designed and installed for the facility.

ERM submitted a Final Focused Feasibility Study (FFS) Report to the NYSDEC and the NYSDOH in April 2009 (ERM, 2009a). The Final FFS Report was approved by the NYSDEC and the report proposes the following additional remedial actions at the Site to address remaining source areas:

- SSD beneath the building, which will also facilitate recovery of VOCs from affected soil and ground water beneath the building;
- natural attenuation of soil and ground water beneath the building; and
- in-situ thermal treatment of affected soil and ground water in the Former Varnish UST Area.

Factors Affecting Vapor Migration

Shallow soil at the Site consists predominantly of silty clay or clayey silt. Due to limited pore space connectivity and very low matrix permeability in clay-rich soil, and the general predominance of vertical fracture and macropore conduits, shallow soil at the Site is generally not conducive to lateral vapor migration, particularly in the area investigated between the Greif facility and the apartments to the north.

VOCs can volatize into soil from affected ground water. As such, ground water flow should be characterized for vapor intrusion studies. Shallow ground water flow direction at the Site is generally towards the north. Migration of VOCs up-gradient (to the south) of source areas is not expected due to the northerly ground water flow direction. Ground water elevations are relatively shallow at depths ranging generally from 6- to 12-feet below ground surface.

A significant amount of ground water monitoring has been performed at the Site in several rounds of investigation as well as a two-year long quarterly ground water monitoring program that was completed in late 2007. A map showing the location of monitoring wells at the Site is presented in Figure 4. The following shallow and intermediate

monitoring wells are or were located between affected areas at the Site and property boundaries.

- MW-1A;
- MW-3;
- MW-4;
- MW-5;
- MW-6;
- MW-7A;
- MW-8;
- MW-15;
- MW-16;
- MW-17;
- MW-19;
- TW-02; and
- TW-03.

These wells are present on all four sides of the Site building between the building and the property boundaries. VOCs of potential concern have not been detected in any of these monitoring wells, indicating that there has been no off-Site migration of VOCs in ground water from affected areas at the Site.

The shallow depth of ground water reduces the possible pore space of the soil column above the water table, limiting the mass of VOCs that may be present in soil vapor. The thickness of saturated soil within the capillary fringe at the Site will also reduce the total volume of pore space available for VOCs within the unsaturated soil column. Therefore, any VOCS present will tend to be present at shallower depths which will facilitate vertical migration to and from the atmosphere relative to lateral migration.

Underground conduit pathways for vapor migration are present at the Site. Vapors will tend to be captured and retained within the backfilled trench, especially in areas capped by asphalt covering, or may be released at surface grates within paved areas. A potential underground conduit is the 3-inch sanitary sewer line that runs north from the varnish pit, and then turns to the east and runs out towards Colvin Boulevard (Figure 2). ERM placed two sample points near this potential conduit; sub-slab vapor point (SSV-09) within the eastern portion of the building, and soil vapor point (SV-06) in the grassy area between the building and Colvin Boulevard (Figure 3).

The Site building is an older structure that contains many open gaps to the outside; these include but are not limited to:

- some broken windows;
- gaps between the walls and conduits that exit the building;
- open dock and shipping bay doors; and
- open side doors.

The building is heated with ceiling mounted, natural gas heaters that move and mix air. A separate ventilation system is also active that remains running during Site operations. Grief was operating while ERM collected the 24-hour indoor air samples. Therefore, use of processing, production, or cleaning chemicals may have occurred near sampling locations during the sampling duration. Use of chemicals near and within the building could affect the number of compounds detected as well as the reporting limits of Site-specific compounds in the samples.

The concrete floor within the Greif building is generally competent and of strong integrity. Cracks are uncommon and where they exist, have a low aperture and appear to be filled. Large cracks or gaps in the floor were not observed except for the varnish pit itself, which was designed and constructed as a large opening at the floor level of the facility for production purposes.

As previously discussed and agreed by ERM and the NYSDEC, the DNAPL recovery system, which also recovers sub-slab vapors, was in operation during the period of the initial vapor intrusion evaluation. The decision to keep the DNAPL recovery system operational was based on the fact that a SSD system will be operational in the future and therefore performance of the evaluation during active vapor recovery would be more representative of current and future building conditions.

Relevant Standards, Criteria, and Guidance.

The NYSDEC currently does not have any standards, criteria, or guidance for the soil vapor matrix in New York State. The following air guideline values have been established by the NYSDOH for VOCs of potential concern at the Site.

Compound	Air Guideline Value (mcg/m^3)
Methylene Chloride	60
PCE	100
TCE	5

The purpose of a guideline is to help guide decisions about the nature of efforts to reduce exposure to the compound if required.

NYSDOH (2006) is the applicable regulatory guidance document for the evaluation of vapor intrusion in New York State. Interpretation of data and associated recommendations for additional action are based on NYSDOH (2006).

Development of Recommended Actions

Comparison of detected concentrations in sub-slab and indoor air samples results in the following summary of recommended actions from the NYSDOH decision matrices for the various co-located sampling locations at the Site. In some instances, the actual reporting limits achieved during laboratory analysis resulted in several potential decision matrix recommended actions. Instances where three or more decision matrix recommended actions are possible based on current analytical data are identified in the summary below as "Unknown".

	Decision Matrix 1		**Decision Matrix 2**	
Sample Location	**TCE**	**Carbon Tetrachloride**	**PCE**	**1,1,1-TCA**
SSV-07/IA-07	Mitigate	Unknown	Unknown	Mitigate
SSV-08/IA-08	Mitigate	Unknown	Unknown	Mitigate
SSV-09/IA-09	Monitor or Mitigate	Unknown	No further action or Take reasonable and practicable actions to identify sources and reduce exposures	Monitor or Mitigate
SSV-10/IA-10	Monitor or Mitigate	Unknown	No further action or Take reasonable and practicable actions to identify sources and reduce exposures	No further action

The detected concentrations of TCE and 1,1,1-TCA suggest that all of the "unknown" decisions for carbon tetrachloride and PCE are insignificant with regards to decision-making on recommended actions because mitigation or monitoring are warranted at all interior sampling locations based primarily on detected concentrations of TCE and to a lesser extent on detected concentrations of 1,1,1-TCA. The evaluation suggests that mitigation appears warranted beneath the building at sample locations SSV-07/IA-07 and SSV-08/IA-08 and may also be warranted beneath the northeastern quadrant of the building (sample location SSV-09/IA-09).

4.1 DESCRIPTION OF RECOMMENDED ACTIONS

Based on data from the evaluation and comments received from the NYSDEC dated 23 December 2008, ERM recommends mitigation and additional monitoring of potential vapor intrusion beneath the facility. The following specific actions are recommended based on the results of the vapor intrusion evaluation and comments received from the NYSDEC.

1. Vapor extraction should continue through piping recently installed during abandonment of the varnish pit until a full-scale SSD system is installed and operational.
2. SSD system components including a selected number of suction points (i.e., sub-slab extraction points) and vacuum monitoring points should be installed and pilot tested to provide for mitigation of potential vapor intrusion beneath the building and to provide additional data on radius of influence from suction points.
3. The results of the pilot test will be communicated to the NYSDEC for review and comment. The SSD system should remain operational after completion of the pilot test. If necessary, additional suction points or vacuum monitoring points may be recommended based on the results of the pilot test.

The proposed SSD system will include suction points specifically designed for sub-slab vapor extraction that will be installed at the bottom of the concrete flooring after removal of 6- to 12-inches of material beneath the floor. The suction points and vacuum monitoring points will be installed in a phased approach to allow pilot testing to confirm radius of influence and facilitate proper spacing of additional extraction points and vacuum monitoring as necessary. ERM provided a conceptual design for a full-scale SSD system to the NYSDEC for review and comment in the Remedial Action Work Plan dated October 2009 (ERM, 2009).

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ERM, 2008. Vapor Intrusion Evaluation Report, Greif, Inc. Facility, Town of Tonawanda, Erie County, New York. NYSDEC VCP Number V00334-9, ERM Project Number 0070448, October 2008.

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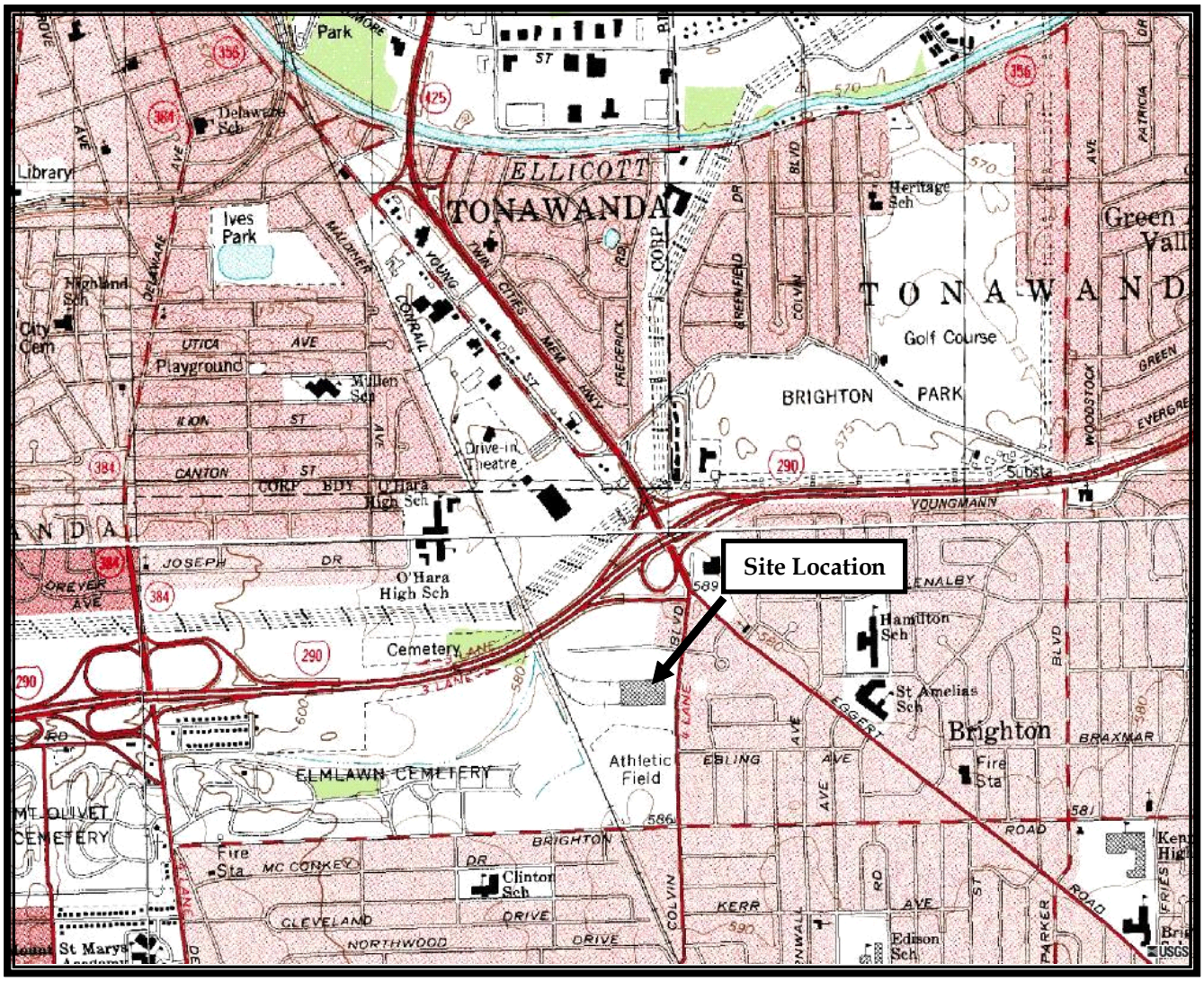
NYSDEC, 2008. Letter dated 23 December 2008 from Michael Hinton, P.E. (NYSDEC) to Robert Powell, C.S.P. (Sonoco Products Company) containing NYSDEC and NYSDOH comments on the Vapor Intrusion Evaluation Report dated October 2008.

NYSDOH, 2006. Guidance for evaluating soil vapor intrusion in the State of New York (Final). New York State Department of Health, Center for Environmental Health, Bureau of Environmental Exposure Investigation, Albany, October 2006, 92 pp.

Figures



Buffalo NE Quadrangle
New York
7.5 Minute Series

SCALE 1 : 24,000

1 .5 0 1 MILE

CONTOUR INTERVAL 20 FEET

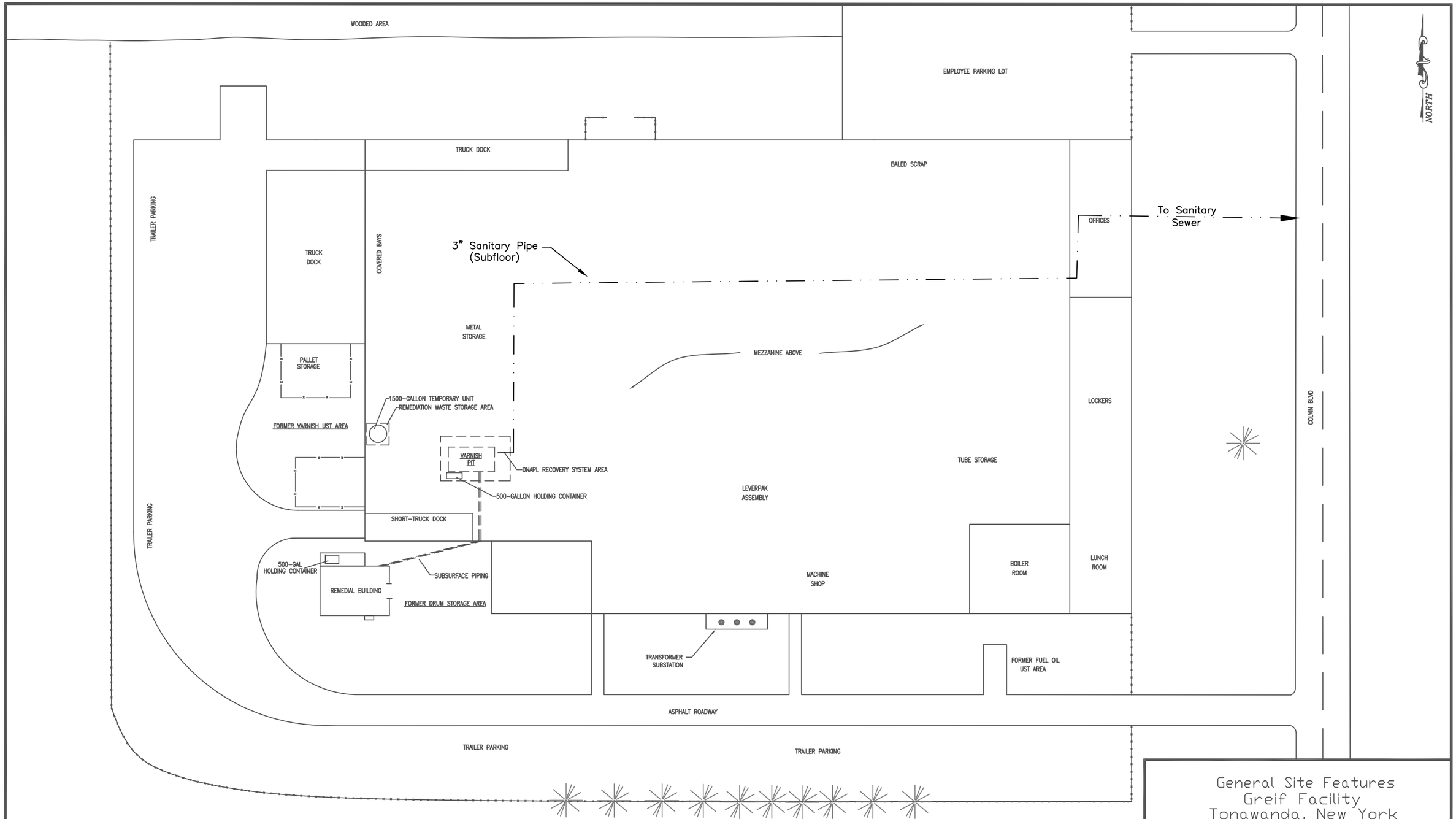
Site Location Map
Grief Facility
Tonawanda, New York
NYSDEC VCP# V00334-9

PREPARED FOR
Sonoco Products Company

ERM
5788 WIDEWATERS PARKWAY
DEWITT, NEW YORK 13214

SCALE	FIGURE
NTS	1
DATE	
5/07	

PROJECT#0070448



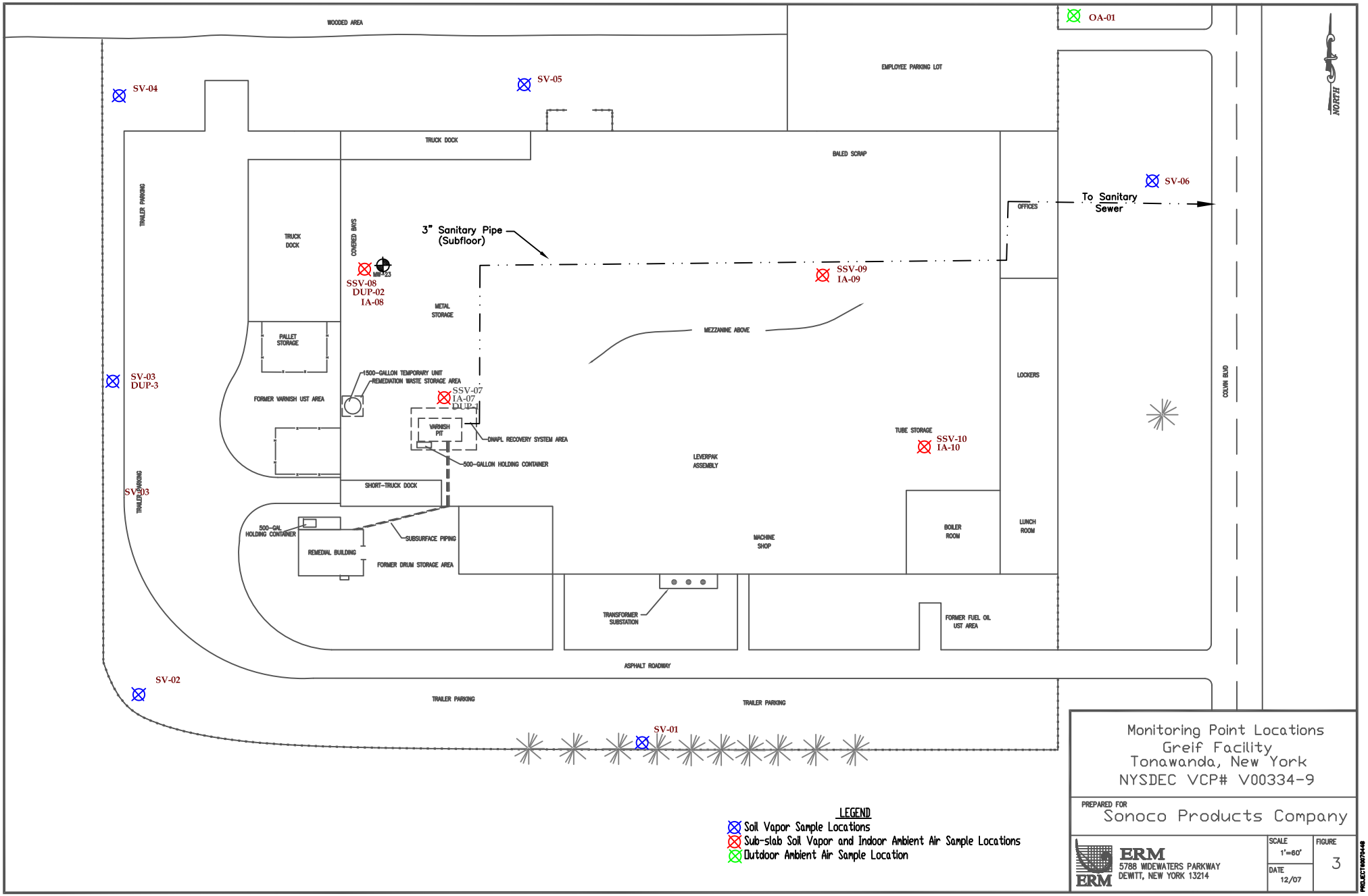
General Site Features
Greif Facility
Tonawanda, New York
NYSDEC VCP# V00334-9

PREPARED FOR
Sonoco Products Company

ERM
5788 WIDEWATERS PARKWAY
DEWITT, NEW YORK 13214

SCALE 1"=60'
DATE 12/07
FIGURE 2

PROJECT#0070448



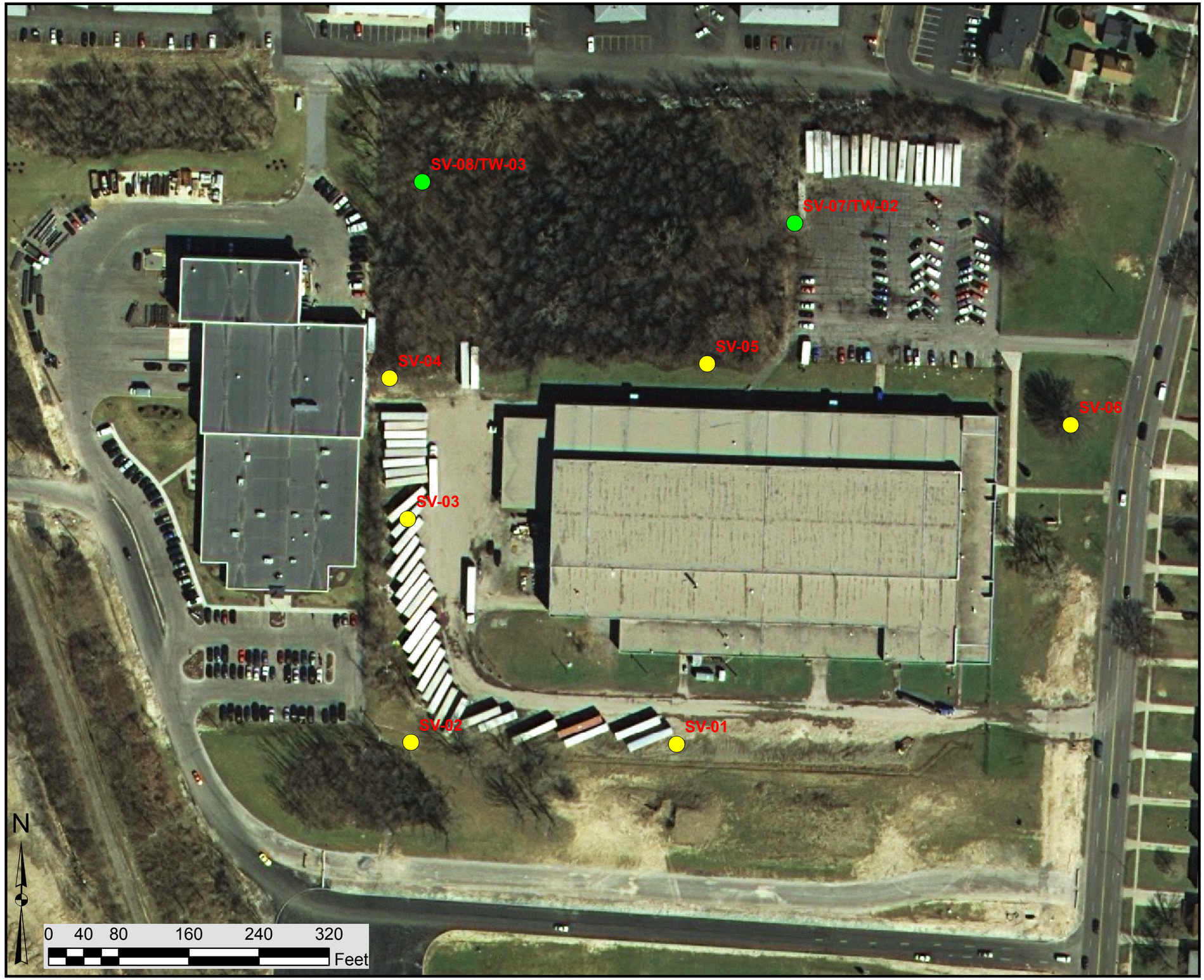
Monitoring Point Locations
Greif Facility
Tonawanda, New York
NYSDEC VCP# V00334-9

PREPARED FOR
Sonoco Products Company

ERM
5788 WIDEWATERS PARKWAY
DEWITT, NEW YORK 13214

SCALE 1"=60'
DATE 12/07
FIGURE 3

PROJECT#407448



Legend

- Soil Vapor Sample / Temporary Well Locations - January 2009
- Soil Vapor Sample Locations - December 2007

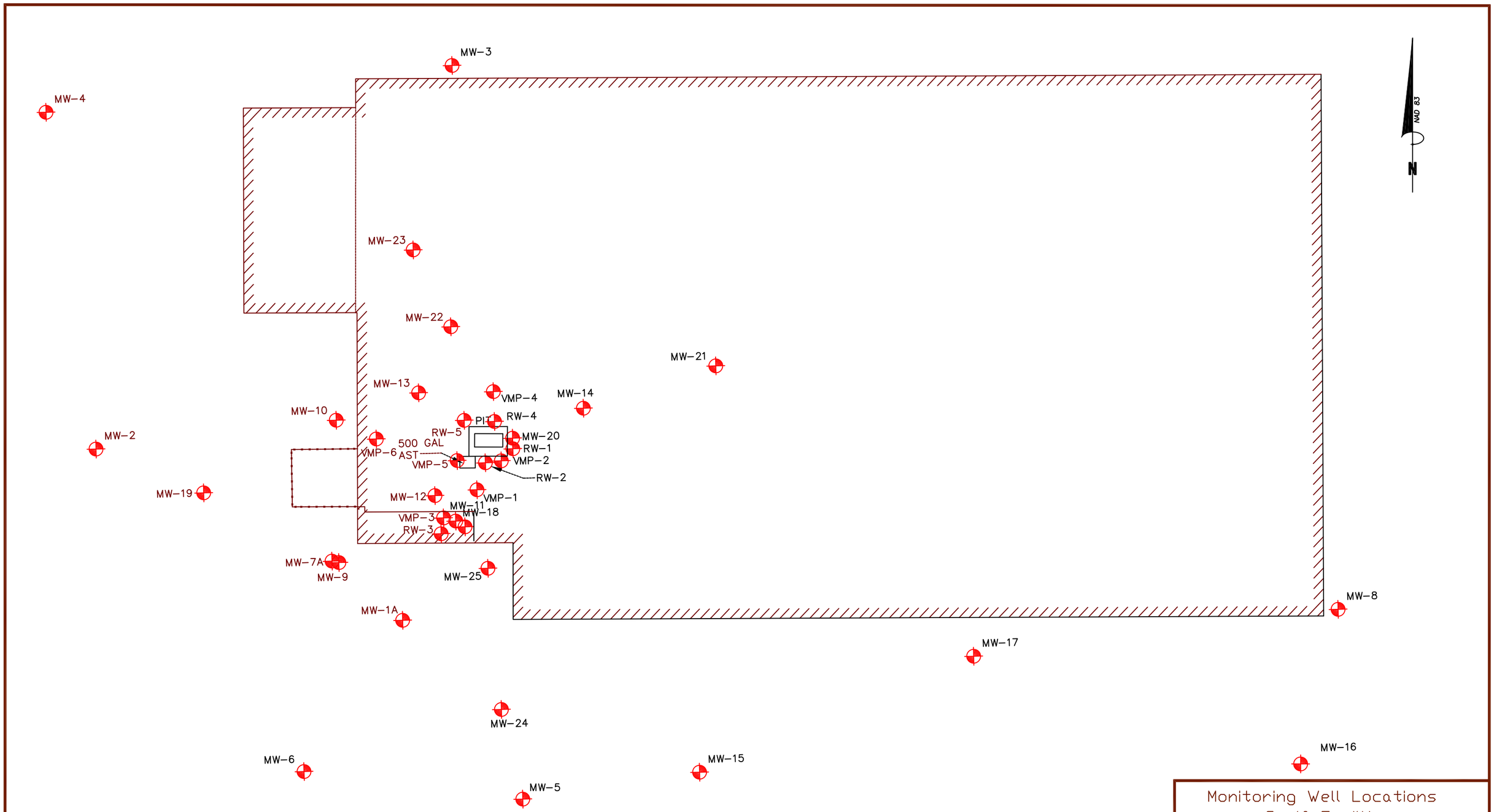
Soil Vapor Sample Locations
Greif Facility
Tonawanda, New York
NYSDEC VCP# V00334-9

PREPARED FOR
Sonoco Products Company

ERM
5788 WIDEWATERS PARKWAY
DEWITT, NEW YORK 13214

SCALE: As Shown
DATE: 03/09
FIGURE: 4

R:\Filepath DocumentName Date



LEGEND

VMP-3 Well Location and Designation

Monitoring Well Locations
Greif Facility
2122 Colvin Boulevard
Tonawanda, New York

PREPARED FOR

SONOCO PRODUCTS COMPANY

ERM
5788 WIDEWATERS PARKWAY
DEWITT, NEW YORK 13214

SCALE 1"=40'

DATE 02/05

FIGURE 5

Tables

TABLE 1 - SUMMARY OF SAMPLES
VAPOR INTRUSION EVALUATION
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9
ERM PROJECT NUMBER 0070448

Sample Designation	Collection Date	Sample Type	Sample Matrix
Greif-IA-07	12-Dec-07	Grab	Indoor Air
Greif-IA-08	12-Dec-07	Grab	Indoor Air
Greif-IA-09	12-Dec-07	Grab	Indoor Air
Greif-IA-10	12-Dec-07	Grab	Indoor Air
Greif-SSV-07	12-Dec-07	Grab	Sub-Slab Vapor
Greif-SSV-08	12-Dec-07	Grab	Sub-Slab Vapor
Greif-SSV-09	12-Dec-07	Grab	Sub-Slab Vapor
Greif-SSV-10	12-Dec-07	Grab	Sub-Slab Vapor
Greif-OA-01	12-Dec-07	Grab	Outdoor Air
Greif-SV-01	12-Dec-07	Grab	Soil Vapor
Greif-SV-02	12-Dec-07	Grab	Soil Vapor
Greif-SV-03	12-Dec-07	Grab	Soil Vapor
Greif-SV-04	12-Dec-07	Grab	Soil Vapor
Greif-SV-05	12-Dec-07	Grab	Soil Vapor
Greif-SV-06	12-Dec-07	Grab	Soil Vapor
Greif-TW-02	12-Mar-09	Grab	Ground Water
Greif-DUP-1	12-Dec-07	Duplicate of Greif-IA-07	Indoor Air
Greif-DUP-2	12-Dec-07	Duplicate of Greif-SSV-08	Sub-Slab Vapor
Greif-DUP-3	12-Dec-07	Duplicate of Greif-SV-03	Soil Vapor

TABLE 2 - SOIL VAPOR SAMPLE RESULTS
VAPOR INTRUSION EVALUATION
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9
ERM PROJECT NUMBER 0070448

Compound	Molar Weight	Greif-SV-01[1]		Greif-SV-02[2]		Greif-SV-03		Greif-DUP-3		Greif-SV-04[2]		Greif-SV-05[1]		Greif-SV-06[1]	
	gram MW	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm
1,1,1-TRICHLOROETHANE	133.4	**30.6**	0.006	ND<2.7	--	**0.9**	0.000	ND<2.7	--	**35.1**	0.006	**27.1**	0.005	**212**	0.039
1,1,2,2-TETRACHLOROETHANE	167.85	ND<17.2	--	ND<3.4	--	ND<1.0	--	ND<3.4	--	ND<3.4	--	ND<6.9	--	ND<6.9	--
1,1,2-TRICHLOROETHANE	133.4	ND<13.6	--	ND<2.7	--	ND<0.8	--	ND<2.7	--	ND<2.7	--	ND<5.5	--	ND<5.5	--
1,1-DICHLOROETHANE	98.96	ND<10.1	--	ND<2.0	--	ND<0.6	--	ND<2.0	--	ND<2.0	--	ND<4.1	--	**4.5**	0.001
1,1-DICHLOROETHENE	96.95	ND<9.9	--	ND<2.0	--	ND<0.6	--	ND<2.0	--	ND<2.0	--	ND<4.0	--	ND<4.0	--
1,2,4-TRIMETHYLBENZENE	120.19	ND<12.3	--	ND<02.5	--	**1.3**	0.000	ND<02.5	--	ND<02.5	--	ND<4.9	--	ND<4.9	--
1,2-DICHLOROETHANE	98.96	ND<10.1	--	ND<2.0	--	ND<0.6	--	ND<2.0	--	ND<2.0	--	ND<4.1	--	ND<4.1	--
2-BUTANONE (MEK)	72.11	ND<7.4	--	ND<1.5	--	**2.4**	0.001	ND<1.5	--	**2.5**	0.001	**4.9**	0.002	**4.4**	0.001
ACETONE	58.08	ND<5.9	--	ND<1.2	--	**3.3**	0.001	ND<1.2	--	**27.6**	0.012	**37.8**	0.016	**63.2**	0.027
BENZENE	78	ND<8.0	--	ND<1.6	--	**2.2**	0.001	ND<1.6	--	ND<1.6	--	ND<3.2	--	ND<3.2	--
CARBON TETRACHLORIDE	153.24	ND<15.7	--	ND<3.2	--	**1.2**	0.000	ND<3.2	--	ND<3.2	--	ND<6.3	--	ND<6.3	--
CHLOROETHANE	50.49	ND<6.6	--	ND<1.3	--	ND<0.4	--	ND<1.3	--	ND<1.3	--	ND<2.6	--	ND<2.6	--
CHLOROFORM	119.38	ND<12.2	--	ND<2.4	--	ND<0.7	--	ND<2.4	--	ND<2.4	--	ND<4.9	--	ND<4.9	--
CIS-1,2-DICHLOROETHENE	96.94	ND<9.9	--	ND<2.0	--	ND<0.6	--	ND<2.0	--	ND<2.0	--	ND<4.0	--	ND<4.0	--
ETHYLBENZENE	106.16	ND<10.8	--	ND<2.2	--	**0.8**	0.000	ND<2.2	--	ND<2.2	--	ND<4.3	--	ND<4.3	--
METHYLENE CHLORIDE	84.93	ND<8.7	--	ND<1.7	--	**3.3**	0.001	ND<1.7	--	**1.8**	0.001	ND<3.5	--	ND<3.5	--
4-METHYL-2-PENTANONE	100.16	ND<10.2	--	ND<2.1	--	ND<0.6	--	ND<2.1	--	ND<2.1	--	ND<4.1	--	ND<4.1	--
P/M-XYLENE	106.17	ND<21.7	--	ND<4.3	--	**2.1**	0.000	ND<4.3	--	ND<4.3	--	ND<8.7	--	ND<8.7	--
O-XYLENE	106.17	ND<10.8	--	ND<2.2	--	**0.8**	0.000	ND<2.2	--	ND<2.2	--	ND<4.3	--	ND<4.3	--
TETRACHLOROETHENE	133.42	ND<17.0	--	ND<3.4	--	**1.2**	0.000	ND<3.4	--	ND<3.4	--	ND<6.8	--	ND<6.8	--
TOLUENE	92.13	ND<9.4	--	ND<1.9	--	**1.7**	0.000	ND<1.9	--	**5.9**	0.002	**6.3**	0.002	**6.9**	0.002
TRANS-1,2-DICHLOROETHENE	133.42	ND<9.9	--	ND<2.0	--	ND<0.6	--	ND<2.0	--	ND<2.0	--	ND<4.0	--	ND<4.0	--
TRICHLOROETHENE	167.85	**14**	0.002	ND<2.7	--	ND<0.8	--	ND<2.7	--	**13.3**	0.002	**20.4**	0.003	**13.4**	0.002
VINYL CHLORIDE	62.5	ND<6.4	--	ND<1.3	--	ND<0.4	--	ND<1.3	--	ND<1.3	--	ND<2.6	--	ND<2.6	--

[1]: could not be analyzed for SIM due to high concentrations of target and/or non-target compounds present in the sample.
[2]: could not be analyzed for SIM due to low pressure of the cans and have a final reporting levels of 0.5ppbv.
ND<2.2: compound not detected at concentrations greater than the listed number.

TABLE 3 - SUB-SLAB VAPOR SAMPLE RESULTS
VAPOR INTRUSION EVALUATION
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9
ERM PROJECT NUMBER 0070448

Compound	Molar Weight	Greif-SSV-07[1]		Greif-SSV-08[2]		Greif-DUP-2[1]		Greif-SSV-09[1]		Greif-SSV-10[1]	
	gram MW	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3	ppm
1,1,1-TRICHLOROETHANE	133.4	**23,897**	4.380	**6.2**	0.001	**12,800**	2.346	**797**	0.146	ND<54.6	--
1,1,2,2-TETRACHLOROETHANE	167.85	ND<174	--	ND<1.0	--	ND<409	--	ND<34.3	--	ND<68.7	--
1,1,2-TRICHLOROETHANE	133.4	ND<139	--	ND<0.8	--	ND<325	--	ND<27.3	--	ND<54.6	--
1,1-DICHLOROETHANE	98.96	**806**	0.199	**3.9**	0.001	**2,940**	0.726	ND<20.2	--	ND<40.5	--
1,1-DICHLOROETHENE	96.95	**1,180**	0.298	**17**	0.004	**6,630**	1.672	ND<19.8	--	ND<39.7	--
1,2,4-TRIMETHYLBENZENE	120.19	ND<125	--	ND<0.7	--	ND<293	--	ND<24.6	--	ND<49.2	--
1,2-DICHLOROETHANE	98.96	ND<103	--	ND<0.6	--	ND<241	--	ND<20.2	--	ND<40.5	--
2-BUTANONE (MEK)	72.11	ND<74.9	--	**2.2**	0.001	ND<175	--	ND<14.7		ND<29.5	--
ACETONE	58.08	**214**	0.090	**15.3**	0.006	**710**	0.299	**15**	0.006	ND<23.8	--
BENZENE	78	ND<81	--	**1.1**	0.000	ND<190	--	ND<16.0	--	ND<31.9	--
CARBON TETRACHLORIDE	153.24	ND<160	--	**1.4**	0.000	ND<374	--	ND<31.5	--	ND<62.9	--
CHLOROETHANE	50.49	ND<67	--	ND<0.4	--	ND<157	--	ND<13.2	--	ND<26.4	--
CHLOROFORM	119.38	ND<124	--	ND<0.7	--	ND<290	--	ND<24.3	--	ND<48.7	--
CIS-1,2-DICHLOROETHENE	96.94	**246**	0.062	**0.6**	0.000	**519**	0.131	ND<19.8	--	ND<39.7	--
ETHYLBENZENE	106.16	ND<110	--	ND<0.7	--	ND<258	--	ND<21.7	--	ND<43.4	--
METHYLENE CHLORIDE	84.93	ND<88.2	--	**2.5**	0.001	ND<207	--	ND<17.4	--	ND<34.7	--
4-METHYL-2-PENTANONE	100.16	ND<104	--	ND<0.6	--	ND<244	--	ND<20.5	--	ND<41.0	--
P/M-XYLENE	106.17	ND<220	--	**1.4**	0.000	ND<516	--	ND<43.4	--	ND<86.7	--
O-XYLENE	106.17	ND<110	--	ND<0.7	--	ND<258	--	ND<21.7	--	ND<43.4	--
TETRACHLOROETHENE	133.42	ND<172	--	ND<1.0	--	ND<403	--	ND<33.9	--	ND<67.8	--
TOLUENE	92.13	ND<95.6	--	**5.2**	0.001	**313**	0.083	ND<18.8	--	ND<37.6	--
TRANS-1,2-DICHLOROETHENE	133.42	ND<101	--	ND<0.6	--	ND<236	--	ND<19.8	--	ND<39.7	--
TRICHLOROETHENE	167.85	**9,940**	1.448	**3.5**	0.001	**32,500**	4.734	**82.2**	0.012	**225**	0.033
VINYL CHLORIDE	62.5	ND<64.9	--	ND<0.4	--	ND<152	--	ND<12.8	--	ND<25.6	--

[1]: could not be analyzed for SIM due to high concentrations of target and/or non-target compounds present in the sample. These are qualified appropriately.

[2]: could not be analyzed for SIM due to low pressure of the cans and have a final reporting levels of 0.5ppbv.

ND<2.2: compound not detected at concentrations greater than the listed number.

TABLE 4 - INDOOR & OUTDOOR AIR SAMPLE RESULTS
VAPOR INTRUSION EVALUATION
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9
ERM PROJECT NUMBER 0070448

Compound	Molar Weight	INDOOR										OUTDOOR	
		Greif-IA-07		**Greif-DUP-1[2]**		**Greif-IA-08[1]**		**Greif-IA-09[1]**		**Greif-IA-10[2]**		**Greif-OA-01**	
	gram MW	µg/m3	ppm	µg/m3	ppm	µg/m3	ppm	µg/m3	ppm	µg/m3	ppm	µg/m3	ppm
1,1,1-TRICHLOROETHANE	133.4	**12.8**	0.002	**36**	0.007	ND<27.3	--	ND<27.3	--	ND<2.7	--	**2.9**	0.001
1,1,2,2-TETRACHLOROETHANE	167.85	ND<3.4	--	ND<3.4	--	ND<34.3	--	ND<34.3	--	ND<3.4	--	ND<1.0	--
1,1,2-TRICHLOROETHANE	133.4	ND<2.7	--	ND<2.7	--	ND<27.3	--	ND<27.3	--	ND<2.7	--	ND<0.8	--
1,1-DICHLOROETHANE	98.96	ND<2.0	--	ND<2.0	--	ND<20.2	--	ND<20.2	--	ND<2.0	--	ND<0.6	--
1,1-DICHLOROETHENE	96.95	ND<2.0	--	ND<2.0	--	ND<19.8	--	ND<19.8	--	ND<2.0	--	ND<0.6	--
1,2,4-TRIMETHYLBENZENE	120.19	ND<02.5	--	ND<02.5	--	ND<24.6	--	ND<24.6	--	ND<02.5	--	ND<0.7	--
1,2-DICHLOROETHANE	98.96	ND<2.0	--	ND<2.0	--	ND<20.2	--	ND<20.2	--	ND<2.0	--	ND<0.6	--
2-BUTANONE (MEK)	72.11	ND<1.5	--	ND<1.5	--	ND<14.7	--	ND<14.7	--	ND<1.5	--	**1.2**	0.000
ACETONE	58.08	**11.9**	0.005	**15.1**	0.006	**14**	0.006	**20.4**	0.009	ND<1.2	--	**6.3**	0.003
BENZENE	78	ND<1.6	--	**2.3**	0.001	ND<16.0	--	ND<16.0	--	ND<1.6	--	**1.0**	0.000
CARBON TETRACHLORIDE	153.24	ND<3.2	--	ND<3.2	--	ND<31.5	--	ND<31.5	--	ND<3.2	--	**1.4**	0.000
CHLOROETHANE	50.49	ND<1.3	--	ND<1.3	--	ND<13.2	--	ND<13.2	--	ND<1.3	--	ND<0.7	--
CHLOROFORM	119.38	ND<2.4	--	ND<2.4	--	ND<24.3	--	ND<24.3	--	ND<2.4	--	ND<0.7	--
CIS-1,2-DICHLOROETHENE	96.94	ND<2.0	--	ND<2.0	--	ND<19.8	--	ND<19.8	--	ND<2.0	--	ND<0.6	--
ETHYLBENZENE	106.16	ND<2.2	--	ND<2.2	--	ND<21.7	--	ND<21.7	--	ND<2.2	--	**0.9**	0.000
METHYLENE CHLORIDE	84.93	ND<1.7	--	ND<1.7	--	ND<17.4	--	ND<17.4	--	**3.6**	0.001	**1.0**	0.000
4-METHYL-2-PENTANONE	100.16	ND<2.1	--	ND<2.1	--	ND<20.5	--	ND<20.5	--	ND<2.1	--	ND<0.6	--
P/M-XYLENE	106.17	ND<4.3	--	ND<4.3	--	ND<43.4	--	ND<43.4	--	ND<4.3	--	**1.6**	0.000
O-XYLENE	106.17	ND<2.2	--	ND<2.2	--	ND<21.7	--	ND<21.7	--	ND<2.2	--	**1.0**	0.000
TETRACHLOROETHENE	133.42	ND<3.4	--	ND<3.4	--	ND<33.9	--	ND<33.9	--	ND<3.4	--	**1.1**	0.000
TOLUENE	92.13	**6.6**	0.002	**9.4**	0.002	ND<18.8	--	ND<18.8	--	**6.9**	0.002	**5.1**	0.001
TRANS-1,2-DICHLOROETHENE	133.42	ND<2.0	--	ND<2.0	--	ND<19.8	--	ND<19.8	--	ND<2.0	--	ND<0.6	--
TRICHLOROETHENE	167.85	**5.9**	0.001	**15.8**	0.002	ND<26.9	--	ND<26.9	--	ND<2.7	--	**1.6**	0.000
VINYL CHLORIDE	62.5	ND<1.3	--	ND<1.3	--	ND<12.8	--	ND<12.8	--	ND<1.3	--	ND<0.4	--

[1]: could not be analyzed for SIM due to high concentrations of target and/or non-target compounds present in the sample. These are qualified appropriately.

[2]: could not be analyzed for SIM due to low pressure of the cans and have a final reporting levels of 0.5ppbv.

ND<2.2: compound not detected at concentrations greater than the listed number.

TABLE 5 - GROUND WATER SAMPLE RESULTS
VAPOR INTRUSION EVALUATION
GREIF FACILITY - TONAWANDA, NEW YORK
NYSDEC VCP NUMBER V00334-9
ERM PROJECT NUMBER 0070448

Compound	SAMPLE **Greif-TW-02** (µg/l)
1,1,1-TRICHLOROETHANE	ND<2
1,1,2,2-TETRACHLOROETHANE	ND<2
1,1,2-TRICHLOROETHANE	ND<2
1,1-DICHLOROETHANE	ND<2
1,1-DICHLOROETHENE	ND<2
1,2,4-TRIMETHYLBENZENE	ND<5
1,2-DICHLOROETHANE	ND<2
2-BUTANONE (MEK)	ND<10
ACETONE	ND<10
BENZENE	ND<0.7
CARBON TETRACHLORIDE	ND<2
CHLOROETHANE	ND<2
CHLOROFORM	ND<2
CIS-1,2-DICHLOROETHENE	ND<2
ETHYLBENZENE	ND<2
METHYLENE CHLORIDE	ND<5
4-METHYL-2-PENTANONE	ND<5
P/M-XYLENE	ND<2
O-XYLENE	ND<2
TETRACHLOROETHENE	ND<2
TOLUENE	ND<2
TRANS-1,2-DICHLOROETHENE	ND<2
TRICHLOROETHENE	ND<2
VINYL CHLORIDE	ND<2

ND<2 = the compound was not detected at the indicated reporting limit.

Appendix A
Field Forms

ERM

5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number: SV-1

BORING LOG

Project Name & Location: Greif	Project Number: 0070448	Date & Time Started: 12/10/07 10:25	
Drilling Company: Trec	Foreman: Paul Willey	Sampler(s): —	Sampler Hammer: — / Drop: —
Drilling Equipment: Geoprobe	Method: Direct Push	Elevation & Datum: —	Completion Depth: 4' / Rock Depth: —
Bit Size(s):	Core Barrel(s):	Geologist(s): R. Sents	

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION: Gravel Parking Lot	
0		3.9	0.0	NM	mod. brown, silt to sm gravel, moist	
1			0.0		reddish brown silt, some fine sand, moist	
					↓	
2			0.0		↓	
					reddish brown silt, some clay, moist	
3			0.0		↓	
					↓	
4					↓	
5						
6						
7						
8						
9						
10						

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ERM

5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number SV-2

ERM

BORING LOG

Project Name & Location: Greif	Project Number: 0070448	Date & Time Started: 12/10/07 10:40	
Drilling Company: Trec	Foreman: Paul Willey	Sampler(s): —	Sampler Hammer: — / Drop: —
Drilling Equipment: Geoprobe	Method: Direct Push	Elevation & Datum: —	Completion Depth: 4' / Rock Depth: —
Bit Size(s):	Core Barrel(s):	Geologist(s): R. Sents	

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION: Grass	
0		1.5	0.0	NM	mod brown silt, some clay/ moist	
1			0.6		mod brown silt and mod. subround gravel, moist	
			0.0		mod. brown silt and clay, moist	
2						
3						
4						
5						
6						
7						
8						
9						
10						

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ERM

5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number SV-3

BORING LOG

Project Name & Location: Greif	Project Number: 0070448	Date & Time Started: 12/10/07 11:30	
Drilling Company: Trec	Foreman: Paul Willey	Sampler(s): —	Sampler Hammer: — / Drop: —
Drilling Equipment: Geoprobe	Method: Direct Push	Elevation & Datum: —	Completion Depth: 4' / Rock Depth: —
Bit Size(s):	Core Barrel(s):	Geologist(s): R. Sents	

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION: Gravel Parking lot	
0		4.0	0.3	NM	Dark brown, silt and coarse sand to sm. subround gravel, moist	
1			0.6		Dark brown silt, some coarse sand moist	
			1.2		Reddish brown, silt, some clay moist	
			13.7			
2			36.7			
			28.3			
3			26.7			
			45.6			
4						
5						
6						
7						
8						
9						
10						

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ERM

5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number SV-34

BORING LOG

Project Name & Location	Project Number	Date & Time Started: / Date & Time Completed:		
Drilling Company	Foreman	Sampler(s)	Sampler Hammer	Drop
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock Depth
Bit Size(s)	Core Barrel(s)	Geologist(s)		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION: Grass	
0		4.0	0.0		mod brown silt and fines sand trace clay	
1					reddish brown silt, trace clay moist	
			0.0			
2			0.0			
3			0.0			
			0.0		mod brown silt and fine sand moist	
4						
5						
6						
7						
8						
9						
10						

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ERM

5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number SV-5

BORING LOG

Project Name & Location: Greif	Project Number: 0070448	Date & Time Started: 12/10/07 11:55	
Drilling Company: Trec	Foreman: Paul Willey	Sampler(s): —	Sampler Hammer: — / Drop: —
Drilling Equipment: Geoprobe	Method: Direct Push	Elevation & Datum: —	Completion Depth: 4' / Rock Depth: —
Bit Size(s):	Core Barrel(s):	Geologist(s): R. Sents	

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION: Grass	
0		4.0	0.0	NM	Dark brown, silt, some fine sand	organic matter throughout
1			0.0		Reddish brown silt and fine sand, moist	
			0.0		Greyish brown, silt, moist	
2			0.0			
3			0.0		mod brown silt, some fine sand, moist	
4			0.0			
5						
6						
7						
8						
9						
10						

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ERM

5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number: SV-6

BORING LOG

Project Name & Location: Greif	Project Number: 0070448	Date & Time Started: / Date & Time Completed: 12/10/07 12:05	
Drilling Company: Trec	Foreman: Paul Willey	Sampler(s): —	Sampler Hammer: — / Drop: —
Drilling Equipment: Geoprobe	Method: Direct Push	Elevation & Datum: —	Completion Depth: 4' / Rock Depth: —
Bit Size(s):	Core Barrel(s):	Geologist(s): R. Sents	

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	FID/PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	LOCATION:				SURFACE DESCRIPTION: Grass	
0		3.6	0.0	NM	Dark brown silt and fine sand, moist	
1					Grayish brown, silt, some fine sand, moist	"hand"
			0.0			
2			0.0		Dark grayish brown silt moist	
3			0.0			
4						
5						
6						
7						
8						
9						
10						

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ERM
5788 Widewaters Parkway
Dewitt, New York 13214

Boring Number: SV-07/TW-02

BORING LOG

Project name & location: Greif, Inc. Tonawanda, NY	**Project number** 96528	**Date Started:** 1/27/09 **Time:**	**Date Completed:** 1/27/09 **Time:**
Drilling company Nothnagle	**Geologist** —	**Sampler(s)** MacroCore	**Sampler hammer** Auto **Drop** —
Drilling equipment 6610 DT Geoprobe	**Method** Direct Push	**Elevation & datum** —	**Completion depth** 18' **Rock depth** —
Bit(s) —	**Core barrel(s)** —	**Inspector(s)** R. Sents	

DEPTH (feet below grade)	SAMPLES: Sample Number	Recovery (feet)	FID / PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
0	BORING LOCATION:				SURFACE DESCRIPTION:	
0		2.2	0.0	NM	Dark brown, silt to medium angular gravel, moist, loose	
1			0.0		Dark brown silt, some fine sand, moist, firm	(80/20)
			0.0		medium brown, silt, some clay, firm, moist	
2			0.0			
	1					
3						
4						
		4.0	0.0		Grayish brown, clay and silt, moist soft	(70/30)
5			0.0		Grayish brown clay and silt, very stiff, moist	
			0.0		marbled reddish brown and grayish brown, clay and silt, firm moist	(70/30)
6	2					
			0.0			
7						
			0.0			
8						
		4.0	0.0		medium brown silt to med. sand and small subrounded gravel, saturated, firm	(40/30/30)
9			0.3			
					reddish brown clay, some silt very firm, moist	(90/10)
10	3		0.0		marbled reddish brown and grayish brown clay and silt, firm moist	(60/40)

Page: 1 **of** 2 **Signature:** [signature] **Date:** 1/27/09

ERM
5788 Widewaters Parkway
Dewitt, New York 13214

Boring Number: SV-07/TW-02

BORING LOG

DEPTH (feet below grade)	SAMPLES: Sample Number	Recovery (feet)	FID / PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
10						
		4.0	0.0	NM	Same as above	
11	3					
			0.0		Reddish brown clay and silt, moist, firm	(60/40)
12						
		3.0	0.6		Mottled reddish brown and grayish brown clay and silt saturated, soft	(60/40)
13						
	4		0.0			
14					Reddish brown silt and clay, some coarse sand to small subround gravel, saturated, very soft	
			0.0			
15						
		1.2	0.0		Grayish brown silt and clay mottled with Reddish brown silt and fine sand	80% silty clay 20% silty sand
16			0.0			
			0.1			
17	5					
18						
19						
20						
21						
22						

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Signature: [signature]

Date: 1/27/09

ERM
5788 Widewaters Parkway
Dewitt, New York 13214

Boring Number: SV-08 / TW-03

BORING LOG

Project name & location: Greif, Inc. Tonawanda, NY	**Project number** 96528	**Date Started:** 1/27/09 **Time:**	**Date Completed:** 1/27/09 **Time:**
Drilling company Nothnagle	**Geologist** —	**Sampler(s)** MacroCore	**Sampler hammer** Auto **Drop** —
Drilling equipment 6610 DT Geoprobe	**Method** Direct Push	**Elevation & datum** —	**Completion depth** 18' **Rock depth** —
Bit(s) —	**Core barrel(s)** —	**Inspector(s)** R. Sents	

DEPTH (feet below grade)	SAMPLES: Sample Number	Recovery (feet)	FID / PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
	BORING LOCATION:				SURFACE DESCRIPTION:	
0		1.8	0.0	NM	Dark gray, silt and sand, some clay, moist, firm	(60/30/10)
1			0.2		Marbled reddish brown and grayish brown, silt and clay, some	
			0.1		fine sand, moist, firm	(60/40)
2	1					
3						
4		4.0	0.0		Marbled reddish brown and grayish brown silt and clay, some fine sand	(50/40/10)
5					Marbled reddish brown and grayish brown silt and clay, moist, firm	(60/40)
			0.0			
6	2				Marbled reddish brown and grayish brown, clay and silt, moist	(70/30)
			0.0			
7			0.0		same as above	
8		4.0	0.0		Marbled reddish brown and grayish brown silt, some clay, wet, soft	(80/20)
9			0.0		Grayish brown, silt and clay moist, soft and reddish	
10	3		0.0		brown fine sand and silt lenses	

Signature: [signature]

Date: 1/27/09

ERM
5788 Widewaters Parkway
Dewitt, New York 13214

Boring Number: SV-08/TW-03

BORING LOG

DEPTH (feet below grade)	SAMPLES: Sample Number	Recovery (feet)	FID / PID (ppm)	Blow Counts	SOIL DESCRIPTION	REMARKS
10						
		4.0	0.0	NM	Grayish brown clay and silt very soft, wet	
11	3					
			0.0			
12					Same as above	
		3.2	0.0		Marbled reddish brown and grayish brown clay and silt, saturated	(70/30)
13					marbled grayish brown silty clay and reddish brown silty sand saturated, soft	(60/40)
	4		0.1			
14						
			0.0		marbled reddish brown and grayish brown silt and clay/ moist	(60/40)
15						
		3.0	0.0		Same as above	
16						
			0.0		marbled reddish brown and grayish brown clay and silt, moist	(60/40)
17	5					
			0.0			
18						
19						
20						
21						
22						

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Signature: [signature]

Date: 1/27/09

ERM

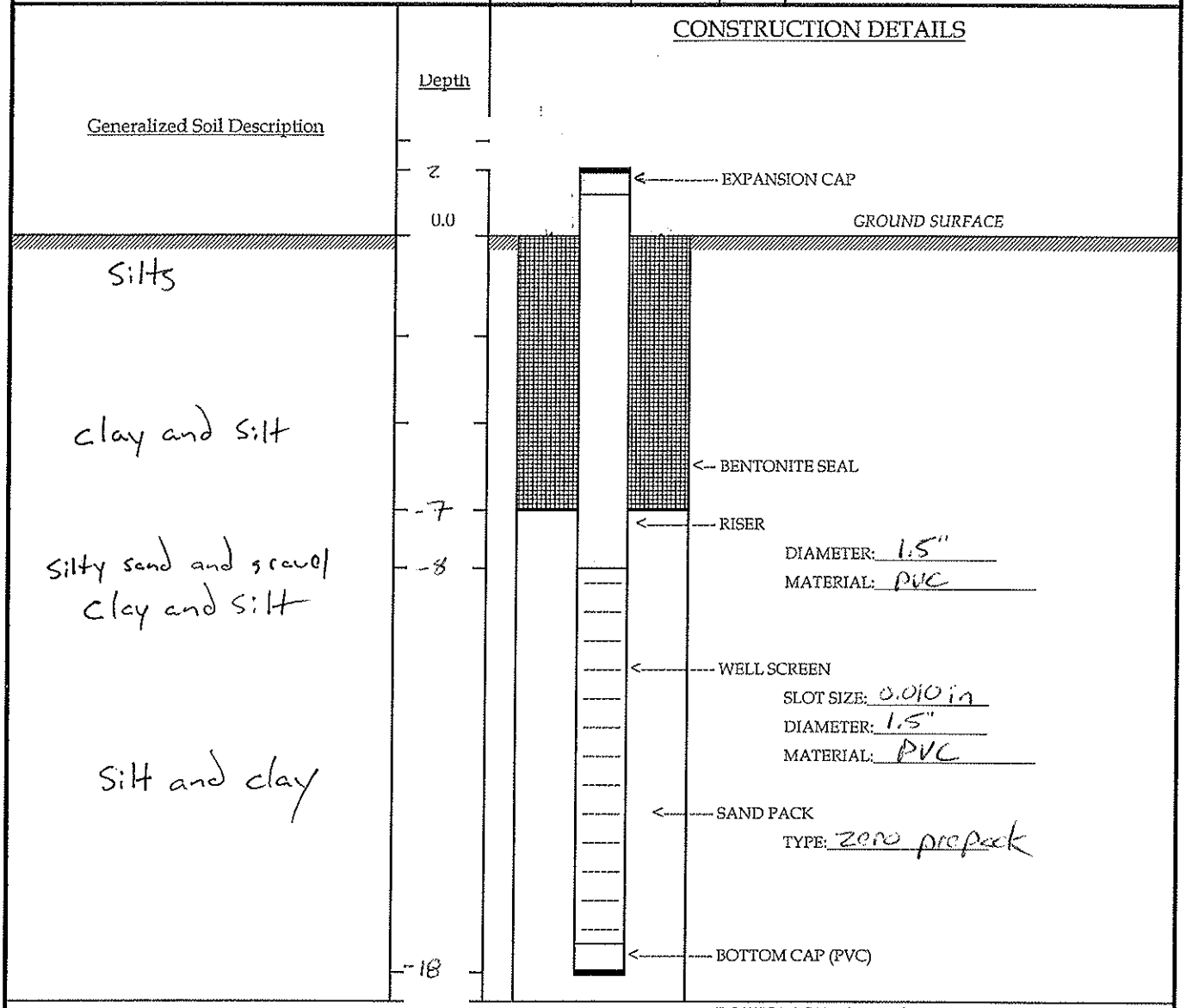
WELL: TW-02

5788 Widewaters Parkway, Dewitt, NY 13214 (315) 445-2554

MONITORING WELL CONSTRUCTION

Project Name	Water Level(s) (ft below top of casing)			Location
Groff, Inc. - Additional VI				Tonawanda, New York
Drilling Company / Foreman	Date	Time	Level (feet)	Project No.
Nothnagle				0096528
Date and Time of Completion	3/29/09	9:45	Dry	Geologist
27 January 2009	3/12/09	12:10	10.91	R. Santy

CONSTRUCTION DETAILS



REMARKS Soil was saturated at 8ft bgs.

ERM

WELL: TW-03

5788 Widewaters Parkway, Dewitt, NY 13214 (315) 445-2554

MONITORING WELL CONSTRUCTION

Project Name	Water Level(s) (ft below top of casing)			Location
Greif, Inc. - Additional VI				Tonawanda, NY
Drilling Company / Foreman	Date	Time	Level (feet)	Project No.
Nothnagle				0096528
Date and Time of Completion	1/29/09	10:05	dry	Geologist
27 January 2009	3/12/09	13:45	dry	R. Sontz

CONSTRUCTION DETAILS

Generalized Soil Description

Depth

2 — EXPANSION CAP

0.0 — GROUND SURFACE

silty sand
silt and clay

clay and silt

-7 — BENTONITE SEAL

silt and clay

-8 — RISER
DIAMETER: 1.5"
MATERIAL: PVC

clay and silt

WELL SCREEN
SLOT SIZE: 0.010 in
DIAMETER: 1.5"
MATERIAL: PVC

silt and clay

SAND PACK
TYPE: Zoro prepack

clay and silt

-18 — BOTTOM CAP (PVC)

BOTTOM OF BOREHOLE

REMARKS: soil wet from 8-12 ft bgs becoming saturated at 12 ft bgs.

Low-Flow Groundwater Sampling Form

Site Name

Site Address:

ERM

Well ID: TW-02

Date: 3/12/09

Sampling Personnel: R. Sants

Weather Conditions: ± 35°f, clear, wind 0-5mph out of NW

Time: 12:10 → 13:10

File Name: Sunoco/Toxwanda/0016528/Task 02

Total Depth (T.D.): 18 ft bgs, 20ft total

Depth to Water (D.T.W): (1) 10.91 ft

Total Volume Purged: ~0.75 gallons

Purge Rate: 90-300 ml/min

Tubing Type: polyethylene

Pump Intake (ft below M.P.): 19.50 ft

Screen Length: 10 ft

Well Diameter: 1.5"

Casing Type: PVC

Sampling Device: Peristaltic

Measuring Point: TOC east side

color: clear odor: none

Time: (min)	DTW: (feet)	Comments:	Temp (°C)	SpC (uS/cm)	Cond (uS/cm)	DO (mg/L)	pH (std units)	Turb NTU	ORP mV	Flow (ml/min)
Stabalization Criteria[2]	(see note below)[3]		+/- 3%	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10%[4]	+/- 10 mV	100-400
12:24	11.49	decrease flow	9.74	1710	1.210	7.01	7.78	23.9	21.9	300
12:29	13.57	rate	8.85	1694	1.171	2.55	7.14	22.4	46.5	175
12:34	16.16	" "	8.54	1663	1.140	1.69	7.02	17.2	49.1	100
12:39	17.31		8.29	1666	1.134	1.14	7.14	12.8	34.6	90
12:44	17.96		7.46	1679	1.126	1.00	7.11	12.8	38.4	90
12:49	18.65		7.63	1677	1.115	0.44	7.02	6.85	45.4	90
12:54	19.11		7.73	1674	1.114	0.85	6.97	3.61	49.1	90
12:59	19.21		7.65	1675	1.121	0.83	6.95	2.97	57.0	90
13:04	19.39		7.69	1677	1.120	0.86	6.91	2.18	55.2	90
13:05		sample collected								

Sampling Time: 13:05

Samples Collected: Grab TW-02

Analysis Requested: Site specific VOC list by 8260

Preservative: HCl

Notes:

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.

(2) - Stabilization criteria based on three most recent consecutive measurements.

(3) - Total drawdown in well to be less than 0.1 m (0.32 ft). Purging rate to be lowered as necessary to keep drawdown below 0.1 m (0.32 ft).

(4) +/- 10% when turbidity is over 10 NTUs.

Appendix B
Photographic Log –
Additional Investigation

APPENDIX B
PHOTOLOG

Project Name:	Greif, Inc.	VCP Number:	V00334-9
Project No.:	0096528	Date:	15 June 2009
Prepared By:	R. Sents/J. Fox		

NOTES

27-Jan-09: Completion of soil boring SV-07/temporary well TW-02 on the north side of the Greif Facility in the NYSDEC-approved location.

NOTES

27-Jan-09: Photograph showing the initially attempted investigation area north of monitoring well MW-3 in the wooded area between the Greif facility and the apartment buildings to the north. The standing water just below the snow was exposed when the track-mounted Geoprobe rig used to install the soil vapor sampling points and temporary wells broke through the ice. The sampling location was moved to the eastern edge of the wooded area after on site consultation with the NYSDEC based on the distribution of standing water.

APPENDIX B
PHOTOLOG

Project Name:	Greif, Inc.	VCP Number:	V00334-9
Project No.:	0096528	Date:	15 June 2009
Prepared By:	R. Sents/J. Fox		

NOTES

27-Jan-09: Temporary monitoring well TW-03 (arrow) installed north of monitoring well MW-4 as requested by the NYSDEC. ERM's drilling subcontractor is preparing to install the soil vapor monitoring point.

NOTES

27-Jan-09: Photograph showing Teflon™ tubing which is attached the soil vapor sampling point set 5-feet below ground surface. The tubing is protruding through the hydrated bentonite seal.

APPENDIX B
PHOTOLOG

Project Name:	Greif, Inc.	VCP Number:	V00334-9
Project No.:	0096528	Date:	15 June 2009
Prepared By:	R. Sents/J. Fox		

NOTES

28-Jan-09: The seals on each of the soil vapor monitoring points were allowed to set overnight and were tested using helium prior to setting up the Summa canisters.

NOTES

28-Jan-09: This photograph shows the set up of the soil vapor sampling canisters at SV-08 located north of MW-4. The canister was placed in a fiber drum and then covered with polyethylene sheeting to protect the sampling equipment from the weather.

APPENDIX B
PHOTOLOG

Project Name:	Greif, Inc.	VCP Number:	V00334-9
Project No.:	0096528	Date:	15 June 2009
Prepared By:	R. Sents/J. Fox		

NOTES

2-Mar-09: Due to failure of active sampling methods in this area using Summa canisters, ERM received approval from the NYSDEC to install passive axial sorbent tubes for analysis of VOCs of interest using USEPA Method TO-17. ERM remobilized to the Site to install the sorbent tubes in the wooded area between the Greif facility and the apartments to the north. Perched ground water slightly below ground surface was encountered in each of the NYSDEC-approved sampling locations which prevented the installation of the passive sorbent tubes. A reflection of light from the top of ground water can be seen within the borehole.

NOTES

12-Mar-09: Photograph showing the facility edge of the wooded area between the Greif facility and the apartments to the north. Standing water can be seen in the wooded area.

APPENDIX B
PHOTOLOG

Project Name:	Greif, Inc.	VCP Number:	V00334-9
Project No.:	0096528	Date:	15 June 2009
Prepared By:	R. Sents/J. Fox		

NOTES

12-Mar-09: Photograph showing low flow ground water sampling at TW-02. Five ground water measurements collected between 27-Jan-09 and 12-Mar-09 indicated that there was insufficient ground water present in TW-03 to purge or collect a sample. Therefore, attempts to collect a ground water sample from TW-03 were abandoned with the approval of the NYSDEC.

Appendix C
Laboratory Analytical Reports

Report Date:
09-Jan-08 16:33

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Resources Management
5788 Widewaters Pkwy
Dewitt, NY 13214
Attn: Jon Fox

Project: Greif - Tunawanda, NY
Project 0070448

Laboratory ID	Client Sample ID	Container	Matrix	Date Sampled	Date Received
SA72249-01	Greif-IA-07	Summa canister	Air	12-Dec-07 08:48	13-Dec-07 10:48
SA72249-02	Greif-SSV-07	Summa canister	Air	12-Dec-07 09:38	13-Dec-07 10:48
SA72249-03	Greif-IA-08	Summa canister	Air	12-Dec-07 10:13	13-Dec-07 10:48
SA72249-04	Greif-SSV-08	Summa canister	Air	12-Dec-07 08:50	13-Dec-07 10:48
SA72249-05	Greif-IA-09	Summa canister	Air	12-Dec-07 08:53	13-Dec-07 10:48
SA72249-06	Greif-SSV-09	Summa canister	Air	12-Dec-07 08:53	13-Dec-07 10:48
SA72249-07	Greif-IA-10	Summa canister	Air	12-Dec-07 08:58	13-Dec-07 10:48
SA72249-08	Greif-SSV-10	Summa canister	Air	12-Dec-07 08:58	13-Dec-07 10:48
SA72249-09	Greif-DUP-2	Summa canister	Air	12-Dec-07 00:00	13-Dec-07 10:48
SA72249-10	Greif-DUP-1	Summa canister	Air	12-Dec-07 00:00	13-Dec-07 10:48
SA72249-11	Greif-SV-05	Summa canister	Air	12-Dec-07 10:55	13-Dec-07 10:48
SA72249-12	Greif-SV-06	Summa canister	Air	12-Dec-07 11:05	13-Dec-07 10:48
SA72249-13	Greif-OA-01	Summa canister	Air	12-Dec-07 11:00	13-Dec-07 10:48
SA72249-14	Greif-SV-01	Summa canister	Air	12-Dec-07 13:40	13-Dec-07 10:48
SA72249-15	Greif-SV-02	Summa canister	Air	12-Dec-07 13:50	13-Dec-07 10:48
SA72249-16	Greif-SV-03	Summa canister	Air	12-Dec-07 14:00	13-Dec-07 10:48
SA72249-17	Greif-SV-04	Summa canister	Air	12-Dec-07 14:15	13-Dec-07 10:48
SA72249-18	Greif-DUP-3	Summa canister	Air	12-Dec-07 00:00	13-Dec-07 10:48

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.
Please note that this report contains 39 pages of analytical data plus Chain of Custody document(s).

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New Jersey # MA011/MA012
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NH-2972, NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The samples contained in this work order were analyzed by EPA TO-15. The client requested reporting levesl requiring the data to be analyzed and processed using SIM technique. This was not originally noted when the order for equipment was sent, therefore the cans were were not cleaned down to 0.2 ppbv levels.

The client requested that SIM still be run and the laboratory was able to do this for samples SA72249-04, -13 and -16 to a final reporting level of 0.15 ppbv.

Samples SA72249-02, -03, -05, -06, -08, -09, -11, -12 and -14 could not be analyzed for SIM due to high concentrations of target and/or non-target compounds present in the samples. These are qualifed appropriately.

Samples SA72249-01, -07, -10, -15 and -17 could not be analyzed for SIM due to the low pressure of the cans and have final reporting levels of 0.5 ppbv.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-IA-07	0070448	Air	12-Dec-07 08:48	13-Dec-07
SA72249-01				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07							
75-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	20-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	0.500	BRL	1.3		"	"	"	"
67-64-1	Acetone	5.01	0.500	11.9	1.2		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-09-2	Methylene chloride	BRL	0.500	BRL	1.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
67-66-3	Chloroform	BRL	0.500	BRL	2.4		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	2.34	0.500	12.8	2.7		"	"	"	"
71-43-2	Benzene	BRL	0.500	BRL	1.6		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		"	"	"	"
79-01-6	Trichloroethene	1.09	0.500	5.9	2.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
108-88-3	Toluene	1.76	0.500	6.6	1.9		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		"	"	"	"
1330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*87*	*75-125 %*				"	"	"	"

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SSV-07 SA72249-02	0070448	Air	12-Dec-07 09:38	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 19-Dec-07			GS				
75-01-4	Vinyl chloride	BRL	25.4	BRL	64.9		EPA TO-15	20-Dec-07	7121453	WB
75-00-3	Chloroethane	BRL	25.4	BRL	67.0		"	"	"	"
67-64-1	Acetone	89.9	25.4	214.0	60.4		"	"	"	"
75-35-4	1,1-Dichloroethene	297	25.4	1180.0	101.0		"	"	"	"
75-09-2	Methylene chloride	BRL	25.4	BRL	88.2		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	25.4	BRL	101.0		"	"	"	"
75-34-3	1,1-Dichloroethane	199	25.4	806.0	103.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	25.4	BRL	74.9		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	62.0	25.4	246.0	101.0		"	"	"	"
67-66-3	Chloroform	BRL	25.4	BRL	124.0		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	25.4	BRL	103.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	6110	25.4	33300.0	139.0	E	"	"	"	"
71-43-2	Benzene	BRL	25.4	BRL	81.0		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	25.4	BRL	160.0		"	"	"	"
79-01-6	Trichloroethene	1850	25.4	9940.0	137.0		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	25.4	BRL	104.0		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	25.4	BRL	139.0		"	"	"	"
108-88-3	Toluene	BRL	25.4	BRL	95.6		"	"	"	"
127-18-4	Tetrachloroethene	BRL	25.4	BRL	172.0		"	"	"	"
100-41-4	Ethylbenzene	BRL	25.4	BRL	110.0		"	"	"	"
1330-20-7	m,p-Xylene	BRL	50.8	BRL	220.0		"	"	"	"
95-47-6	o-Xylene	BRL	25.4	BRL	110.0		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	25.4	BRL	174.0		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	25.4	BRL	125.0		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*91*	*75-125 %*				"	"	"	"
Re-analysis of EPA TO-15										
71-55-6	1,1,1-Trichloroethane	4380	127	23900.0	693.0		EPA TO-15	18-Dec-07	7121342	WB
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*93*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-IA-08	0070448	Air	12-Dec-07 10:13	13-Dec-07
SA72249-03				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	5.00	BRL	12.8		EPA TO-15	20-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	5.00	BRL	13.2		"	"	"	"
67-64-1	Acetone	5.90	5.00	14.0	11.9		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
75-09-2	Methylene chloride	BRL	5.00	BRL	17.4		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	5.00	BRL	20.2		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	5.00	BRL	14.7		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
67-66-3	Chloroform	BRL	5.00	BRL	24.3		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	5.00	BRL	20.2		"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	5.00	BRL	27.3		"	"	"	"
71-43-2	Benzene	BRL	5.00	BRL	16.0		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	5.00	BRL	31.5		"	"	"	"
79-01-6	Trichloroethene	BRL	5.00	BRL	26.9		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	5.00	BRL	20.5		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	5.00	BRL	27.3		"	"	"	"
108-88-3	Toluene	BRL	5.00	BRL	18.8		"	"	"	"
127-18-4	Tetrachloroethene	BRL	5.00	BRL	33.9		"	"	"	"
100-41-4	Ethylbenzene	BRL	5.00	BRL	21.7		"	"	"	"
1330-20-7	m,p-Xylene	BRL	10.0	BRL	43.4		"	"	"	"
95-47-6	o-Xylene	BRL	5.00	BRL	21.7		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	5.00	BRL	34.3		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	5.00	BRL	24.6		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*90*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SSV-08 SA72249-04	0070448	Air	12-Dec-07 08:50	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07							
75-01-4	Vinyl chloride	BRL	0.150	BRL	0.4		EPA TO-15	20-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	0.150	BRL	0.4		"	"	"	"
67-64-1	Acetone	6.43	0.150	15.3	0.4		"	"	"	"
75-35-4	1,1-Dichloroethene	4.29	0.150	17.0	0.6		"	"	"	"
75-09-2	Methylene chloride	0.720	0.150	2.5	0.5		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
75-34-3	1,1-Dichloroethane	0.970	0.150	3.9	0.6		"	"	"	"
78-93-3	2-Butanone (MEK)	0.750	0.150	2.2	0.4		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	0.155	0.150	0.6	0.6		"	"	"	"
67-66-3	Chloroform	BRL	0.150	BRL	0.7		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.150	BRL	0.6		"	"	"	"
71-55-6	1,1,1-Trichloroethane	1.13	0.150	6.2	0.8		"	"	"	"
71-43-2	Benzene	0.339	0.150	1.1	0.5		"	"	"	"
56-23-5	Carbon tetrachloride	0.219	0.150	1.4	0.9		"	"	"	"
79-01-6	Trichloroethene	0.650	0.150	3.5	0.8		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.150	BRL	0.6		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.150	BRL	0.8		"	"	"	"
108-88-3	Toluene	1.37	0.150	5.2	0.6		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.150	BRL	1.0		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.150	BRL	0.7		"	"	"	"
1330-20-7	m,p-Xylene	0.330	0.150	1.4	0.7		"	"	"	"
95-47-6	o-Xylene	BRL	0.150	BRL	0.7		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.150	BRL	1.0		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.150	BRL	0.7		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*88*	*75-125 %*				"	"	"	"

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-IA-09 SA72249-05	0070448	Air	12-Dec-07 08:53	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	5.00	BRL	12.8		EPA TO-15	20-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	5.00	BRL	13.2		"	"	"	"
67-64-1	Acetone	8.60	5.00	20.4	11.9		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
75-09-2	Methylene chloride	BRL	5.00	BRL	17.4		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	5.00	BRL	20.2		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	5.00	BRL	14.7		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
67-66-3	Chloroform	BRL	5.00	BRL	24.3		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	5.00	BRL	20.2		"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	5.00	BRL	27.3		"	"	"	"
71-43-2	Benzene	BRL	5.00	BRL	16.0		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	5.00	BRL	31.5		"	"	"	"
79-01-6	Trichloroethene	BRL	5.00	BRL	26.9		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	5.00	BRL	20.5		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	5.00	BRL	27.3		"	"	"	"
108-88-3	Toluene	BRL	5.00	BRL	18.8		"	"	"	"
127-18-4	Tetrachloroethene	BRL	5.00	BRL	33.9		"	"	"	"
100-41-4	Ethylbenzene	BRL	5.00	BRL	21.7		"	"	"	"
1330-20-7	m,p-Xylene	BRL	10.0	BRL	43.4		"	"	"	"
95-47-6	o-Xylene	BRL	5.00	BRL	21.7		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	5.00	BRL	34.3		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	5.00	BRL	24.6		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*90*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SSV-09 SA72249-06	0070448	Air	12-Dec-07 08:53	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	5.00	BRL	12.8		EPA TO-15	20-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	5.00	BRL	13.2		"	"	"	"
67-64-1	Acetone	6.30	5.00	15.0	11.9		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
75-09-2	Methylene chloride	BRL	5.00	BRL	17.4		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	5.00	BRL	20.2		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	5.00	BRL	14.7		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	5.00	BRL	19.8		"	"	"	"
67-66-3	Chloroform	BRL	5.00	BRL	24.3		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	5.00	BRL	20.2		"	"	"	"
71-55-6	1,1,1-Trichloroethane	146	5.00	797.0	27.3		"	"	"	"
71-43-2	Benzene	BRL	5.00	BRL	16.0		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	5.00	BRL	31.5		"	"	"	"
79-01-6	Trichloroethene	15.3	5.00	82.2	26.9		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	5.00	BRL	20.5		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	5.00	BRL	27.3		"	"	"	"
108-88-3	Toluene	BRL	5.00	BRL	18.8		"	"	"	"
127-18-4	Tetrachloroethene	BRL	5.00	BRL	33.9		"	"	"	"
100-41-4	Ethylbenzene	BRL	5.00	BRL	21.7		"	"	"	"
1330-20-7	m,p-Xylene	BRL	10.0	BRL	43.4		"	"	"	"
95-47-6	o-Xylene	BRL	5.00	BRL	21.7		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	5.00	BRL	34.3		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	5.00	BRL	24.6		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*91*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-IA-10 SA72249-07	0070448	Air	12-Dec-07 08:58	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 24-Dec-07							
75-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	24-Dec-07	7121749	WB
75-00-3	Chloroethane	BRL	0.500	BRL	1.3		"	"	"	"
67-64-1	Acetone	BRL	0.500	BRL	1.2		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-09-2	Methylene chloride	1.04	0.500	3.6	1.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
67-66-3	Chloroform	BRL	0.500	BRL	2.4		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
71-43-2	Benzene	BRL	0.500	BRL	1.6		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		"	"	"	"
79-01-6	Trichloroethene	BRL	0.500	BRL	2.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
108-88-3	Toluene	1.83	0.500	6.9	1.9		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		"	"	"	"
1330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*87*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SSV-10 SA72249-08	0070448	Air	12-Dec-07 08:58	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	10.0	BRL	25.6		EPA TO-15	20-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	10.0	BRL	26.4		"	"	"	"
67-64-1	Acetone	BRL	10.0	BRL	23.8		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	10.0	BRL	39.7		"	"	"	"
75-09-2	Methylene chloride	BRL	10.0	BRL	34.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	10.0	BRL	39.7		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	10.0	BRL	40.5		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	10.0	BRL	29.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	10.0	BRL	39.7		"	"	"	"
67-66-3	Chloroform	BRL	10.0	BRL	48.7		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	10.0	BRL	40.5		"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	10.0	BRL	54.6		"	"	"	"
71-43-2	Benzene	BRL	10.0	BRL	31.9		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	10.0	BRL	62.9		"	"	"	"
79-01-6	Trichloroethene	41.8	10.0	225.0	53.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0	BRL	41.0		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	10.0	BRL	54.6		"	"	"	"
108-88-3	Toluene	BRL	10.0	BRL	37.6		"	"	"	"
127-18-4	Tetrachloroethene	BRL	10.0	BRL	67.8		"	"	"	"
100-41-4	Ethylbenzene	BRL	10.0	BRL	43.4		"	"	"	"
1330-20-7	m,p-Xylene	BRL	20.0	BRL	86.7		"	"	"	"
95-47-6	o-Xylene	BRL	10.0	BRL	43.4		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	10.0	BRL	68.7		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	10.0	BRL	49.2		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*89*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-DUP-2	0070448	Air	12-Dec-07 00:00	13-Dec-07
SA72249-09				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 19-Dec-07			GS				
75-01-4	Vinyl chloride	BRL	59.5	BRL	152.0		EPA TO-15	20-Dec-07	7121453	WB
75-00-3	Chloroethane	BRL	59.5	BRL	157.0		"	"	"	"
67-64-1	Acetone	295	59.5	701.0	141.0		"	"	"	"
75-35-4	1,1-Dichloroethene	1670	59.5	6630.0	236.0		"	"	"	"
75-09-2	Methylene chloride	BRL	59.5	BRL	207.0		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	59.5	BRL	236.0		"	"	"	"
75-34-3	1,1-Dichloroethane	727	59.5	2940.0	241.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	59.5	BRL	175.0		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	131	59.5	519.0	236.0		"	"	"	"
67-66-3	Chloroform	BRL	59.5	BRL	290.0		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	59.5	BRL	241.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	2350	59.5	12800.0	325.0		"	"	"	"
71-43-2	Benzene	BRL	59.5	BRL	190.0		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	59.5	BRL	374.0		"	"	"	"
79-01-6	Trichloroethene	6050	59.5	32500.0	320.0		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	59.5	BRL	244.0		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	59.5	BRL	325.0		"	"	"	"
108-88-3	Toluene	83.3	59.5	313.0	224.0		"	"	"	"
127-18-4	Tetrachloroethene	BRL	59.5	BRL	403.0		"	"	"	"
100-41-4	Ethylbenzene	BRL	59.5	BRL	258.0		"	"	"	"
1330-20-7	m,p-Xylene	BRL	119	BRL	516.0		"	"	"	"
95-47-6	o-Xylene	BRL	59.5	BRL	258.0		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	59.5	BRL	409.0		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	59.5	BRL	293.0		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*93*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-DUP-1 SA72249-10	0070448	Air	12-Dec-07 00:00	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07							
75-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	0.500	BRL	1.3		"	"	"	"
67-64-1	Acetone	6.34	0.500	15.1	1.2		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-09-2	Methylene chloride	BRL	0.500	BRL	1.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
67-66-3	Chloroform	BRL	0.500	BRL	2.4		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	6.60	0.500	36.0	2.7		"	"	"	"
71-43-2	Benzene	0.720	0.500	2.3	1.6		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		"	"	"	"
79-01-6	Trichloroethene	2.94	0.500	15.8	2.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
108-88-3	Toluene	2.51	0.500	9.4	1.9		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		"	"	"	"
1330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*90*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SV-05	0070448	Air	12-Dec-07 10:55	13-Dec-07
SA72249-11				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	1.00	BRL	2.6		EPA TO-15	21-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	1.00	BRL	2.6		"	"	"	"
67-64-1	Acetone	15.9	1.00	37.8	2.4		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	1.00	BRL	4.0		"	"	"	"
75-09-2	Methylene chloride	BRL	1.00	BRL	3.5		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	1.00	BRL	4.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	1.00	BRL	4.1		"	"	"	"
78-93-3	2-Butanone (MEK)	1.66	1.00	4.9	3.0		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	1.00	BRL	4.0		"	"	"	"
67-66-3	Chloroform	BRL	1.00	BRL	4.9		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	1.00	BRL	4.1		"	"	"	"
71-55-6	1,1,1-Trichloroethane	4.96	1.00	27.1	5.5		"	"	"	"
71-43-2	Benzene	BRL	1.00	BRL	3.2		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	1.00	BRL	6.3		"	"	"	"
79-01-6	Trichloroethene	3.80	1.00	20.4	5.4		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	1.00	BRL	4.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	1.00	BRL	5.5		"	"	"	"
108-88-3	Toluene	1.68	1.00	6.3	3.8		"	"	"	"
127-18-4	Tetrachloroethene	BRL	1.00	BRL	6.8		"	"	"	"
100-41-4	Ethylbenzene	BRL	1.00	BRL	4.3		"	"	"	"
1330-20-7	m,p-Xylene	BRL	2.00	BRL	8.7		"	"	"	"
95-47-6	o-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	1.00	BRL	6.9		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	1.00	BRL	4.9		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*88*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SV-06 SA72249-12	0070448	Air	12-Dec-07 11:05	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	1.00	BRL	2.6		EPA TO-15	21-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	1.00	BRL	2.6		"	"	"	"
67-64-1	Acetone	26.6	1.00	63.2	2.4		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	1.00	BRL	4.0		"	"	"	"
75-09-2	Methylene chloride	BRL	1.00	BRL	3.5		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	1.00	BRL	4.0		"	"	"	"
75-34-3	1,1-Dichloroethane	1.12	1.00	4.5	4.1		"	"	"	"
78-93-3	2-Butanone (MEK)	1.50	1.00	4.4	3.0		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	1.00	BRL	4.0		"	"	"	"
67-66-3	Chloroform	BRL	1.00	BRL	4.9		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	1.00	BRL	4.1		"	"	"	"
71-55-6	1,1,1-Trichloroethane	38.8	1.00	212.0	5.5		"	"	"	"
71-43-2	Benzene	BRL	1.00	BRL	3.2		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	1.00	BRL	6.3		"	"	"	"
79-01-6	Trichloroethene	2.50	1.00	13.4	5.4		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	1.00	BRL	4.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	1.00	BRL	5.5		"	"	"	"
108-88-3	Toluene	1.82	1.00	6.9	3.8		"	"	"	"
127-18-4	Tetrachloroethene	BRL	1.00	BRL	6.8		"	"	"	"
100-41-4	Ethylbenzene	BRL	1.00	BRL	4.3		"	"	"	"
1330-20-7	m,p-Xylene	BRL	2.00	BRL	8.7		"	"	"	"
95-47-6	o-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	1.00	BRL	6.9		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	1.00	BRL	4.9		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*92*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-OA-01	0070448	Air	12-Dec-07 11:00	13-Dec-07
SA72249-13				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07							
75-01-4	Vinyl chloride	BRL	0.150	BRL	0.4		EPA TO-15	21-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	0.150	BRL	0.4		"	"	"	"
67-64-1	Acetone	2.64	0.150	6.3	0.4		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
75-09-2	Methylene chloride	0.273	0.150	1.0	0.5		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.150	BRL	0.6		"	"	"	"
78-93-3	2-Butanone (MEK)	0.400	0.150	1.2	0.4		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
67-66-3	Chloroform	BRL	0.150	BRL	0.7		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.150	BRL	0.6		"	"	"	"
71-55-6	1,1,1-Trichloroethane	0.530	0.150	2.9	0.8		"	"	"	"
71-43-2	Benzene	0.310	0.150	1.0	0.5		"	"	"	"
56-23-5	Carbon tetrachloride	0.220	0.150	1.4	0.9		"	"	"	"
79-01-6	Trichloroethene	0.295	0.150	1.6	0.8		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.150	BRL	0.6		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.150	BRL	0.8		"	"	"	"
108-88-3	Toluene	1.35	0.150	5.1	0.6		"	"	"	"
127-18-4	Tetrachloroethene	0.167	0.150	1.1	1.0		"	"	"	"
100-41-4	Ethylbenzene	0.196	0.150	0.9	0.7		"	"	"	"
1330-20-7	m,p-Xylene	0.370	0.150	1.6	0.7		"	"	"	"
95-47-6	o-Xylene	0.229	0.150	1.0	0.7		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.150	BRL	1.0		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	0.228	0.150	1.1	0.7		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*90*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SV-01	0070448	Air	12-Dec-07 13:40	13-Dec-07
SA72249-14				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 20-Dec-07			R05				
75-01-4	Vinyl chloride	BRL	2.50	BRL	6.4		EPA TO-15	21-Dec-07	7121541	WB
75-00-3	Chloroethane	BRL	2.50	BRL	6.6		"	"	"	"
67-64-1	Acetone	BRL	2.50	BRL	5.9		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	2.50	BRL	9.9		"	"	"	"
75-09-2	Methylene chloride	BRL	2.50	BRL	8.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	2.50	BRL	9.9		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	2.50	BRL	10.1		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	2.50	BRL	7.4		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	2.50	BRL	9.9		"	"	"	"
67-66-3	Chloroform	BRL	2.50	BRL	12.2		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	2.50	BRL	10.1		"	"	"	"
71-55-6	1,1,1-Trichloroethane	5.60	2.50	30.6	13.6		"	"	"	"
71-43-2	Benzene	BRL	2.50	BRL	8.0		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	2.50	BRL	15.7		"	"	"	"
79-01-6	Trichloroethene	2.60	2.50	14.0	13.4		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	2.50	BRL	10.2		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	2.50	BRL	13.6		"	"	"	"
108-88-3	Toluene	BRL	2.50	BRL	9.4		"	"	"	"
127-18-4	Tetrachloroethene	BRL	2.50	BRL	17.0		"	"	"	"
100-41-4	Ethylbenzene	BRL	2.50	BRL	10.8		"	"	"	"
1330-20-7	m,p-Xylene	BRL	5.00	BRL	21.7		"	"	"	"
95-47-6	o-Xylene	BRL	2.50	BRL	10.8		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	2.50	BRL	17.2		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	2.50	BRL	12.3		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*88*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SV-02 SA72249-15	0070448	Air	12-Dec-07 13:50	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 21-Dec-07							
75-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121849	WB
75-00-3	Chloroethane	BRL	0.500	BRL	1.3		"	"	"	"
67-64-1	Acetone	BRL	0.500	BRL	1.2		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-09-2	Methylene chloride	BRL	0.500	BRL	1.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
67-66-3	Chloroform	BRL	0.500	BRL	2.4		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
71-43-2	Benzene	BRL	0.500	BRL	1.6		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		"	"	"	"
79-01-6	Trichloroethene	BRL	0.500	BRL	2.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
108-88-3	Toluene	BRL	0.500	BRL	1.9		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		"	"	"	"
1330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*84*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SV-03	0070448	Air	12-Dec-07 14:00	13-Dec-07
SA72249-16				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 21-Dec-07							
75-01-4	Vinyl chloride	BRL	0.150	BRL	0.4		EPA TO-15	21-Dec-07	7121849	WB
75-00-3	Chloroethane	BRL	0.150	BRL	0.4		"	"	"	"
67-64-1	Acetone	1.40	0.150	3.3	0.4		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
75-09-2	Methylene chloride	0.950	0.150	3.3	0.5		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.150	BRL	0.6		"	"	"	"
78-93-3	2-Butanone (MEK)	0.805	0.150	2.4	0.4		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.150	BRL	0.6		"	"	"	"
67-66-3	Chloroform	BRL	0.150	BRL	0.7		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.150	BRL	0.6		"	"	"	"
71-55-6	1,1,1-Trichloroethane	0.155	0.150	0.9	0.8		"	"	"	"
71-43-2	Benzene	0.680	0.150	2.2	0.5		"	"	"	"
56-23-5	Carbon tetrachloride	0.193	0.150	1.2	0.9		"	"	"	"
79-01-6	Trichloroethene	0.218	0.150	1.2	0.8		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.150	BRL	0.6		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.150	BRL	0.8		"	"	"	"
108-88-3	Toluene	0.450	0.150	1.7	0.6		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.150	BRL	1.0		"	"	"	"
100-41-4	Ethylbenzene	0.185	0.150	0.8	0.7		"	"	"	"
1330-20-7	m,p-Xylene	0.486	0.150	2.1	0.7		"	"	"	"
95-47-6	o-Xylene	0.191	0.150	0.8	0.7		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.150	BRL	1.0		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	0.258	0.150	1.3	0.7		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*87*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-SV-04 SA72249-17	0070448	Air	12-Dec-07 14:15	13-Dec-07

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 21-Dec-07							
75-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121849	WB
75-00-3	Chloroethane	BRL	0.500	BRL	1.3		"	"	"	"
67-64-1	Acetone	11.6	0.500	27.6	1.2		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-09-2	Methylene chloride	0.510	0.500	1.8	1.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
78-93-3	2-Butanone (MEK)	0.830	0.500	2.5	1.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
67-66-3	Chloroform	BRL	0.500	BRL	2.4		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	6.43	0.500	35.1	2.7		"	"	"	"
71-43-2	Benzene	BRL	0.500	BRL	1.6		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		"	"	"	"
79-01-6	Trichloroethene	2.47	0.500	13.3	2.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
108-88-3	Toluene	1.56	0.500	5.9	1.9		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		"	"	"	"
1330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*88*	*75-125 %*				"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Greif-DUP-3	0070448	Air	12-Dec-07 00:00	13-Dec-07
SA72249-18				

CAS No.	*Analyte(s)*	*Result Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Batch*	*Analyst*
Air Quality Analyses										
EPA TO-15		ppbv	Prepared 21-Dec-07							
75-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121849	WB
75-00-3	Chloroethane	BRL	0.500	BRL	1.3		"	"	"	"
67-64-1	Acetone	BRL	0.500	BRL	1.2		"	"	"	"
75-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-09-2	Methylene chloride	BRL	0.500	BRL	1.7		"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
78-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		"	"	"	"
67-66-3	Chloroform	BRL	0.500	BRL	2.4		"	"	"	"
107-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
71-43-2	Benzene	BRL	0.500	BRL	1.6		"	"	"	"
56-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		"	"	"	"
79-01-6	Trichloroethene	BRL	0.500	BRL	2.7		"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		"	"	"	"
108-88-3	Toluene	BRL	0.500	BRL	1.9		"	"	"	"
127-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		"	"	"	"
100-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		"	"	"	"
1330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		"	"	"	"
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		"	"	"	"
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*86*	*75-125 %*				"	"	"	"

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121342 - General Air Prep										
Blank (7121342-BLK1)				Prepared & Analyzed: 18-Dec-07						
Propene	BRL	0.500	ppbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500	ppbv							
Chloromethane	BRL	0.500	ppbv							
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv							
Vinyl chloride	BRL	0.500	ppbv							
1,3-Butadiene	BRL	0.500	ppbv							
Bromomethane	BRL	0.500	ppbv							
Chloroethane	BRL	0.500	ppbv							
Acetone	BRL	0.500	ppbv							
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv							
Ethanol	BRL	0.500	ppbv							
1,1-Dichloroethene	BRL	0.500	ppbv							
Methylene chloride	BRL	0.500	ppbv							
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv							
Carbon disulfide	BRL	0.500	ppbv							
trans-1,2-Dichloroethene	BRL	0.500	ppbv							
1,1-Dichloroethane	BRL	0.500	ppbv							
Methyl tert-butyl ether	BRL	0.500	ppbv							
Isopropyl alcohol	BRL	0.500	ppbv							
2-Butanone (MEK)	BRL	0.500	ppbv							
cis-1,2-Dichloroethene	BRL	0.500	ppbv							
Hexane	BRL	0.500	ppbv							
Ethyl acetate	BRL	0.500	ppbv							
Chloroform	BRL	0.500	ppbv							
Tetrahydrofuran	BRL	0.500	ppbv							
1,2-Dichloroethane	BRL	0.500	ppbv							
1,1,1-Trichloroethane	BRL	0.500	ppbv							
Benzene	BRL	0.500	ppbv							
Carbon tetrachloride	BRL	0.500	ppbv							
Cyclohexane	BRL	0.500	ppbv							
1,2-Dichloropropane	BRL	0.500	ppbv							
Bromodichloromethane	BRL	0.500	ppbv							
Trichloroethene	BRL	0.500	ppbv							
n-Heptane	BRL	0.500	ppbv							
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv							
cis-1,3-Dichloropropene	BRL	0.500	ppbv							
trans-1,3-Dichloropropene	BRL	0.500	ppbv							
1,1,2-Trichloroethane	BRL	0.500	ppbv							
Toluene	BRL	0.500	ppbv							
2-Hexanone (MBK)	BRL	0.500	ppbv							
Dibromochloromethane	BRL	0.500	ppbv							
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv							
Tetrachloroethene	BRL	0.500	ppbv							
Chlorobenzene	BRL	0.500	ppbv							
Ethylbenzene	BRL	0.500	ppbv							
m,p-Xylene	BRL	1.00	ppbv							
Bromoform	BRL	0.500	ppbv							
Styrene	BRL	0.500	ppbv							
o-Xylene	BRL	0.500	ppbv							
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv							
1,3,5-Trimethylbenzene	BRL	0.500	ppbv							
4-Ethyltoluene	BRL	0.500	ppbv							
1,2,4-Trimethylbenzene	BRL	0.500	ppbv							
1,3-Dichlorobenzene	BRL	0.500	ppbv							

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121342 - General Air Prep										
Blank (7121342-BLK1)				Prepared & Analyzed: 18-Dec-07						
Benzyl chloride	BRL	0.500	ppbv							
1,4-Dichlorobenzene	BRL	0.500	ppbv							
1,2-Dichlorobenzene	BRL	0.500	ppbv							
1,2,4-Trichlorobenzene	BRL	0.500	ppbv							
Hexachlorobutadiene	BRL	0.500	ppbv							
Surrogate: 4-Bromofluorobenzene	*9.26*		ppbv	*10.0*		*93*	*75-125*			
LCS (7121342-BS1)				Prepared & Analyzed: 18-Dec-07						
Propene	8.12		ppbv	10.0		81	70-130			
Dichlorodifluoromethane (Freon12)	7.44		ppbv	10.0		74	70-130			
Chloromethane	11.4		ppbv	10.0		114	70-130			
1,2-Dichlorotetrafluoroethane (Freon 114)	9.78		ppbv	10.0		98	70-130			
Vinyl chloride	9.25		ppbv	10.0		92	70-130			
1,3-Butadiene	9.36		ppbv	10.0		94	70-130			
Bromomethane	9.57		ppbv	10.0		96	70-130			
Chloroethane	9.37		ppbv	10.0		94	70-130			
Acetone	8.60		ppbv	10.0		86	70-130			
Trichlorofluoromethane (Freon 11)	9.14		ppbv	10.0		91	70-130			
Ethanol	9.05		ppbv	10.0		90	55.1-230			
1,1-Dichloroethene	8.85		ppbv	10.0		88	70-130			
Methylene chloride	9.10		ppbv	10.0		91	70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	9.20		ppbv	10.0		92	70-130			
Carbon disulfide	8.92		ppbv	10.0		89	70-130			
trans-1,2-Dichloroethene	9.58		ppbv	10.0		96	70-130			
1,1-Dichloroethane	9.49		ppbv	10.0		95	70-130			
Methyl tert-butyl ether	8.72		ppbv	10.0		87	70-130			
Isopropyl alcohol	9.09		ppbv	10.0		91	70-130			
2-Butanone (MEK)	8.41		ppbv	10.0		84	70-130			
cis-1,2-Dichloroethene	8.88		ppbv	10.0		89	70-130			
Hexane	9.93		ppbv	10.0		99	70-130			
Ethyl acetate	9.57		ppbv	10.0		96	70-130			
Chloroform	8.88		ppbv	10.0		89	70-130			
Tetrahydrofuran	8.92		ppbv	10.0		89	70-130			
1,2-Dichloroethane	8.56		ppbv	10.0		86	70-130			
1,1,1-Trichloroethane	8.82		ppbv	10.0		88	70-130			
Benzene	9.90		ppbv	10.0		99	70-130			
Carbon tetrachloride	8.37		ppbv	10.0		84	70-130			
Cyclohexane	8.85		ppbv	10.0		88	70-130			
1,2-Dichloropropane	9.14		ppbv	10.0		91	70-130			
Bromodichloromethane	9.25		ppbv	10.0		92	70-130			
Trichloroethene	9.99		ppbv	10.0		100	70-130			
n-Heptane	9.71		ppbv	10.0		97	70-130			
4-Methyl-2-pentanone (MIBK)	9.35		ppbv	10.0		94	70-130			
cis-1,3-Dichloropropene	8.34		ppbv	10.0		83	70-130			
trans-1,3-Dichloropropene	8.91		ppbv	10.0		89	70-130			
1,1,2-Trichloroethane	9.41		ppbv	10.0		94	70-130			
Toluene	10.8		ppbv	10.0		108	70-130			
2-Hexanone (MBK)	10.1		ppbv	10.0		101	70-130			
Dibromochloromethane	14.1		ppbv	10.0		141	70-130			QC2
1,2-Dibromoethane (EDB)	9.27		ppbv	10.0		93	70-130			
Tetrachloroethene	9.22		ppbv	10.0		92	70-130			
Chlorobenzene	9.10		ppbv	10.0		91	70-130			
Ethylbenzene	9.39		ppbv	10.0		94	70-130			
m,p-Xylene	19.4		ppbv	20.0		97	70-130			

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121342 - General Air Prep										
LCS (7121342-BS1)				Prepared & Analyzed: 18-Dec-07						
Bromoform	8.42		ppbv	10.0		84	70-130			
Styrene	8.69		ppbv	10.0		87	70-130			
o-Xylene	9.71		ppbv	10.0		97	70-130			
1,1,2,2-Tetrachloroethane	10.4		ppbv	10.0		104	70-130			
1,3,5-Trimethylbenzene	9.53		ppbv	10.0		95	70-130			
4-Ethyltoluene	9.31		ppbv	10.0		93	70-130			
1,2,4-Trimethylbenzene	9.05		ppbv	10.0		90	70-130			
1,3-Dichlorobenzene	9.88		ppbv	10.0		99	70-130			
Benzyl chloride	10.2		ppbv	10.0		102	70-130			
1,4-Dichlorobenzene	10.4		ppbv	10.0		104	70-130			
1,2-Dichlorobenzene	11.0		ppbv	10.0		110	70-130			
1,2,4-Trichlorobenzene	7.66		ppbv	10.0		77	70-130			
Hexachlorobutadiene	8.53		ppbv	10.0		85	70-130			
Surrogate: 4-Bromofluorobenzene	*9.69*		ppbv	*10.0*		*97*	*75-125*			
Duplicate (7121342-DUP1)	**Source: SA72345-01**			Prepared & Analyzed: 18-Dec-07						
Propene	3.55	0.500	ppbv		3.43			3	30	
Dichlorodifluoromethane (Freon12)	1.30	0.500	ppbv		1.24			5	30	
Chloromethane	0.780	0.500	ppbv		0.730			7	30	
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv		BRL				30	
Vinyl chloride	BRL	0.500	ppbv		BRL				30	
1,3-Butadiene	BRL	0.500	ppbv		BRL				30	
Bromomethane	BRL	0.500	ppbv		BRL				30	
Chloroethane	BRL	0.500	ppbv		BRL				30	
Acetone	98.2	0.500	ppbv		90.1			9	30	
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv		BRL				30	
Ethanol	72.0	0.500	ppbv		70.9			2	30	
1,1-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Methylene chloride	1.18	0.500	ppbv		1.10			7	30	
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv		BRL				30	
Carbon disulfide	0.400	0.500	ppbv		0.370			8	30	J
trans-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
1,1-Dichloroethane	BRL	0.500	ppbv		BRL				30	
Methyl tert-butyl ether	BRL	0.500	ppbv		BRL				30	
Isopropyl alcohol	26.9	0.500	ppbv		27.0			0.3	30	
2-Butanone (MEK)	10.5	0.500	ppbv		9.65			8	30	
cis-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Hexane	0.510	0.500	ppbv		0.470			8	30	
Ethyl acetate	BRL	0.500	ppbv		BRL				30	
Chloroform	BRL	0.500	ppbv		BRL				30	
Tetrahydrofuran	BRL	0.500	ppbv		BRL				30	
1,2-Dichloroethane	BRL	0.500	ppbv		BRL				30	
1,1,1-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Benzene	0.590	0.500	ppbv		0.540			9	30	
Carbon tetrachloride	BRL	0.500	ppbv		BRL				30	
Cyclohexane	BRL	0.500	ppbv		BRL				30	
1,2-Dichloropropane	BRL	0.500	ppbv		BRL				30	
Bromodichloromethane	BRL	0.500	ppbv		BRL				30	
Trichloroethene	BRL	0.500	ppbv		BRL				30	
n-Heptane	BRL	0.500	ppbv		BRL				30	
4-Methyl-2-pentanone (MIBK)	4.63	0.500	ppbv		4.52			2	30	
cis-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
trans-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichloroethane	BRL	0.500	ppbv		BRL				30	

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121342 - General Air Prep										
Duplicate (7121342-DUP1)		**Source: SA72345-01**		Prepared & Analyzed: 18-Dec-07						
Toluene	1.69	0.500	ppbv		1.60			5	30	
2-Hexanone (MBK)	1.46	0.500	ppbv		1.47			0.7	30	
Dibromochloromethane	BRL	0.500	ppbv		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv		BRL				30	
Tetrachloroethene	BRL	0.500	ppbv		BRL				30	
Chlorobenzene	BRL	0.500	ppbv		BRL				30	
Ethylbenzene	BRL	0.500	ppbv		BRL				30	
m,p-Xylene	0.890	1.00	ppbv		0.870			2	30	J
Bromoform	BRL	0.500	ppbv		BRL				30	
Styrene	BRL	0.500	ppbv		BRL				30	
o-Xylene	0.410	0.500	ppbv		0.400			2	30	J
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
4-Ethyltoluene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trimethylbenzene	0.590	0.500	ppbv		0.590			0	30	
1,3-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
Benzyl chloride	BRL	0.500	ppbv		BRL				30	
1,4-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500	ppbv		BRL				30	
Hexachlorobutadiene	BRL	0.500	ppbv		BRL				30	
Surrogate: 4-Bromofluorobenzene	*9.50*		ppbv	*10.0*		*95*	*75-125*			
Batch 7121453 - General Air Prep										
Blank (7121453-BLK1)				Prepared & Analyzed: 19-Dec-07						
Propene	BRL	0.500	ppbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500	ppbv							
Chloromethane	BRL	0.500	ppbv							
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv							
Vinyl chloride	BRL	0.500	ppbv							
1,3-Butadiene	BRL	0.500	ppbv							
Bromomethane	BRL	0.500	ppbv							
Chloroethane	BRL	0.500	ppbv							
Acetone	BRL	0.500	ppbv							
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv							
Ethanol	BRL	0.500	ppbv							
1,1-Dichloroethene	BRL	0.500	ppbv							
Methylene chloride	BRL	0.500	ppbv							
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv							
Carbon disulfide	BRL	0.500	ppbv							
trans-1,2-Dichloroethene	BRL	0.500	ppbv							
1,1-Dichloroethane	BRL	0.500	ppbv							
Methyl tert-butyl ether	BRL	0.500	ppbv							
Isopropyl alcohol	BRL	0.500	ppbv							
2-Butanone (MEK)	BRL	0.500	ppbv							
cis-1,2-Dichloroethene	BRL	0.500	ppbv							
Hexane	BRL	0.500	ppbv							
Ethyl acetate	BRL	0.500	ppbv							
Chloroform	BRL	0.500	ppbv							
Tetrahydrofuran	BRL	0.500	ppbv							
1,2-Dichloroethane	BRL	0.500	ppbv							
1,1,1-Trichloroethane	BRL	0.500	ppbv							
Benzene	BRL	0.500	ppbv							
Carbon tetrachloride	BRL	0.500	ppbv							

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121453 - General Air Prep										
Blank (7121453-BLK1)				Prepared & Analyzed: 19-Dec-07						
Cyclohexane	BRL	0.500	ppbv							
1,2-Dichloropropane	BRL	0.500	ppbv							
Bromodichloromethane	BRL	0.500	ppbv							
Trichloroethene	BRL	0.500	ppbv							
n-Heptane	BRL	0.500	ppbv							
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv							
cis-1,3-Dichloropropene	BRL	0.500	ppbv							
trans-1,3-Dichloropropene	BRL	0.500	ppbv							
1,1,2-Trichloroethane	BRL	0.500	ppbv							
Toluene	BRL	0.500	ppbv							
2-Hexanone (MBK)	BRL	0.500	ppbv							
Dibromochloromethane	BRL	0.500	ppbv							
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv							
Tetrachloroethene	BRL	0.500	ppbv							
Chlorobenzene	BRL	0.500	ppbv							
Ethylbenzene	BRL	0.500	ppbv							
m,p-Xylene	BRL	1.00	ppbv							
Bromoform	BRL	0.500	ppbv							
Styrene	BRL	0.500	ppbv							
o-Xylene	BRL	0.500	ppbv							
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv							
1,3,5-Trimethylbenzene	BRL	0.500	ppbv							
4-Ethyltoluene	BRL	0.500	ppbv							
1,2,4-Trimethylbenzene	BRL	0.500	ppbv							
1,3-Dichlorobenzene	BRL	0.500	ppbv							
Benzyl chloride	BRL	0.500	ppbv							
1,4-Dichlorobenzene	BRL	0.500	ppbv							
1,2-Dichlorobenzene	BRL	0.500	ppbv							
1,2,4-Trichlorobenzene	BRL	0.500	ppbv							
Hexachlorobutadiene	BRL	0.500	ppbv							
Surrogate: 4-Bromofluorobenzene	*9.19*		ppbv	*10.0*		*92*	*75-125*			
LCS (7121453-BS1)				Prepared & Analyzed: 19-Dec-07						
Propene	8.07		ppbv	10.0		81	70-130			
Dichlorodifluoromethane (Freon12)	7.32		ppbv	10.0		73	70-130			
Chloromethane	11.3		ppbv	10.0		113	70-130			
1,2-Dichlorotetrafluoroethane (Freon 114)	9.62		ppbv	10.0		96	70-130			
Vinyl chloride	9.11		ppbv	10.0		91	70-130			
1,3-Butadiene	9.20		ppbv	10.0		92	70-130			
Bromomethane	9.36		ppbv	10.0		94	70-130			
Chloroethane	9.21		ppbv	10.0		92	70-130			
Acetone	8.42		ppbv	10.0		84	70-130			
Trichlorofluoromethane (Freon 11)	9.00		ppbv	10.0		90	70-130			
Ethanol	8.66		ppbv	10.0		87	55.1-230			
1,1-Dichloroethene	8.73		ppbv	10.0		87	70-130			
Methylene chloride	8.95		ppbv	10.0		90	70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	9.07		ppbv	10.0		91	70-130			
Carbon disulfide	9.02		ppbv	10.0		90	70-130			
trans-1,2-Dichloroethene	9.19		ppbv	10.0		92	70-130			
1,1-Dichloroethane	9.28		ppbv	10.0		93	70-130			
Methyl tert-butyl ether	8.46		ppbv	10.0		85	70-130			
Isopropyl alcohol	8.64		ppbv	10.0		86	70-130			
2-Butanone (MEK)	8.13		ppbv	10.0		81	70-130			
cis-1,2-Dichloroethene	8.57		ppbv	10.0		86	70-130			

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121453 - General Air Prep										
LCS (7121453-BS1)				Prepared & Analyzed: 19-Dec-07						
Hexane	9.67		ppbv	10.0		97	70-130			
Ethyl acetate	9.09		ppbv	10.0		91	70-130			
Chloroform	9.84		ppbv	10.0		98	70-130			
Tetrahydrofuran	8.68		ppbv	10.0		87	70-130			
1,2-Dichloroethane	8.43		ppbv	10.0		84	70-130			
1,1,1-Trichloroethane	8.53		ppbv	10.0		85	70-130			
Benzene	9.55		ppbv	10.0		96	70-130			
Carbon tetrachloride	8.06		ppbv	10.0		81	70-130			
Cyclohexane	8.54		ppbv	10.0		85	70-130			
1,2-Dichloropropane	8.95		ppbv	10.0		90	70-130			
Bromodichloromethane	9.08		ppbv	10.0		91	70-130			
Trichloroethene	9.65		ppbv	10.0		96	70-130			
n-Heptane	9.40		ppbv	10.0		94	70-130			
4-Methyl-2-pentanone (MIBK)	8.89		ppbv	10.0		89	70-130			
cis-1,3-Dichloropropene	8.00		ppbv	10.0		80	70-130			
trans-1,3-Dichloropropene	8.52		ppbv	10.0		85	70-130			
1,1,2-Trichloroethane	9.10		ppbv	10.0		91	70-130			
Toluene	10.4		ppbv	10.0		104	70-130			
2-Hexanone (MBK)	8.88		ppbv	10.0		89	70-130			
Dibromochloromethane	13.4		ppbv	10.0		134	70-130			QC2
1,2-Dibromoethane (EDB)	8.73		ppbv	10.0		87	70-130			
Tetrachloroethene	8.49		ppbv	10.0		85	70-130			
Chlorobenzene	8.40		ppbv	10.0		84	70-130			
Ethylbenzene	8.81		ppbv	10.0		88	70-130			
m,p-Xylene	18.0		ppbv	20.0		90	70-130			
Bromoform	7.65		ppbv	10.0		76	70-130			
Styrene	7.76		ppbv	10.0		78	70-130			
o-Xylene	9.03		ppbv	10.0		90	70-130			
1,1,2,2-Tetrachloroethane	9.57		ppbv	10.0		96	70-130			
1,3,5-Trimethylbenzene	8.55		ppbv	10.0		86	70-130			
4-Ethyltoluene	8.44		ppbv	10.0		84	70-130			
1,2,4-Trimethylbenzene	8.09		ppbv	10.0		81	70-130			
1,3-Dichlorobenzene	8.33		ppbv	10.0		83	70-130			
Benzyl chloride	7.77		ppbv	10.0		78	70-130			
1,4-Dichlorobenzene	8.73		ppbv	10.0		87	70-130			
1,2-Dichlorobenzene	9.04		ppbv	10.0		90	70-130			
1,2,4-Trichlorobenzene	2.38		ppbv	10.0		24	70-130			QC2
Hexachlorobutadiene	5.10		ppbv	10.0		51	70-130			QC2
Surrogate: 4-Bromofluorobenzene	*9.28*		ppbv	*10.0*		*93*	*75-125*			
Duplicate (7121453-DUP1)		**Source: SA72461-01**		Prepared & Analyzed: 19-Dec-07						
Propene	2.94	0.500	ppbv		2.74			7	30	
Dichlorodifluoromethane (Freon12)	0.470	0.500	ppbv		0.440			7	30	J
Chloromethane	0.790	0.500	ppbv		0.730			8	30	
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv		BRL				30	
Vinyl chloride	BRL	0.500	ppbv		BRL				30	
1,3-Butadiene	BRL	0.500	ppbv		BRL				30	
Bromomethane	BRL	0.500	ppbv		BRL				30	
Chloroethane	BRL	0.500	ppbv		BRL				30	
Acetone	46.8	0.500	ppbv		43.4			8	30	
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv		BRL				30	
Ethanol	21.8	0.500	ppbv		20.4			6	30	
1,1-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Methylene chloride	BRL	0.500	ppbv		BRL				30	

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121453 - General Air Prep										
Duplicate (7121453-DUP1)	**Source: SA72461-01**			Prepared & Analyzed: 19-Dec-07						
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv		BRL				30	
Carbon disulfide	0.310	0.500	ppbv		BRL				30	J
trans-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
1,1-Dichloroethane	BRL	0.500	ppbv		BRL				30	
Methyl tert-butyl ether	BRL	0.500	ppbv		BRL				30	
Isopropyl alcohol	3.06	0.500	ppbv		2.89			6	30	
2-Butanone (MEK)	5.43	0.500	ppbv		5.06			7	30	
cis-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Hexane	BRL	0.500	ppbv		BRL				30	
Ethyl acetate	BRL	0.500	ppbv		BRL				30	
Chloroform	BRL	0.500	ppbv		BRL				30	
Tetrahydrofuran	BRL	0.500	ppbv		BRL				30	
1,2-Dichloroethane	BRL	0.500	ppbv		BRL				30	
1,1,1-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Benzene	0.460	0.500	ppbv		0.430			7	30	J
Carbon tetrachloride	BRL	0.500	ppbv		BRL				30	
Cyclohexane	BRL	0.500	ppbv		BRL				30	
1,2-Dichloropropane	BRL	0.500	ppbv		BRL				30	
Bromodichloromethane	BRL	0.500	ppbv		BRL				30	
Trichloroethene	BRL	0.500	ppbv		BRL				30	
n-Heptane	BRL	0.500	ppbv		BRL				30	
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv		BRL				30	
cis-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
trans-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Toluene	0.780	0.500	ppbv		0.760			3	30	
2-Hexanone (MBK)	0.510	0.500	ppbv		0.500			2	30	
Dibromochloromethane	BRL	0.500	ppbv		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv		BRL				30	
Tetrachloroethene	BRL	0.500	ppbv		BRL				30	
Chlorobenzene	BRL	0.500	ppbv		BRL				30	
Ethylbenzene	BRL	0.500	ppbv		BRL				30	
m,p-Xylene	0.440	1.00	ppbv		0.460			4	30	J
Bromoform	BRL	0.500	ppbv		BRL				30	
Styrene	BRL	0.500	ppbv		BRL				30	
o-Xylene	BRL	0.500	ppbv		BRL				30	
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
4-Ethyltoluene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
1,3-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
Benzyl chloride	BRL	0.500	ppbv		BRL				30	
1,4-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500	ppbv		BRL				30	
Hexachlorobutadiene	BRL	0.500	ppbv		BRL				30	
Surrogate: 4-Bromofluorobenzene	*9.39*		ppbv	*10.0*		*94*	*75-125*			
Batch 7121541 - General Air Prep										
Blank (7121541-BLK1)				Prepared & Analyzed: 20-Dec-07						
Propene	BRL	0.500	ppbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500	ppbv							
Chloromethane	BRL	0.500	ppbv							
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv							

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121541 - General Air Prep										
Blank (7121541-BLK1)				Prepared & Analyzed: 20-Dec-07						
Vinyl chloride	BRL	0.500	ppbv							
1,3-Butadiene	BRL	0.500	ppbv							
Bromomethane	BRL	0.500	ppbv							
Chloroethane	BRL	0.500	ppbv							
Acetone	BRL	0.500	ppbv							
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv							
Ethanol	BRL	0.500	ppbv							
1,1-Dichloroethene	BRL	0.500	ppbv							
Methylene chloride	BRL	0.500	ppbv							
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv							
Carbon disulfide	BRL	0.500	ppbv							
trans-1,2-Dichloroethene	BRL	0.500	ppbv							
1,1-Dichloroethane	BRL	0.500	ppbv							
Methyl tert-butyl ether	BRL	0.500	ppbv							
Isopropyl alcohol	BRL	0.500	ppbv							
2-Butanone (MEK)	BRL	0.500	ppbv							
cis-1,2-Dichloroethene	BRL	0.500	ppbv							
Hexane	BRL	0.500	ppbv							
Ethyl acetate	BRL	0.500	ppbv							
Chloroform	BRL	0.500	ppbv							
Tetrahydrofuran	BRL	0.500	ppbv							
1,2-Dichloroethane	BRL	0.500	ppbv							
1,1,1-Trichloroethane	BRL	0.500	ppbv							
Benzene	BRL	0.500	ppbv							
Carbon tetrachloride	BRL	0.500	ppbv							
Cyclohexane	BRL	0.500	ppbv							
1,2-Dichloropropane	BRL	0.500	ppbv							
Bromodichloromethane	BRL	0.500	ppbv							
Trichloroethene	BRL	0.500	ppbv							
n-Heptane	BRL	0.500	ppbv							
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv							
cis-1,3-Dichloropropene	BRL	0.500	ppbv							
trans-1,3-Dichloropropene	BRL	0.500	ppbv							
1,1,2-Trichloroethane	BRL	0.500	ppbv							
Toluene	BRL	0.500	ppbv							
2-Hexanone (MBK)	BRL	0.500	ppbv							
Dibromochloromethane	BRL	0.500	ppbv							
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv							
Tetrachloroethene	BRL	0.500	ppbv							
Chlorobenzene	BRL	0.500	ppbv							
Ethylbenzene	BRL	0.500	ppbv							
m,p-Xylene	BRL	1.00	ppbv							
Bromoform	BRL	0.500	ppbv							
Styrene	BRL	0.500	ppbv							
o-Xylene	BRL	0.500	ppbv							
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv							
1,3,5-Trimethylbenzene	BRL	0.500	ppbv							
4-Ethyltoluene	BRL	0.500	ppbv							
1,2,4-Trimethylbenzene	BRL	0.500	ppbv							
1,3-Dichlorobenzene	BRL	0.500	ppbv							
Benzyl chloride	BRL	0.500	ppbv							
1,4-Dichlorobenzene	BRL	0.500	ppbv							
1,2-Dichlorobenzene	BRL	0.500	ppbv							
1,2,4-Trichlorobenzene	BRL	0.500	ppbv							

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121541 - General Air Prep										
Blank (7121541-BLK1)				Prepared & Analyzed: 20-Dec-07						
Hexachlorobutadiene	BRL	0.500	ppbv							
Surrogate: 4-Bromofluorobenzene	*8.85*		ppbv	*10.0*		*88*	*75-125*			
LCS (7121541-BS1)				Prepared & Analyzed: 20-Dec-07						
Propene	9.61		ppbv	10.0		96	70-130			
Dichlorodifluoromethane (Freon12)	8.50		ppbv	10.0		85	70-130			
Chloromethane	12.3		ppbv	10.0		123	70-130			
1,2-Dichlorotetrafluoroethane (Freon 114)	11.1		ppbv	10.0		111	70-130			
Vinyl chloride	10.8		ppbv	10.0		108	70-130			
1,3-Butadiene	10.6		ppbv	10.0		106	70-130			
Bromomethane	10.9		ppbv	10.0		109	70-130			
Chloroethane	10.8		ppbv	10.0		108	70-130			
Acetone	9.40		ppbv	10.0		94	70-130			
Trichlorofluoromethane (Freon 11)	9.95		ppbv	10.0		100	70-130			
Ethanol	9.71		ppbv	10.0		97	55.1-230			
1,1-Dichloroethene	9.55		ppbv	10.0		96	70-130			
Methylene chloride	10.2		ppbv	10.0		102	70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	9.80		ppbv	10.0		98	70-130			
Carbon disulfide	10.2		ppbv	10.0		102	70-130			
trans-1,2-Dichloroethene	10.5		ppbv	10.0		105	70-130			
1,1-Dichloroethane	10.9		ppbv	10.0		109	70-130			
Methyl tert-butyl ether	9.44		ppbv	10.0		94	70-130			
Isopropyl alcohol	10.6		ppbv	10.0		106	70-130			
2-Butanone (MEK)	9.60		ppbv	10.0		96	70-130			
cis-1,2-Dichloroethene	9.83		ppbv	10.0		98	70-130			
Hexane	10.3		ppbv	10.0		103	70-130			
Ethyl acetate	10.8		ppbv	10.0		108	70-130			
Chloroform	10.0		ppbv	10.0		100	70-130			
Tetrahydrofuran	10.1		ppbv	10.0		101	70-130			
1,2-Dichloroethane	9.66		ppbv	10.0		97	70-130			
1,1,1-Trichloroethane	9.47		ppbv	10.0		95	70-130			
Benzene	10.6		ppbv	10.0		106	70-130			
Carbon tetrachloride	9.00		ppbv	10.0		90	70-130			
Cyclohexane	9.54		ppbv	10.0		95	70-130			
1,2-Dichloropropane	10.8		ppbv	10.0		108	70-130			
Bromodichloromethane	10.8		ppbv	10.0		108	70-130			
Trichloroethene	11.1		ppbv	10.0		111	70-130			
n-Heptane	10.7		ppbv	10.0		107	70-130			
4-Methyl-2-pentanone (MIBK)	11.2		ppbv	10.0		112	70-130			
cis-1,3-Dichloropropene	9.77		ppbv	10.0		98	70-130			
trans-1,3-Dichloropropene	10.5		ppbv	10.0		105	70-130			
1,1,2-Trichloroethane	11.0		ppbv	10.0		110	70-130			
Toluene	11.0		ppbv	10.0		110	70-130			
2-Hexanone (MBK)	12.2		ppbv	10.0		122	70-130			
Dibromochloromethane	15.6		ppbv	10.0		156	70-130			QC2
1,2-Dibromoethane (EDB)	10.2		ppbv	10.0		102	70-130			
Tetrachloroethene	8.59		ppbv	10.0		86	70-130			
Chlorobenzene	8.83		ppbv	10.0		88	70-130			
Ethylbenzene	9.29		ppbv	10.0		93	70-130			
m,p-Xylene	18.1		ppbv	20.0		90	70-130			
Bromoform	7.84		ppbv	10.0		78	70-130			
Styrene	8.52		ppbv	10.0		85	70-130			
o-Xylene	9.05		ppbv	10.0		90	70-130			
1,1,2,2-Tetrachloroethane	10.2		ppbv	10.0		102	70-130			

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121541 - General Air Prep										
LCS (7121541-BS1)				Prepared & Analyzed: 20-Dec-07						
1,3,5-Trimethylbenzene	8.80		ppbv	10.0		88	70-130			
4-Ethyltoluene	8.51		ppbv	10.0		85	70-130			
1,2,4-Trimethylbenzene	8.35		ppbv	10.0		84	70-130			
1,3-Dichlorobenzene	8.66		ppbv	10.0		87	70-130			
Benzyl chloride	10.8		ppbv	10.0		108	70-130			
1,4-Dichlorobenzene	9.37		ppbv	10.0		94	70-130			
1,2-Dichlorobenzene	9.50		ppbv	10.0		95	70-130			
1,2,4-Trichlorobenzene	7.95		ppbv	10.0		80	70-130			
Hexachlorobutadiene	6.94		ppbv	10.0		69	70-130			QC2
Surrogate: 4-Bromofluorobenzene	*9.54*		ppbv	*10.0*		*95*	*75-125*			
Duplicate (7121541-DUP1)	**Source: SA72512-01**			Prepared & Analyzed: 20-Dec-07						
Propene	BRL	0.500	ppbv		BRL				30	
Dichlorodifluoromethane (Freon12)	0.590	0.500	ppbv		0.560			5	30	
Chloromethane	0.970	0.500	ppbv		0.920			5	30	
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv		BRL				30	
Vinyl chloride	BRL	0.500	ppbv		BRL				30	
1,3-Butadiene	BRL	0.500	ppbv		BRL				30	
Bromomethane	BRL	0.500	ppbv		BRL				30	
Chloroethane	BRL	0.500	ppbv		BRL				30	
Acetone	8.92	0.500	ppbv		8.79			1	30	
Trichlorofluoromethane (Freon 11)	0.410	0.500	ppbv		0.380			8	30	J
Ethanol	97.6	0.500	ppbv		96.4			1	30	
1,1-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Methylene chloride	1.26	0.500	ppbv		1.21			4	30	
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv		BRL				30	
Carbon disulfide	BRL	0.500	ppbv		BRL				30	
trans-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
1,1-Dichloroethane	BRL	0.500	ppbv		BRL				30	
Methyl tert-butyl ether	BRL	0.500	ppbv		BRL				30	
Isopropyl alcohol	11.4	0.500	ppbv		11.3			1	30	
2-Butanone (MEK)	1.37	0.500	ppbv		1.40			2	30	
cis-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Hexane	1.15	0.500	ppbv		1.12			3	30	
Ethyl acetate	BRL	0.500	ppbv		BRL				30	
Chloroform	BRL	0.500	ppbv		BRL				30	
Tetrahydrofuran	BRL	0.500	ppbv		BRL				30	
1,2-Dichloroethane	BRL	0.500	ppbv		BRL				30	
1,1,1-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Benzene	1.89	0.500	ppbv		1.80			5	30	
Carbon tetrachloride	BRL	0.500	ppbv		BRL				30	
Cyclohexane	0.460	0.500	ppbv		0.440			4	30	J
1,2-Dichloropropane	0.610	0.500	ppbv		0.600			2	30	
Bromodichloromethane	BRL	0.500	ppbv		BRL				30	
Trichloroethene	BRL	0.500	ppbv		BRL				30	
n-Heptane	0.680	0.500	ppbv		0.670			1	30	
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv		BRL				30	
cis-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
trans-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Toluene	3.83	0.500	ppbv		3.70			3	30	
2-Hexanone (MBK)	BRL	0.500	ppbv		BRL				30	
Dibromochloromethane	BRL	0.500	ppbv		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv		BRL				30	

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121541 - General Air Prep										
Duplicate (7121541-DUP1)	**Source: SA72512-01**			Prepared & Analyzed: 20-Dec-07						
Tetrachloroethene	0.850	0.500	ppbv		0.800			6	30	
Chlorobenzene	BRL	0.500	ppbv		BRL				30	
Ethylbenzene	0.550	0.500	ppbv		0.530			4	30	
m,p-Xylene	1.65	1.00	ppbv		1.58			4	30	
Bromoform	BRL	0.500	ppbv		BRL				30	
Styrene	BRL	0.500	ppbv		BRL				30	
o-Xylene	0.620	0.500	ppbv		0.590			5	30	
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
4-Ethyltoluene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trimethylbenzene	0.420	0.500	ppbv		0.400			5	30	J
1,3-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
Benzyl chloride	BRL	0.500	ppbv		BRL				30	
1,4-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500	ppbv		BRL				30	
Hexachlorobutadiene	BRL	0.500	ppbv		BRL				30	
Surrogate: 4-Bromofluorobenzene	*8.87*		ppbv	*10.0*		*89*	*75-125*			
Batch 7121749 - General Air Prep										
Blank (7121749-BLK1)				Prepared & Analyzed: 24-Dec-07						
Propene	BRL	0.500	ppbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500	ppbv							
Chloromethane	BRL	0.500	ppbv							
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv							
Vinyl chloride	BRL	0.500	ppbv							
1,3-Butadiene	BRL	0.500	ppbv							
Bromomethane	BRL	0.500	ppbv							
Chloroethane	BRL	0.500	ppbv							
Acetone	BRL	0.500	ppbv							
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv							
Ethanol	BRL	0.500	ppbv							
1,1-Dichloroethene	BRL	0.500	ppbv							
Methylene chloride	BRL	0.500	ppbv							
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv							
Carbon disulfide	BRL	0.500	ppbv							
trans-1,2-Dichloroethene	BRL	0.500	ppbv							
1,1-Dichloroethane	BRL	0.500	ppbv							
Methyl tert-butyl ether	BRL	0.500	ppbv							
Isopropyl alcohol	BRL	0.500	ppbv							
2-Butanone (MEK)	BRL	0.500	ppbv							
cis-1,2-Dichloroethene	BRL	0.500	ppbv							
Hexane	BRL	0.500	ppbv							
Ethyl acetate	BRL	0.500	ppbv							
Chloroform	BRL	0.500	ppbv							
Tetrahydrofuran	BRL	0.500	ppbv							
1,2-Dichloroethane	BRL	0.500	ppbv							
1,1,1-Trichloroethane	BRL	0.500	ppbv							
Benzene	BRL	0.500	ppbv							
Carbon tetrachloride	BRL	0.500	ppbv							
Cyclohexane	BRL	0.500	ppbv							
1,2-Dichloropropane	BRL	0.500	ppbv							
Bromodichloromethane	BRL	0.500	ppbv							
Trichloroethene	BRL	0.500	ppbv							

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121749 - General Air Prep										
Blank (7121749-BLK1)				Prepared & Analyzed: 24-Dec-07						
n-Heptane	BRL	0.500	ppbv							
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv							
cis-1,3-Dichloropropene	BRL	0.500	ppbv							
trans-1,3-Dichloropropene	BRL	0.500	ppbv							
1,1,2-Trichloroethane	BRL	0.500	ppbv							
Toluene	BRL	0.500	ppbv							
2-Hexanone (MBK)	BRL	0.500	ppbv							
Dibromochloromethane	BRL	0.500	ppbv							
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv							
Tetrachloroethene	BRL	0.500	ppbv							
Chlorobenzene	BRL	0.500	ppbv							
Ethylbenzene	BRL	0.500	ppbv							
m,p-Xylene	BRL	1.00	ppbv							
Bromoform	BRL	0.500	ppbv							
Styrene	BRL	0.500	ppbv							
o-Xylene	BRL	0.500	ppbv							
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv							
1,3,5-Trimethylbenzene	BRL	0.500	ppbv							
4-Ethyltoluene	BRL	0.500	ppbv							
1,2,4-Trimethylbenzene	BRL	0.500	ppbv							
1,3-Dichlorobenzene	BRL	0.500	ppbv							
Benzyl chloride	BRL	0.500	ppbv							
1,4-Dichlorobenzene	BRL	0.500	ppbv							
1,2-Dichlorobenzene	BRL	0.500	ppbv							
1,2,4-Trichlorobenzene	BRL	0.500	ppbv							
Hexachlorobutadiene	BRL	0.500	ppbv							
Surrogate: 4-Bromofluorobenzene	*8.90*		ppbv	*10.0*		*89*	*75-125*			
LCS (7121749-BS1)				Prepared & Analyzed: 24-Dec-07						
Propene	10.7		ppbv	10.0		107	70-130			
Dichlorodifluoromethane (Freon12)	10.3		ppbv	10.0		103	70-130			
Chloromethane	13.9		ppbv	10.0		139	70-130			QC2
1,2-Dichlorotetrafluoroethane (Freon 114)	12.9		ppbv	10.0		129	70-130			
Vinyl chloride	12.1		ppbv	10.0		121	70-130			
1,3-Butadiene	12.1		ppbv	10.0		121	70-130			
Bromomethane	12.6		ppbv	10.0		126	70-130			
Chloroethane	12.1		ppbv	10.0		121	70-130			
Acetone	10.6		ppbv	10.0		106	70-130			
Trichlorofluoromethane (Freon 11)	12.5		ppbv	10.0		125	70-130			
Ethanol	11.2		ppbv	10.0		112	55.1-230			
1,1-Dichloroethene	10.7		ppbv	10.0		107	70-130			
Methylene chloride	11.0		ppbv	10.0		110	70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	11.2		ppbv	10.0		112	70-130			
Carbon disulfide	10.7		ppbv	10.0		107	70-130			
trans-1,2-Dichloroethene	12.2		ppbv	10.0		122	70-130			
1,1-Dichloroethane	12.3		ppbv	10.0		123	70-130			
Methyl tert-butyl ether	11.0		ppbv	10.0		110	70-130			
Isopropyl alcohol	12.1		ppbv	10.0		121	70-130			
2-Butanone (MEK)	11.0		ppbv	10.0		110	70-130			
cis-1,2-Dichloroethene	11.4		ppbv	10.0		114	70-130			
Hexane	11.7		ppbv	10.0		117	70-130			
Ethyl acetate	11.7		ppbv	10.0		117	70-130			
Chloroform	11.8		ppbv	10.0		118	70-130			
Tetrahydrofuran	11.5		ppbv	10.0		115	70-130			

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121749 - General Air Prep										
LCS (7121749-BS1)				Prepared & Analyzed: 24-Dec-07						
1,2-Dichloroethane	11.6		ppbv	10.0		116	70-130			
1,1,1-Trichloroethane	11.7		ppbv	10.0		117	70-130			
Benzene	12.3		ppbv	10.0		123	70-130			
Carbon tetrachloride	11.3		ppbv	10.0		113	70-130			
Cyclohexane	10.9		ppbv	10.0		109	70-130			
1,2-Dichloropropane	11.8		ppbv	10.0		118	70-130			
Bromodichloromethane	12.6		ppbv	10.0		126	70-130			
Trichloroethene	12.8		ppbv	10.0		128	70-130			
n-Heptane	12.0		ppbv	10.0		120	70-130			
4-Methyl-2-pentanone (MIBK)	12.2		ppbv	10.0		122	70-130			
cis-1,3-Dichloropropene	10.9		ppbv	10.0		109	70-130			
trans-1,3-Dichloropropene	12.0		ppbv	10.0		120	70-130			
1,1,2-Trichloroethane	12.4		ppbv	10.0		124	70-130			
Toluene	12.6		ppbv	10.0		126	70-130			
2-Hexanone (MBK)	12.9		ppbv	10.0		129	70-130			
Dibromochloromethane	18.7		ppbv	10.0		187	70-130			QC2
1,2-Dibromoethane (EDB)	11.9		ppbv	10.0		119	70-130			
Tetrachloroethene	10.6		ppbv	10.0		106	70-130			
Chlorobenzene	10.7		ppbv	10.0		107	70-130			
Ethylbenzene	11.4		ppbv	10.0		114	70-130			
m,p-Xylene	22.2		ppbv	20.0		111	70-130			
Bromoform	10.1		ppbv	10.0		101	70-130			
Styrene	10.1		ppbv	10.0		101	70-130			
o-Xylene	11.1		ppbv	10.0		111	70-130			
1,1,2,2-Tetrachloroethane	11.8		ppbv	10.0		118	70-130			
1,3,5-Trimethylbenzene	10.8		ppbv	10.0		108	70-130			
4-Ethyltoluene	10.6		ppbv	10.0		106	70-130			
1,2,4-Trimethylbenzene	10.2		ppbv	10.0		102	70-130			
1,3-Dichlorobenzene	10.7		ppbv	10.0		107	70-130			
Benzyl chloride	12.7		ppbv	10.0		127	70-130			
1,4-Dichlorobenzene	11.6		ppbv	10.0		116	70-130			
1,2-Dichlorobenzene	11.9		ppbv	10.0		119	70-130			
1,2,4-Trichlorobenzene	10.2		ppbv	10.0		102	70-130			
Hexachlorobutadiene	8.91		ppbv	10.0		89	70-130			
Surrogate: 4-Bromofluorobenzene	*9.62*		ppbv	*10.0*		*96*	*75-125*			
Duplicate (7121749-DUP1)		**Source: SA72559-01**		Prepared & Analyzed: 24-Dec-07						
Propene	BRL	0.500	ppbv		BRL				30	
Dichlorodifluoromethane (Freon12)	0.480	0.500	ppbv		0.480			0	30	J
Chloromethane	0.710	1.00	ppbv		0.720			1	30	J
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv		BRL				30	
Vinyl chloride	BRL	0.500	ppbv		BRL				30	
1,3-Butadiene	BRL	0.500	ppbv		BRL				30	
Bromomethane	BRL	0.500	ppbv		BRL				30	
Chloroethane	BRL	0.500	ppbv		BRL				30	
Acetone	2.80	0.500	ppbv		2.84			1	30	
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv		BRL				30	
Ethanol	8.41	0.500	ppbv		8.81			5	30	
1,1-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Methylene chloride	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv		BRL				30	
Carbon disulfide	BRL	0.500	ppbv		BRL				30	
trans-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
1,1-Dichloroethane	BRL	0.500	ppbv		BRL				30	

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121749 - General Air Prep										
Duplicate (7121749-DUP1)		**Source: SA72559-01**		Prepared & Analyzed: 24-Dec-07						
Methyl tert-butyl ether	BRL	0.500	ppbv		BRL				30	
Isopropyl alcohol	1.46	0.500	ppbv		1.49			2	30	
2-Butanone (MEK)	BRL	0.500	ppbv		BRL				30	
cis-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Hexane	BRL	0.500	ppbv		BRL				30	
Ethyl acetate	0.300	0.500	ppbv		0.310			3	30	J
Chloroform	BRL	0.500	ppbv		BRL				30	
Tetrahydrofuran	BRL	0.500	ppbv		BRL				30	
1,2-Dichloroethane	BRL	0.500	ppbv		BRL				30	
1,1,1-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Benzene	0.310	0.500	ppbv		0.320			3	30	J
Carbon tetrachloride	BRL	0.500	ppbv		BRL				30	
Cyclohexane	BRL	0.500	ppbv		BRL				30	
1,2-Dichloropropane	BRL	0.500	ppbv		BRL				30	
Bromodichloromethane	BRL	0.500	ppbv		BRL				30	
Trichloroethene	BRL	0.500	ppbv		BRL				30	
n-Heptane	BRL	0.500	ppbv		BRL				30	
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv		BRL				30	
cis-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
trans-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Toluene	0.420	0.500	ppbv		0.430			2	30	J
2-Hexanone (MBK)	BRL	0.500	ppbv		BRL				30	
Dibromochloromethane	BRL	0.500	ppbv		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv		BRL				30	
Tetrachloroethene	BRL	0.500	ppbv		BRL				30	
Chlorobenzene	BRL	0.500	ppbv		BRL				30	
Ethylbenzene	BRL	0.500	ppbv		BRL				30	
m,p-Xylene	BRL	1.00	ppbv		BRL				30	
Bromoform	BRL	0.500	ppbv		BRL				30	
Styrene	BRL	0.500	ppbv		BRL				30	
o-Xylene	BRL	0.500	ppbv		BRL				30	
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
4-Ethyltoluene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
1,3-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
Benzyl chloride	BRL	0.500	ppbv		BRL				30	
1,4-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500	ppbv		BRL				30	
Hexachlorobutadiene	BRL	0.500	ppbv		BRL				30	
Surrogate: 4-Bromofluorobenzene	*8.97*		ppbv	*10.0*		*90*	*75-125*			
Batch 7121849 - General Air Prep										
Blank (7121849-BLK1)				Prepared & Analyzed: 21-Dec-07						
Propene	BRL	0.500	ppbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500	ppbv							
Chloromethane	BRL	0.500	ppbv							
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv							
Vinyl chloride	BRL	0.500	ppbv							
1,3-Butadiene	BRL	0.500	ppbv							
Bromomethane	BRL	0.500	ppbv							
Chloroethane	BRL	0.500	ppbv							

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121849 - General Air Prep										
Blank (7121849-BLK1)				Prepared & Analyzed: 21-Dec-07						
Acetone	BRL	0.500	ppbv							
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv							
Ethanol	BRL	0.500	ppbv							
1,1-Dichloroethene	BRL	0.500	ppbv							
Methylene chloride	BRL	0.500	ppbv							
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv							
Carbon disulfide	BRL	0.500	ppbv							
trans-1,2-Dichloroethene	BRL	0.500	ppbv							
1,1-Dichloroethane	BRL	0.500	ppbv							
Methyl tert-butyl ether	BRL	0.500	ppbv							
Isopropyl alcohol	BRL	0.500	ppbv							
2-Butanone (MEK)	BRL	0.500	ppbv							
cis-1,2-Dichloroethene	BRL	0.500	ppbv							
Hexane	BRL	0.500	ppbv							
Ethyl acetate	BRL	0.500	ppbv							
Chloroform	BRL	0.500	ppbv							
Tetrahydrofuran	BRL	0.500	ppbv							
1,2-Dichloroethane	BRL	0.500	ppbv							
1,1,1-Trichloroethane	BRL	0.500	ppbv							
Benzene	BRL	0.500	ppbv							
Carbon tetrachloride	BRL	0.500	ppbv							
Cyclohexane	BRL	0.500	ppbv							
1,2-Dichloropropane	BRL	0.500	ppbv							
Bromodichloromethane	BRL	0.500	ppbv							
Trichloroethene	BRL	0.500	ppbv							
n-Heptane	BRL	0.500	ppbv							
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv							
cis-1,3-Dichloropropene	BRL	0.500	ppbv							
trans-1,3-Dichloropropene	BRL	0.500	ppbv							
1,1,2-Trichloroethane	BRL	0.500	ppbv							
Toluene	BRL	0.500	ppbv							
2-Hexanone (MBK)	BRL	0.500	ppbv							
Dibromochloromethane	BRL	0.500	ppbv							
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv							
Tetrachloroethene	BRL	0.500	ppbv							
Chlorobenzene	BRL	0.500	ppbv							
Ethylbenzene	BRL	0.500	ppbv							
m,p-Xylene	BRL	1.00	ppbv							
Bromoform	BRL	0.500	ppbv							
Styrene	BRL	0.500	ppbv							
o-Xylene	BRL	0.500	ppbv							
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv							
1,3,5-Trimethylbenzene	BRL	0.500	ppbv							
4-Ethyltoluene	BRL	0.500	ppbv							
1,2,4-Trimethylbenzene	BRL	0.500	ppbv							
1,3-Dichlorobenzene	BRL	0.500	ppbv							
Benzyl chloride	BRL	0.500	ppbv							
1,4-Dichlorobenzene	BRL	0.500	ppbv							
1,2-Dichlorobenzene	BRL	0.500	ppbv							
1,2,4-Trichlorobenzene	BRL	0.500	ppbv							
Hexachlorobutadiene	BRL	0.500	ppbv							
Surrogate: 4-Bromofluorobenzene	*8.94*		ppbv	*10.0*		*89*	*75-125*			
LCS (7121849-BS1)				Prepared & Analyzed: 21-Dec-07						

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121849 - General Air Prep										
LCS (7121849-BS1)				Prepared & Analyzed: 21-Dec-07						
Propene	9.81		ppbv	10.0		98	70-130			
Dichlorodifluoromethane (Freon12)	9.04		ppbv	10.0		90	70-130			
Chloromethane	12.5		ppbv	10.0		125	70-130			
1,2-Dichlorotetrafluoroethane (Freon 114)	11.5		ppbv	10.0		115	70-130			
Vinyl chloride	11.0		ppbv	10.0		110	70-130			
1,3-Butadiene	10.8		ppbv	10.0		108	70-130			
Bromomethane	11.4		ppbv	10.0		114	70-130			
Chloroethane	11.0		ppbv	10.0		110	70-130			
Acetone	9.45		ppbv	10.0		94	70-130			
Trichlorofluoromethane (Freon 11)	10.8		ppbv	10.0		108	70-130			
Ethanol	9.87		ppbv	10.0		99	55.1-230			
1,1-Dichloroethene	9.94		ppbv	10.0		99	70-130			
Methylene chloride	10.5		ppbv	10.0		105	70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	10.2		ppbv	10.0		102	70-130			
Carbon disulfide	10.4		ppbv	10.0		104	70-130			
trans-1,2-Dichloroethene	11.1		ppbv	10.0		111	70-130			
1,1-Dichloroethane	11.2		ppbv	10.0		112	70-130			
Methyl tert-butyl ether	9.82		ppbv	10.0		98	70-130			
Isopropyl alcohol	10.8		ppbv	10.0		108	70-130			
2-Butanone (MEK)	9.65		ppbv	10.0		96	70-130			
cis-1,2-Dichloroethene	10.1		ppbv	10.0		101	70-130			
Hexane	10.5		ppbv	10.0		105	70-130			
Ethyl acetate	11.0		ppbv	10.0		110	70-130			
Chloroform	10.4		ppbv	10.0		104	70-130			
Tetrahydrofuran	10.5		ppbv	10.0		105	70-130			
1,2-Dichloroethane	10.0		ppbv	10.0		100	70-130			
1,1,1-Trichloroethane	9.87		ppbv	10.0		99	70-130			
Benzene	11.0		ppbv	10.0		110	70-130			
Carbon tetrachloride	9.41		ppbv	10.0		94	70-130			
Cyclohexane	9.74		ppbv	10.0		97	70-130			
1,2-Dichloropropane	11.0		ppbv	10.0		110	70-130			
Bromodichloromethane	11.1		ppbv	10.0		111	70-130			
Trichloroethene	11.6		ppbv	10.0		116	70-130			
n-Heptane	10.9		ppbv	10.0		109	70-130			
4-Methyl-2-pentanone (MIBK)	11.4		ppbv	10.0		114	70-130			
cis-1,3-Dichloropropene	9.99		ppbv	10.0		100	70-130			
trans-1,3-Dichloropropene	10.8		ppbv	10.0		108	70-130			
1,1,2-Trichloroethane	11.3		ppbv	10.0		113	70-130			
Toluene	11.4		ppbv	10.0		114	70-130			
2-Hexanone (MBK)	12.3		ppbv	10.0		123	70-130			
Dibromochloromethane	16.3		ppbv	10.0		163	70-130			QC2
1,2-Dibromoethane (EDB)	10.6		ppbv	10.0		106	70-130			
Tetrachloroethene	8.80		ppbv	10.0		88	70-130			
Chlorobenzene	9.28		ppbv	10.0		93	70-130			
Ethylbenzene	9.80		ppbv	10.0		98	70-130			
m,p-Xylene	19.0		ppbv	20.0		95	70-130			
Bromoform	8.29		ppbv	10.0		83	70-130			
Styrene	8.81		ppbv	10.0		88	70-130			
o-Xylene	9.61		ppbv	10.0		96	70-130			
1,1,2,2-Tetrachloroethane	10.7		ppbv	10.0		107	70-130			
1,3,5-Trimethylbenzene	9.22		ppbv	10.0		92	70-130			
4-Ethyltoluene	9.03		ppbv	10.0		90	70-130			
1,2,4-Trimethylbenzene	8.78		ppbv	10.0		88	70-130			
1,3-Dichlorobenzene	9.08		ppbv	10.0		91	70-130			

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121849 - General Air Prep										
LCS (7121849-BS1)				Prepared & Analyzed: 21-Dec-07						
Benzyl chloride	11.3		ppbv	10.0		113	70-130			
1,4-Dichlorobenzene	9.79		ppbv	10.0		98	70-130			
1,2-Dichlorobenzene	9.89		ppbv	10.0		99	70-130			
1,2,4-Trichlorobenzene	7.89		ppbv	10.0		79	70-130			
Hexachlorobutadiene	7.01		ppbv	10.0		70	70-130			
Surrogate: 4-Bromofluorobenzene	*9.51*		ppbv	*10.0*		*95*	*75-125*			
Duplicate (7121849-DUP1)	**Source: SA72483-01**			Prepared & Analyzed: 21-Dec-07						
Propene	BRL	0.500	ppbv		BRL				30	
Dichlorodifluoromethane (Freon12)	0.480	0.500	ppbv		0.440			9	30	J
Chloromethane	BRL	0.500	ppbv		BRL				30	
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv		BRL				30	
Vinyl chloride	BRL	0.500	ppbv		BRL				30	
1,3-Butadiene	BRL	0.500	ppbv		BRL				30	
Bromomethane	BRL	0.500	ppbv		BRL				30	
Chloroethane	BRL	0.500	ppbv		BRL				30	
Acetone	BRL	0.500	ppbv		BRL				30	
Trichlorofluoromethane (Freon 11)	BRL	0.500	ppbv		BRL				30	
Ethanol	2.66	0.500	ppbv		2.45			8	30	
1,1-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Methylene chloride	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	ppbv		BRL				30	
Carbon disulfide	24.2	0.500	ppbv		25.5			5	30	
trans-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
1,1-Dichloroethane	0.490	0.500	ppbv		0.450			9	30	J
Methyl tert-butyl ether	BRL	0.500	ppbv		BRL				30	
Isopropyl alcohol	0.700	0.500	ppbv		0.610			14	30	
2-Butanone (MEK)	BRL	0.500	ppbv		BRL				30	
cis-1,2-Dichloroethene	BRL	0.500	ppbv		BRL				30	
Hexane	3.96	0.500	ppbv		3.85			3	30	
Ethyl acetate	BRL	0.500	ppbv		BRL				30	
Chloroform	BRL	0.500	ppbv		BRL				30	
Tetrahydrofuran	BRL	0.500	ppbv		BRL				30	
1,2-Dichloroethane	BRL	0.500	ppbv		BRL				30	
1,1,1-Trichloroethane	12.1	0.500	ppbv		11.8			3	30	
Benzene	3.83	0.500	ppbv		3.74			2	30	
Carbon tetrachloride	BRL	0.500	ppbv		BRL				30	
Cyclohexane	25.4	0.500	ppbv		25.4			0.2	30	
1,2-Dichloropropane	BRL	0.500	ppbv		BRL				30	
Bromodichloromethane	0.470	0.500	ppbv		0.450			4	30	J
Trichloroethene	97.9	0.500	ppbv		97.8			0.08	30	
n-Heptane	1.33	0.500	ppbv		1.27			5	30	
4-Methyl-2-pentanone (MIBK)	BRL	0.500	ppbv		1.80				30	
cis-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
trans-1,3-Dichloropropene	BRL	0.500	ppbv		BRL				30	
1,1,2-Trichloroethane	BRL	0.500	ppbv		BRL				30	
Toluene	6.40	0.500	ppbv		6.35			0.8	30	
2-Hexanone (MBK)	BRL	0.500	ppbv		BRL				30	
Dibromochloromethane	BRL	0.500	ppbv		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500	ppbv		BRL				30	
Tetrachloroethene	12.5	0.500	ppbv		12.5			0.4	30	
Chlorobenzene	BRL	0.500	ppbv		BRL				30	
Ethylbenzene	0.370	0.500	ppbv		0.340			8	30	J
m,p-Xylene	0.960	1.00	ppbv		0.870			10	30	J

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121849 - General Air Prep										
Duplicate (7121849-DUP1)	**Source: SA72483-01**			Prepared & Analyzed: 21-Dec-07						
Bromoform	BRL	0.500	ppbv		BRL				30	
Styrene	BRL	0.500	ppbv		BRL				30	
o-Xylene	0.410	0.500	ppbv		0.380			8	30	J
1,1,2,2-Tetrachloroethane	BRL	0.500	ppbv		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
4-Ethyltoluene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trimethylbenzene	BRL	0.500	ppbv		BRL				30	
1,3-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
Benzyl chloride	BRL	0.500	ppbv		BRL				30	
1,4-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2-Dichlorobenzene	BRL	0.500	ppbv		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500	ppbv		BRL				30	
Hexachlorobutadiene	BRL	0.500	ppbv		BRL				30	
Surrogate: 4-Bromofluorobenzene	*9.93*		ppbv	*10.0*		*99*	*75-125*			

Notes and Definitions

R05	Elevated Reporting Limits due to the presence of high levels of non-target analytes.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
GS	This sample was not able to be analyzed for low level reporting limits due to high concentrations of other target analytes in the sample.
E	The concentration indicated for this analyte is an estimated value. This value is considered an estimate (CLP E-flag).
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA 72249 EM

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: ________
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ERM
5788 Widewaters Pkwy
Dewitt NY 13214

Project Mgr.: Jon Fox

Invoice To: Same

P.O. No.: 0070448 RQN: ________

Project No.: 0070448
Site Name: Greif
Location: Tonawanda State: NY
Sampler(s): T. Marsh R. Sent

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= none 10=________

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=________ X2=________ X3=________

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Summa 6 L		TO-15 site specific VOCs see attached list							QA Reporting Notes
72249-01	Greif-IA-07	12Dec07	0848	G	A	9					1		X							IA and SV and OA minimum
02	Greif-SSV-07	↓	0938	↓	↓	↓					↓		↓							detection Limit of
03	Greif-IA-08		1013																	1.0 ug/m3
04	Greif-SSV-08		0850																	
05	Greif-IA-09		0853																	SSV minimum detection Limit
06	Greif-SSV-09		0853																	of 0.25 ug/m3
07	Greif-IA-10		0858																	
08	Greif-SSV-10		0858																	Please report in
09	Greif-DUP-2		—																	ug/m3 units
10	Greif-DUP-1	↓	—	↓	↓	↓					↓		↓							

QA Reporting Notes: (check if needed)
☐ Provide MA DEP MCP CAM Report
☐ Provide CT DPH RCP Report
QA/QC Reporting Level
☐ Standard ☐ No QC
☐ Other ________
State specific reporting standards:

☐ Fax results when available to (____) ________
☒ E-mail to Jon.Fox@erm.com Robert.Sents@erm.com
EDD Format todd.marsh@erm.com

Condition upon receipt: ☐ Iced ☒ Ambient ☐ °C 14

Relinquished by:	Received by:	Date:	Time:
Todd L Marsh	FedEx	12Dec07	1520
FedEx	[signature]	12/13/07	1048

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

SA 72249 Em

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: ______
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ERM
5788 Widewaters Pkwy
Dewitt NY 13214

Project Mgr.: Jon Fox

Invoice To: Same

P.O. No.: ______ RQN: ______

Project No.: 0070448
Site Name: Greif
Location: Tonawanda State: NY
Sampler(s): T. Marsh R. Senta

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= none 10=______

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=______ X2=______ X3=______

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	?33cc [illegible]	TO-15 site specific compounds see attached list
72249-11	Greif-SV-05	12 Dec 07	1055	G	A	9					1	X
12	Greif-SV-06	↓	1105	↓	↓	↓					↓	↓
13	Greif-OA-01	↓	1100	↓	↓	↓					↓	↓
14	Greif-SV-01	↓	1340	↓	↓	↓					↓	↓
15	Greif-SV-02	↓	1358	↓	↓	↓					↓	↓
16	Greif-SV-03	↓	1400	↓	↓	↓					↓	↓
17	Greif-SV-04	↓	1415	↓	↓	↓					↓	↓
18	Greif-DUP-3	12	—	↓	↓	↓					↓	↓

QA Reporting Notes: (check if needed)

- ☐ Provide MA DEP MCP CAM Report
- ☐ Provide CT DPH RCP Report

QA/QC Reporting Level
☐ Standard ☐ No QC
☐ Other ______

*State specific reporting standards: ______

IA, SV and OA samples detection (minimum) of 1.0 ug/m³
SSV samples minimum detection limit of 0.25 ug/m³

Please report in ug/m³ units

☐ Fax results when available to ( ) ______
☒ E-mail to Jon.Fox@erm.com Robert.Senta@erm.com todd.marsh@erm.com
EDD Format ______

Condition upon receipt: ☐ Iced ☑ Ambient ☐ °C 14

Relinquished by:	Received by:	Date:	Time:
Todd L Marsh	Fedex	12 Dec 07	1500
Todd	[signature]	12/13/07	1048

scope of work associated with subsurface investigations generally included installation of soil borings, ground water monitoring wells, and collection of soil, soil vapor, and ground water samples for analysis of selected parameters at an approved environmental laboratory. Previous soil vapor samples collected at the Site were associated with a passive soil vapor survey and were reported as absolute masses, not as concentrations (ERM, 2001). Detailed information regarding previous environmental investigation at the Site is summarized the Data Gap Investigation Report (ERM, 2003). Detailed information regarding completed and ongoing Interim Remedial Measures (IRMs) at the Site are summarized in the dense, non-aqueous phase liquid (DNAPL) Recovery IRM Pilot Test Report (ERM, 2005) and Interim Report - Soil Excavation IRM (ERM, 2006).

Several volatile organic compounds (VOCs) of potential concern have been identified in Site soil, soil vapor, and/or ground water samples previously collected beneath or proximal to the main building at the Site. Samples collected for laboratory analysis during the implementation of this Work Plan will be analyzed for the specific VOCs listed below that were previously detected in soil, soil vapor, and/or ground water samples collected at the Site.

- Acetone
- Benzene
- 2-Butanone
- Carbon tetrachloride
- Chloroethane
- Chloroform
- 1,1-Dichloroethane (DCA)
- 1,2-DCA
- 1,1-Dichloroethene (DCE)
- cis-1,2-DCE
- trans-1,2-DCE
- Ethylbenzene
- Methylene chloride
- 4-Methyl-2-pentanone
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethene (PCE)
- Toluene
- 1,1,1-Trichloroethane (TCA)
- 1,1,2-TCA
- Trichloroethene (TCE)
- 1,2,4-Trimethylbenzene
- Vinyl chloride
- Xylenes

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Cover Page

ERM

For Lab Project # 09-0911
Issued March 23, 2009
This report contains a total of 3 pages

The reported results relate only to the samples as they have been received by the laboratory.

Any noncompliant QC parameters having impact on the data are flagged or documented on the final report.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of frequently used data flags and their meaning:

"ND" = analyzed for but not detected.
"E" = Result has been estimated, calibration limit exceeded.
"D" = Duplicate results outside QC limits. May indicate a non-homogenous matrix.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Non-potable Water

Client: ERM

Client Job Site:	Greif Tonawanda	**Lab Project Number:**	09-0911
		Lab Sample Number:	3328
Client Job Number:	N/A		
Field Location:	Greif-TW-02	**Date Sampled:**	03/12/2009
Field ID Number:	N/A	**Date Received:**	03/13/2009
Sample Type:	Water	**Date Analyzed:**	03/16/2009

Compounds	Results in ug / L
Acetone	ND< 10.0
Benzene	ND< 0.700
2-Butanone (MEK)	ND< 10.0
Carbon Tetrachloride	ND< 2.00
Chloroethane	ND< 2.00
Chloroform	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
Ethylbenzene	ND< 2.00
Methylene chloride	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
Toluene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
1,2,4-Trimethylbenzene	ND< 5.00
Vinyl chloride	ND< 2.00
m,p-Xylene	ND< 2.00
o-Xylene	ND< 2.00

ELAP Number 10958 Method: EPA 8260B Data File: V64211.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature: _____
Bruce Hoogestegen, Technical Director

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 • (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:			
COMPANY: ERM		COMPANY: SAME		LAB PROJECT #: 09-0911	CLIENT PROJECT #:
ADDRESS: 5788 Widewaters Parkway		ADDRESS:			
CITY: Dewitt STATE: NY ZIP: 13214		CITY: STATE: ZIP:		TURNAROUND TIME: (WORKING DAYS)	
PHONE: (315) 445-2545 FAX: (315) 445-2543		PHONE: FAX:		STD ☒ 5	OTHER ☐
PROJECT NAME/SITE NAME: Greif Tonawanda	ATTN: Rob Sents	ATTN:		☐ 1 ☐ 2 ☐ 3	
	COMMENTS:			QUOTE #:	

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	VOCs by 8260									REMARKS	PARADIGM LAB SAMPLE NUMBER
	3/12/09																	
1	~~3/11/09~~	1305		X	Greif-TW-02	GW	2	X									Site Specific List Only	33288
2	CDC BS 3/13/09	1200																
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

****LAB USE ONLY BELOW THIS LINE****

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y ☒	N ☐
Comments:		
Preservation:	Y ☒	N ☐
Comments:		
Holding Time:	Y ☒	N ☐
Comments:		
Temperature:	Y ☒	N ☐
Comments: 2°C iced		

Sampled By — Date/Time: 3/12/09 1305

Relinquished By — Date/Time: 3/13/09

Received By — Date/Time: 3/13/09 8:05

Received @ Lab By: Elizabeth A. Honch — Date/Time: 3/13/09 1210

Total Cost:

P.I.F.

Appendix D
Data Usability Summary Report

DATA USABILITY SUMMARY REPORT (DUSR)
SONOCO PRODUCTS COMPANY
GREIF BROS. FACILITY, TONOWANDA, NEW YORK
AIR SAMPLE ANALYSIS
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)
PROJECT NUMBER 0017521.7
SPECTRUM ANALYTICAL
SAMPLE DELIVERY GROUP (SDG) 72249

Deliverables:

The above referenced data package for fifteen (15) air samples and three (3) blind field duplicate samples contains sufficient deliverables as stipulated under the 2005 New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B deliverables. The sample were analyzed following "*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition 1997, EPA/625/R-96/010B"*, Compendium Method TO-15, "*Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*". The data have been evaluated according to the protocols and quality control (QC) requirements of the ASP, the National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region 2 Data Review Standard Operating Procedure (SOP) Number HW-31, Revision 4, October 2006: Validating Volatile Organic Analysis of Ambient Air in canister by Method TO-15 and the reviewer's professional judgment.

This report pertains to the following air samples collected on 12 December 2007:

Sample ID		***QC Sample ID***
Greif-IA-07	Greif-SV-05	Greif-DUP-1 (blind field duplicate of sample Greif-IA-07)
Greif-SSV-07	Greif-SV-06	Greif-DUP-2 (blind field duplicate of sample Greif-SSV-08)
Greif-IA-08	Greif-OA-01	Greif-DUP-3 (blind field duplicate of sample Greif-SV-03)
Greif-SSV-08	Greif-SV-01	
Greif-IA-09	Greif-SV-02	
Greif-SSV-09	Greif-SV-03	
Greif-IA-10	Greif-SV-04	
Greif-SSV-10		

The following items/criteria were reviewed:

- Chains-of-Custody (COCs)
- Data completeness, Deliverables and Analysis Data Sheets (Form I)
- Cover letter and Narrative
- Canister Receipt/Log-in sheet (Leak Checks)
- Canister Certification Blanks/Spikes/Pressure Differences
- Holding times
- Surrogate compound recoveries, summary and data
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries, summary and data
- Laboratory Check Sample (LCS) recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- GC/MS chromatograms, mass spectra and quantitation reports
- Quantitation/detection limits
- Qualitative and quantitative compound identification

The items listed above were in compliance with the analytical methods and with the ASP and USEPA criteria with the exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

- Only the following compounds were required: Acetone Benzene, 2-Butanone, Carbon tetrachloride, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Ethylbenzene, Methylene chloride, 4-Methyl-2-pentanone, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, 1,2,4-Trimethylbenzene, Vinyl chloride, and Xylene (Total).

- The required minimum reporting limit (RL) for all requested compounds for samples denoted with an “IA”, “SV” and “OA” was 1.0 ug/m^3 while the required minimum RL for all requested compounds for samples denoted with an “SSV” was 0.25 ug/m^3. The laboratory was to achieve this by analyzing the samples by Selective

Ion Monitoring (SIM). As noted in the laboratory's Case Narrative, the canisters were not cleaned down to the requested levels and SIM analysis could only be performed on samples Greif-SSV-08, Greif-OA-01, and Greif-SV-03. Any positive concentration below 0.2 ppbv for these samples may be considered biased and have been qualified "J".

- The reporting limits for samples Greif-SSV-07, Greif-IA-08, Greif-IA-09, Greif-SSV-09, Greif-SSV-10, Greif-DUP-2, Greif-SV-05, Greif-SV-06, and Greif-SV-01 are elevated due to the dilution required based on the elevated concentration of target compounds. The laboratory utilized a D qualifier to indicate this dilution. The D qualifier has been removed as it is unnecessary. No qualification of the sample data is required.

- The concentration of 1,1,1-trichloroethene was above the calibration range of the instrument in sample Greif-SSV-07. The sample was reanalyzed at a further dilution. The result to be utilized for 1,1,1-trichloroethene is from the further diluted analysis. The Form I has been manually edited to show this concentration. No additional qualification of the sample data is required.

- The following table includes compounds that did not meet QC criteria in the Laboratory Control Sample (LCS). For a percent recovery (%R) below QC criteria (70-130%), positive results in all samples associated with the LCS are considered estimated and qualified "J", while non-detects in all samples associated with the LCS are considered estimated and qualified "UJ".

LCS	Compound	% Recovery	Associated Samples
7121453	1,2,4-trimethylbenzene	24%	Greif-SSV-07, Greif-DUP-2

- 2-butanone, ethylbenzene, and o-xylene were not positively identified in sample Greif-IA-07, however were reported as positive detects in the associated blind field duplicate sample, Greif-DUP-1. As a result the results for these compounds only are considered estimated and have been qualified "J" for positive detects and "UJ" for non-detects.

- Numerous compounds were positively identified in sample Greif-SV-03, however were reported as non-detects in the

associated blind field duplicate sample, Greif-DUP-3. As a result all results are considered estimated and have been qualified "J" for positive detects and "UJ" for non-detects.

- Numerous compounds were positively identified in sample Greif-SSV-08 as well as the associated blind field duplicate sample, Greif-DUP-2. However, the reported concentrations were vastly different. The Summa canister for sample Greif-SSV-08 apparently malfunctioned during sample collection and is believed to have allowed an unknown amount of ambient air to enter the canister. Results for sample Greif-SSV-08 are possibly biased and have been qualified "J" for positive detects and "UJ" for non-detects. The same qualifiers have been applied to the associated blind field duplicate sample as there is no way to verify the accuracy of these results.

Package Summary:

All data are valid and usable with qualifications as noted in this review.

Signed: _____ Dated: 27 March 2008

Andrew J. Coenen
ERM QA Officer

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-OA-01

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-13	File ID:	B22051.D
Sampled:	12/12/07 11:00	Prepared:	12/20/07 08:50	Analyzed:	12/21/07 02:28
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.150	0.4	U
75-00-3	Chloroethane	1	0.150	0.4	U
67-64-1	Acetone	1	2.64	6.3	
75-35-4	1,1-Dichloroethene	1	0.150	0.6	U
75-09-2	Methylene chloride	1	0.273	0.9	
156-60-5	trans-1,2-Dichloroethene	1	0.150	0.6	U
75-34-3	1,1-Dichloroethane	1	0.150	0.6	U
78-93-3	2-Butanone (MEK)	1	0.400	1.2	
156-59-2	cis-1,2-Dichloroethene	1	0.150	0.6	U
67-66-3	Chloroform	1	0.150	0.7	U
107-06-2	1,2-Dichloroethane	1	0.150	0.6	U
71-55-6	1,1,1-Trichloroethane	1	0.530	2.9	
71-43-2	Benzene	1	0.310	1.0	
56-23-5	Carbon tetrachloride	1	0.220	1.4	
79-01-6	Trichloroethene	1	0.295	1.6	
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.150	0.6	U
79-00-5	1,1,2-Trichloroethane	1	0.150	0.8	U
108-88-3	Toluene	1	1.35	5.1	
127-18-4	Tetrachloroethene	1	0.167	1.1	J
100-41-4	Ethylbenzene	1	0.196	0.8	J
1330-20-7	m,p-Xylene	1	0.370	1.6	
95-47-6	o-Xylene	1	0.229	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	1	0.150	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	0.228	1.1	

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.04	90	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1231768	9.54	1431251	9.55	
1,4-Difluorobenzene	5793092	11.78	6818820	11.79	
Chlorobenzene-d5	2746595	17.38	3258375	17.38	

* Values outside of QC limits

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Greif-SV-01

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-14	File ID:	B22052.D
Sampled:	12/12/07 13:40	Prepared:	12/20/07 08:50	Analyzed:	12/21/07 03:12
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
				Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	5	0.690	1.8	UD
75-00-3	Chloroethane	5	0.790	2.1	UD
67-64-1	Acetone	5	1.11	2.6	UD
75-35-4	1,1-Dichloroethene	5	0.620	2.5	UD
75-09-2	Methylene chloride	5	0.550	1.9	UD
156-60-5	trans-1,2-Dichloroethene	5	0.350	1.4	UD
75-34-3	1,1-Dichloroethane	5	0.830	3.4	UD
78-93-3	2-Butanone (MEK)	5	0.525	1.5	UD
156-59-2	cis-1,2-Dichloroethene	5	0.605	2.4	UD
67-66-3	Chloroform	5	1.10	5.4	UD
107-06-2	1,2-Dichloroethane	5	1.24	5.0	UD
71-55-6	1,1,1-Trichloroethane	5	5.60	30.6	D
71-43-2	Benzene	5	0.620	2.0	UD
56-23-5	Carbon tetrachloride	5	1.10	6.9	UD
79-01-6	Trichloroethene	5	2.60	14.0	D
108-10-1	4-Methyl-2-pentanone (MIBK)	5	1.70	7.0	UD
79-00-5	1,1,2-Trichloroethane	5	0.800	4.4	UD
108-88-3	Toluene	5	2.25	8.5	JD
127-18-4	Tetrachloroethene	5	0.715	4.8	UD
100-41-4	Ethylbenzene	5	0.705	3.1	UD
1330-20-7	m,p-Xylene	5	1.23	5.3	UD
95-47-6	o-Xylene	5	0.580	2.5	UD
79-34-5	1,1,2,2-Tetrachloroethane	5	1.26	8.7	UD
95-63-6	1,2,4-Trimethylbenzene	5	0.720	3.5	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.81	88	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1168988	9.54	1431251	9.55	
1,4-Difluorobenzene	5497660	11.78	6818820	11.79	
Chlorobenzene-d5	2571241	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
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Greif-SV-02

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-15	File ID:	B22069.D
Sampled:	12/12/07 13:50	Prepared:	12/21/07 07:14	Analyzed:	12/21/07 21:32
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121849	Sequence:	S800622	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	0.222	0.5	U
75-35-4	1,1-Dichloroethene	1	0.124	0.5	U
75-09-2	Methylene chloride	1	0.110	0.4	U
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	U
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	1	0.105	0.3	U
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	U
67-66-3	Chloroform	1	0.221	1.1	U
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-55-6	1,1,1-Trichloroethane	1	0.130	0.7	U
71-43-2	Benzene	1	0.124	0.4	U
56-23-5	Carbon tetrachloride	1	0.221	1.4	U
79-01-6	Trichloroethene	1	0.153	0.8	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.339	1.4	U
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Toluene	1	0.122	0.5	U
127-18-4	Tetrachloroethene	1	0.143	1.0	U
100-41-4	Ethylbenzene	1	0.141	0.6	U
1330-20-7	m,p-Xylene	1	0.246	1.1	U
95-47-6	o-Xylene	1	0.116	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	U
95-63-6	1,2,4-Trimethylbenzene	1	0.144	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.43	84	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1816282	9.55	1688612	9.55	
1,4-Difluorobenzene	8511589	11.78	8107328	11.79	
Chlorobenzene-d5	3876197	17.38	3858679	17.39	

* Values outside of QC limits

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Greif-SV-03

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-16	File ID:	B22070.D
Sampled:	12/12/07 14:00	Prepared:	12/21/07 07:14	Analyzed:	12/21/07 22:20
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121849	Sequence:	S800622	Calibration:	0801024
				Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.150	0.4	U J
75-00-3	Chloroethane	1	0.150	0.4	U J
67-64-1	Acetone	1	1.40	3.3	J
75-35-4	1,1-Dichloroethene	1	0.150	0.6	U J
75-09-2	Methylene chloride	1	0.950	3.3	J
156-60-5	trans-1,2-Dichloroethene	1	0.150	0.6	U J
75-34-3	1,1-Dichloroethane	1	0.150	0.6	U J
78-93-3	2-Butanone (MEK)	1	0.805	2.4	J
156-59-2	cis-1,2-Dichloroethene	1	0.150	0.6	U J
67-66-3	Chloroform	1	0.150	0.7	U
107-06-2	1,2-Dichloroethane	1	0.150	0.6	U
71-55-6	1,1,1-Trichloroethane	1	0.155	0.8	J
71-43-2	Benzene	1	0.680	2.2	J
56-23-5	Carbon tetrachloride	1	0.193	1.2	J
79-01-6	Trichloroethene	1	0.218	1.2	J
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.150	0.6	U J
79-00-5	1,1,2-Trichloroethane	1	0.150	0.8	U J
108-88-3	Toluene	1	0.450	1.7	J
127-18-4	Tetrachloroethene	1	0.150	1.0	U J
100-41-4	Ethylbenzene	1	0.185	0.8	J
1330-20-7	m,p-Xylene	1	0.486	2.1	J
95-47-6	o-Xylene	1	0.191	0.8	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.150	1.0	U J
95-63-6	1,2,4-Trimethylbenzene	1	0.258	1.3	J

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.71	87	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1854956	9.55	1688612	9.55	
1,4-Difluorobenzene	8777493	11.78	8107328	11.79	
Chlorobenzene-d5	3959000	17.38	3858679	17.39	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
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Greif-DUP-3

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-18	File ID:	B22072.D
Sampled:	12/12/07 00:00	Prepared:	12/21/07 07:14	Analyzed:	12/21/07 23:55
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121849	Sequence:	S800622	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	0.222	0.5	U
75-35-4	1,1-Dichloroethene	1	0.124	0.5	U
75-09-2	Methylene chloride	1	0.110	0.4	U
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	U
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	1	0.105	0.3	U
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	U
67-66-3	Chloroform	1	0.221	1.1	U
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-55-6	1,1,1-Trichloroethane	1	0.130	0.7	U
71-43-2	Benzene	1	0.124	0.4	U
56-23-5	Carbon tetrachloride	1	0.221	1.4	U
79-01-6	Trichloroethene	1	0.153	0.8	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.339	1.4	U
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Toluene	1	0.122	0.5	U
127-18-4	Tetrachloroethene	1	0.143	1.0	U
100-41-4	Ethylbenzene	1	0.141	0.6	U
1330-20-7	m,p-Xylene	1	0.246	1.1	U
95-47-6	o-Xylene	1	0.116	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	U
95-63-6	1,2,4-Trimethylbenzene	1	0.144	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.59	86	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1783868	9.54	1688612	9.55	
1,4-Difluorobenzene	8295971	11.78	8107328	11.79	
Chlorobenzene-d5	3749971	17.38	3858679	17.39	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
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Greif-SV-04

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-17	File ID:	B22071.D
Sampled:	12/12/07 14:15	Prepared:	12/21/07 07:14	Analyzed:	12/21/07 23:07
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121849	Sequence:	S800622	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	11.6	27.6	
75-35-4	1,1-Dichloroethene	1	0.340	1.3	J
75-09-2	Methylene chloride	1	0.510	1.8	
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	U
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	1	0.830	2.4	
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	U
67-66-3	Chloroform	1	0.221	1.1	U
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-55-6	1,1,1-Trichloroethane	1	6.43	35.1	
71-43-2	Benzene	1	0.410	1.3	J
56-23-5	Carbon tetrachloride	1	0.221	1.4	U
79-01-6	Trichloroethene	1	2.47	13.3	
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.339	1.4	U
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Toluene	1	1.56	5.9	
127-18-4	Tetrachloroethene	1	0.143	1.0	U
100-41-4	Ethylbenzene	1	0.141	0.6	U
1330-20-7	m,p-Xylene	1	0.490	2.1	J
95-47-6	o-Xylene	1	0.116	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	U
95-63-6	1,2,4-Trimethylbenzene	1	0.144	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.83	88	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1913679	9.55	1688612	9.55	
1,4-Difluorobenzene	9009810	11.78	8107328	11.79	
Chlorobenzene-d5	4074778	17.38	3858679	17.39	

* Values outside of QC limits

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Greif-SV-05

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-11	File ID:	B22049.D
Sampled:	12/12/07 10:55	Prepared:	12/20/07 08:50	Analyzed:	12/21/07 01:00
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
				Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	2	0.276	0.7	UD
75-00-3	Chloroethane	2	0.316	0.8	UD
67-64-1	Acetone	2	15.9	37.8	D
75-35-4	1,1-Dichloroethene	2	0.248	1.0	UD
75-09-2	Methylene chloride	2	0.220	0.8	UD
156-60-5	trans-1,2-Dichloroethene	2	0.140	0.6	UD
75-34-3	1,1-Dichloroethane	2	0.332	1.3	UD
78-93-3	2-Butanone (MEK)	2	1.66	4.9	D
156-59-2	cis-1,2-Dichloroethene	2	0.242	1.0	UD
67-66-3	Chloroform	2	0.442	2.2	UD
107-06-2	1,2-Dichloroethane	2	0.498	2.0	UD
71-55-6	1,1,1-Trichloroethane	2	4.96	27.1	D
71-43-2	Benzene	2	0.248	0.8	UD
56-23-5	Carbon tetrachloride	2	0.442	2.8	UD
79-01-6	Trichloroethene	2	3.80	20.4	D
108-10-1	4-Methyl-2-pentanone (MIBK)	2	0.678	2.8	UD
79-00-5	1,1,2-Trichloroethane	2	0.320	1.7	UD
108-88-3	Toluene	2	1.68	6.3	D
127-18-4	Tetrachloroethene	2	0.286	1.9	UD
100-41-4	Ethylbenzene	2	0.282	1.2	UD
1330-20-7	m,p-Xylene	2	1.08	4.7	JD
95-47-6	o-Xylene	2	0.232	1.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	2	0.506	3.5	UD
95-63-6	1,2,4-Trimethylbenzene	2	0.288	1.4	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.80	88	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1200286	9.55	1431251	9.55	
1,4-Difluorobenzene	5660957	11.78	6818820	11.79	
Chlorobenzene-d5	2679771	17.38	3258375	17.38	

* Values outside of QC limits

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Greif-SV-06

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-12	File ID:	B22050.D
Sampled:	12/12/07 11:05	Prepared:	12/20/07 08:50	Analyzed:	12/21/07 01:44
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	2	0.276	0.7	UD
75-00-3	Chloroethane	2	0.316	0.8	UD
67-64-1	Acetone	2	26.6	63.2	D
75-35-4	1,1-Dichloroethene	2	0.680	2.7	JD
75-09-2	Methylene chloride	2	0.220	0.8	UD
156-60-5	trans-1,2-Dichloroethene	2	0.140	0.6	UD
75-34-3	1,1-Dichloroethane	2	1.12	4.5	D
78-93-3	2-Butanone (MEK)	2	1.50	4.4	D
156-59-2	cis-1,2-Dichloroethene	2	0.242	1.0	UD
67-66-3	Chloroform	2	0.442	2.2	UD
107-06-2	1,2-Dichloroethane	2	0.498	2.0	UD
71-55-6	1,1,1-Trichloroethane	2	38.8	211.7	D
71-43-2	Benzene	2	0.640	2.0	JD
56-23-5	Carbon tetrachloride	2	0.442	2.8	UD
79-01-6	Trichloroethene	2	2.50	13.4	D
108-10-1	4-Methyl-2-pentanone (MIBK)	2	0.678	2.8	UD
79-00-5	1,1,2-Trichloroethane	2	0.320	1.7	UD
108-88-3	Toluene	2	1.82	6.8	D
127-18-4	Tetrachloroethene	2	0.286	1.9	UD
100-41-4	Ethylbenzene	2	0.282	1.2	UD
1330-20-7	m,p-Xylene	2	0.740	3.2	JD
95-47-6	o-Xylene	2	0.232	1.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	2	0.506	3.5	UD
95-63-6	1,2,4-Trimethylbenzene	2	0.288	1.4	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.18	92	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1314430	9.55	1431251	9.55	
1,4-Difluorobenzene	6248283	11.78	6818820	11.79	
Chlorobenzene-d5	2932945	17.38	3258375	17.38	

* Values outside of QC limits

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Greif-IA-07

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-01	File ID:	B22041.D
Sampled:	12/12/07 08:48	Prepared:	12/20/07 08:50	Analyzed:	12/20/07 19:04
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024	Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	5.01	11.9	
75-35-4	1,1-Dichloroethene	1	0.124	0.5	U
75-09-2	Methylene chloride	1	0.110	0.4	U
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	U
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	1	0.105	0.3	UJ
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	U
67-66-3	Chloroform	1	0.221	1.1	U
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-55-6	1,1,1-Trichloroethane	1	2.34	12.8	
71-43-2	Benzene	1	0.470	1.5	J
56-23-5	Carbon tetrachloride	1	0.221	1.4	U
79-01-6	Trichloroethene	1	1.09	5.9	
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.339	1.4	U
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Toluene	1	1.76	6.6	
127-18-4	Tetrachloroethene	1	0.143	1.0	U
100-41-4	Ethylbenzene	1	0.141	0.6	UJ
1330-20-7	m,p-Xylene	1	0.670	2.9	J
95-47-6	o-Xylene	1	0.116	0.5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	U
95-63-6	1,2,4-Trimethylbenzene	1	0.144	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.74	87	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1303479	9.56	1431251	9.55	
1,4-Difluorobenzene	6159564	11.79	6818820	11.79	
Chlorobenzene-d5	2852812	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-DUP-1

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-10	File ID:	B22048.D
Sampled:	12/12/07 00:00	Prepared:	12/20/07 08:50	Analyzed:	12/21/07 00:13
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	6.34	15.1	
75-35-4	1,1-Dichloroethene	1	0.124	0.5	U
75-09-2	Methylene chloride	1	0.110	0.4	U
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	U
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	1	0.490	1.4	J
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	U
67-66-3	Chloroform	1	0.221	1.1	U
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-55-6	1,1,1-Trichloroethane	1	6.60	36.0	
71-43-2	Benzene	1	0.720	2.3	
56-23-5	Carbon tetrachloride	1	0.221	1.4	U
79-01-6	Trichloroethene	1	2.94	15.8	
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.339	1.4	U
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Toluene	1	2.51	9.4	
127-18-4	Tetrachloroethene	1	0.143	1.0	U
100-41-4	Ethylbenzene	1	0.300	1.3	J
1330-20-7	m,p-Xylene	1	0.880	3.8	J
95-47-6	o-Xylene	1	0.330	1.4	J
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	U
95-63-6	1,2,4-Trimethylbenzene	1	0.144	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.96	90	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1300671	9.55	1431251	9.55	
1,4-Difluorobenzene	6197367	11.78	6818820	11.79	
Chlorobenzene-d5	2882878	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-SSV-07

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-02	File ID:	B22026.D
Sampled:	12/12/07 09:38	Prepared:	12/19/07 08:33	Analyzed:	12/20/07 01:33
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121453	Sequence:	S801745	Calibration:	0801024
				Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	50.8	7.01	17.9	UD
75-00-3	Chloroethane	50.8	8.03	21.2	UD
67-64-1	Acetone	50.8	89.9	213.6	D
75-35-4	1,1-Dichloroethene	50.8	297	1,178.3	D
75-09-2	Methylene chloride	50.8	5.59	19.4	UD
156-60-5	trans-1,2-Dichloroethene	50.8	3.55	14.1	UD
75-34-3	1,1-Dichloroethane	50.8	199	805.8	D
78-93-3	2-Butanone (MEK)	50.8	5.33	15.7	UD
156-59-2	cis-1,2-Dichloroethene	50.8	62.0	245.8	D
67-66-3	Chloroform	50.8	11.2	54.5	UD
107-06-2	1,2-Dichloroethane	50.8	12.6	51.0	UD
71-55-6	1,1,1-Trichloroethane	50.8	4380 ~~6110~~	23874 ~~33,336.4~~	~~DE~~
71-43-2	Benzene	50.8	6.30	20.1	UD
56-23-5	Carbon tetrachloride	50.8	11.2	70.5	UD
79-01-6	Trichloroethene	50.8	1850	9,942.3	D
108-10-1	4-Methyl-2-pentanone (MIBK)	50.8	17.2	70.5	UD
79-00-5	1,1,2-Trichloroethane	50.8	8.13	44.4	UD
108-88-3	Toluene	50.8	6.20	23.3	UD
127-18-4	Tetrachloroethene	50.8	7.26	49.2	UD
100-41-4	Ethylbenzene	50.8	7.16	31.0	UD
1330-20-7	m,p-Xylene	50.8	12.5	54.2	UD
95-47-6	o-Xylene	50.8	5.89	25.5	UD
79-34-5	1,1,2,2-Tetrachloroethane	50.8	12.9	88.6	UD
95-63-6	1,2,4-Trimethylbenzene	50.8	7.32	36.0	UJ

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.06	91	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1398435	9.55	1589072	9.55	
1,4-Difluorobenzene	6688206	11.79	7800235	11.79	
Chlorobenzene-d5	3179003	17.38	3628344	17.39	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-SSV-07 DL

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA	SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY	Project:	Greif - Tonawanda, NY
Project Number:	0070448	Received:	12/13/07 10:48

Matrix:	Air	Laboratory ID:	SA72249-02RE1	File ID:	B21992.D
Sampled:	12/12/07 09:38	Prepared:	12/18/07 08:17	Analyzed:	12/18/07 17:36
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121342	Sequence:	S801737	Calibration:	0801024

Instrument: Air2

See first page

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	254	~~4380~~	~~23,897.4~~	~~D~~

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.28	93	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1561010	9.55	1442460	9.55	
1,4-Difluorobenzene	7575852	11.78	7113840	11.79	
Chlorobenzene-d5	3490523	17.38	3205009	17.39	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-IA-08

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA	SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY	Project:	Greif - Tonawanda, NY
Project Number:	0070448	Received:	12/13/07 10:48

Matrix:	Air	Laboratory ID:	SA72249-03	File ID:	B22042.D
Sampled:	12/12/07 10:13	Prepared:	12/20/07 08:50	Analyzed:	12/20/07 19:47
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024	Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	10	1.38	3.5	UD
75-00-3	Chloroethane	10	1.58	4.2	UD
67-64-1	Acetone	10	5.90	14.0	D
75-35-4	1,1-Dichloroethene	10	1.24	4.9	UD
75-09-2	Methylene chloride	10	1.10	3.8	UD
156-60-5	trans-1,2-Dichloroethene	10	0.699	2.8	UD
75-34-3	1,1-Dichloroethane	10	1.66	6.7	UD
78-93-3	2-Butanone (MEK)	10	1.05	3.1	UD
156-59-2	cis-1,2-Dichloroethene	10	1.21	4.8	UD
67-66-3	Chloroform	10	2.21	10.8	UD
107-06-2	1,2-Dichloroethane	10	2.49	10.1	UD
71-55-6	1,1,1-Trichloroethane	10	3.40	18.6	JD
71-43-2	Benzene	10	1.24	4.0	UD
56-23-5	Carbon tetrachloride	10	2.21	13.9	UD
79-01-6	Trichloroethene	10	1.53	8.2	UD
108-10-1	4-Methyl-2-pentanone (MIBK)	10	3.39	13.9	UD
79-00-5	1,1,2-Trichloroethane	10	1.60	8.7	UD
108-88-3	Toluene	10	1.22	4.6	UD
127-18-4	Tetrachloroethene	10	1.43	9.7	UD
100-41-4	Ethylbenzene	10	1.41	6.1	UD
1330-20-7	m,p-Xylene	10	2.46	10.7	UD
95-47-6	o-Xylene	10	1.16	5.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	10	2.53	17.4	UD
95-63-6	1,2,4-Trimethylbenzene	10	1.44	7.1	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.98	90	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1339712	9.54	1431251	9.55	
1,4-Difluorobenzene	6356008	11.78	6818820	11.79	
Chlorobenzene-d5	2951580	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-SSV-08

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA	SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY	Project:	Greif - Tonawanda, NY
Project Number:	0070448	Received:	12/13/07 10:48

Matrix:	Air	Laboratory ID:	SA72249-04	File ID:	B22043.D
Sampled:	12/12/07 08:50	Prepared:	12/20/07 08:50	Analyzed:	12/20/07 20:34
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
				Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.150	0.4	U
75-00-3	Chloroethane	1	0.150	0.4	U
67-64-1	Acetone	1	6.43	15.3	
75-35-4	1,1-Dichloroethene	1	4.29	17.0	
75-09-2	Methylene chloride	1	0.720	2.5	
156-60-5	trans-1,2-Dichloroethene	1	0.150	0.6	U
75-34-3	1,1-Dichloroethane	1	0.970	3.9	
78-93-3	2-Butanone (MEK)	1	0.750	2.2	
156-59-2	cis-1,2-Dichloroethene	1	0.155	0.6	
67-66-3	Chloroform	1	0.150	0.7	U
107-06-2	1,2-Dichloroethane	1	0.150	0.6	U
71-55-6	1,1,1-Trichloroethane	1	1.13	6.2	
71-43-2	Benzene	1	0.339	1.1	
56-23-5	Carbon tetrachloride	1	0.219	1.4	
79-01-6	Trichloroethene	1	0.650	3.5	
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.150	0.6	U
79-00-5	1,1,2-Trichloroethane	1	0.150	0.8	U
108-88-3	Toluene	1	1.37	5.2	
127-18-4	Tetrachloroethene	1	0.150	1.0	U
100-41-4	Ethylbenzene	1	0.150	0.7	U
1330-20-7	m,p-Xylene	1	0.330	1.4	
95-47-6	o-Xylene	1	0.150	0.7	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.150	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	0.150	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.78	88	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1250671	9.54	1431251	9.55	
1,4-Difluorobenzene	5886446	11.78	6818820	11.79	
Chlorobenzene-d5	2777073	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-DUP-2

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-09	File ID:	B22027.D
Sampled:	12/12/07 00:00	Prepared:	12/19/07 08:33	Analyzed:	12/20/07 02:18
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121453	Sequence:	S801745	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	119	16.4	41.9	UD
75-00-3	Chloroethane	119	18.8	49.6	UD
67-64-1	Acetone	119	295	701.0	D
75-35-4	1,1-Dichloroethene	119	1670	6,625.4	D
75-09-2	Methylene chloride	119	13.1	45.5	UD
156-60-5	trans-1,2-Dichloroethene	119	8.32	33.0	UD
75-34-3	1,1-Dichloroethane	119	727	2,943.7	D
78-93-3	2-Butanone (MEK)	119	12.5	36.9	UD
156-59-2	cis-1,2-Dichloroethene	119	131	519.4	D
67-66-3	Chloroform	119	26.3	128.0	UD
107-06-2	1,2-Dichloroethane	119	29.6	119.9	UD
71-55-6	1,1,1-Trichloroethane	119	2350	12,821.7	D
71-43-2	Benzene	119	14.8	47.2	UD
56-23-5	Carbon tetrachloride	119	26.3	165.4	UD
79-01-6	Trichloroethene	119	6050	32,514.1	D
108-10-1	4-Methyl-2-pentanone (MIBK)	119	40.3	165.2	UD
79-00-5	1,1,2-Trichloroethane	119	19.0	103.7	UD
108-88-3	Toluene	119	83.3	313.4	D
127-18-4	Tetrachloroethene	119	17.0	115.3	UD
100-41-4	Ethylbenzene	119	16.8	72.8	UD
1330-20-7	m,p-Xylene	119	29.3	127.0	UD
95-47-6	o-Xylene	119	13.8	59.8	UD
79-34-5	1,1,2,2-Tetrachloroethane	119	30.1	206.7	UD
95-63-6	1,2,4-Trimethylbenzene	119	17.1	84.1	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.27	93	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1492257	9.54	1589072	9.55	
1,4-Difluorobenzene	7130534	11.78	7800235	11.79	
Chlorobenzene-d5	3342751	17.38	3628344	17.39	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-IA-09

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-05	File ID:	B22044.D
Sampled:	12/12/07 08:53	Prepared:	12/20/07 08:50	Analyzed:	12/20/07 21:17
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	10	1.38	3.5	UD
75-00-3	Chloroethane	10	1.58	4.2	UD
67-64-1	Acetone	10	8.60	20.4	D
75-35-4	1,1-Dichloroethene	10	1.24	4.9	UD
75-09-2	Methylene chloride	10	1.10	3.8	UD
156-60-5	trans-1,2-Dichloroethene	10	0.699	2.8	UD
75-34-3	1,1-Dichloroethane	10	1.66	6.7	UD
78-93-3	2-Butanone (MEK)	10	1.05	3.1	UD
156-59-2	cis-1,2-Dichloroethene	10	1.21	4.8	UD
67-66-3	Chloroform	10	2.21	10.8	UD
107-06-2	1,2-Dichloroethane	10	2.49	10.1	UD
71-55-6	1,1,1-Trichloroethane	10	3.50	19.1	JD
71-43-2	Benzene	10	1.24	4.0	UD
56-23-5	Carbon tetrachloride	10	2.21	13.9	UD
79-01-6	Trichloroethene	10	3.30	17.7	JD
108-10-1	4-Methyl-2-pentanone (MIBK)	10	3.39	13.9	UD
79-00-5	1,1,2-Trichloroethane	10	1.60	8.7	UD
108-88-3	Toluene	10	3.40	12.8	JD
127-18-4	Tetrachloroethene	10	1.43	9.7	UD
100-41-4	Ethylbenzene	10	1.41	6.1	UD
1330-20-7	m,p-Xylene	10	2.46	10.7	UD
95-47-6	o-Xylene	10	1.16	5.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	10	2.53	17.4	UD
95-63-6	1,2,4-Trimethylbenzene	10	1.44	7.1	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.02	90	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1269252	9.54	1431251	9.55	
1,4-Difluorobenzene	6031307	11.78	6818820	11.79	
Chlorobenzene-d5	2870804	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-SSV-09

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-06	File ID:	B22045.D
Sampled:	12/12/07 08:53	Prepared:	12/20/07 08:50	Analyzed:	12/20/07 22:00
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024
Instrument:	Air2				

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	10	1.38	3.5	UD
75-00-3	Chloroethane	10	1.58	4.2	UD
67-64-1	Acetone	10	6.30	15.0	D
75-35-4	1,1-Dichloroethene	10	1.24	4.9	UD
75-09-2	Methylene chloride	10	1.10	3.8	UD
156-60-5	trans-1,2-Dichloroethene	10	0.699	2.8	UD
75-34-3	1,1-Dichloroethane	10	1.66	6.7	UD
78-93-3	2-Butanone (MEK)	10	1.05	3.1	UD
156-59-2	cis-1,2-Dichloroethene	10	1.21	4.8	UD
67-66-3	Chloroform	10	2.21	10.8	UD
107-06-2	1,2-Dichloroethane	10	2.49	10.1	UD
71-55-6	1,1,1-Trichloroethane	10	146	796.6	D
71-43-2	Benzene	10	1.24	4.0	UD
56-23-5	Carbon tetrachloride	10	2.21	13.9	UD
79-01-6	Trichloroethene	10	15.3	82.2	D
108-10-1	4-Methyl-2-pentanone (MIBK)	10	3.39	13.9	UD
79-00-5	1,1,2-Trichloroethane	10	1.60	8.7	UD
108-88-3	Toluene	10	4.20	15.8	JD
127-18-4	Tetrachloroethene	10	1.43	9.7	UD
100-41-4	Ethylbenzene	10	1.41	6.1	UD
1330-20-7	m,p-Xylene	10	2.46	10.7	UD
95-47-6	o-Xylene	10	1.16	5.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	10	2.53	17.4	UD
95-63-6	1,2,4-Trimethylbenzene	10	1.44	7.1	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	9.10	91	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1306701	9.54	1431251	9.55	
1,4-Difluorobenzene	6194081	11.78	6818820	11.79	
Chlorobenzene-d5	2956248	17.38	3258375	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-IA-10

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA	SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY	Project:	Greif - Tonawanda, NY
Project Number:	0070448	Received:	12/13/07 10:48

Matrix:	Air	Laboratory ID:	SA72249-07	File ID:	B22116.D
Sampled:	12/12/07 08:58	Prepared:	12/24/07 07:15	Analyzed:	12/24/07 15:26
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121749	Sequence:	S801883	Calibration:	0801024	Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	0.222	0.5	U
75-35-4	1,1-Dichloroethene	1	0.124	0.5	U
75-09-2	Methylene chloride	1	1.04	3.6	
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	U
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	1	0.105	0.3	U
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	U
67-66-3	Chloroform	1	0.221	1.1	U
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-55-6	1,1,1-Trichloroethane	1	0.130	0.7	U
71-43-2	Benzene	1	0.124	0.4	U
56-23-5	Carbon tetrachloride	1	0.221	1.4	U
79-01-6	Trichloroethene	1	0.153	0.8	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.339	1.4	U
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Toluene	1	1.83	6.9	
127-18-4	Tetrachloroethene	1	0.143	1.0	U
100-41-4	Ethylbenzene	1	0.141	0.6	U
1330-20-7	m,p-Xylene	1	0.246	1.1	U
95-47-6	o-Xylene	1	0.116	0.5	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	U
95-63-6	1,2,4-Trimethylbenzene	1	0.144	0.7	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.66	87	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1803189	9.54	1790242	9.54	
1,4-Difluorobenzene	8298842	11.78	8352155	11.78	
Chlorobenzene-d5	3753505	17.38	3896738	17.38	

* Values outside of QC limits

FORM I - AIR ANALYSIS DATA SHEET
EPA TO-15

Greif-SSV-10

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	72249
Client:	Environmental Resources Management - Dewitt, NY			Project:	Greif - Tonawanda, NY
Project Number:	0070448			Received:	12/13/07 10:48
Matrix:	Air	Laboratory ID:	SA72249-08	File ID:	B22047.D
Sampled:	12/12/07 08:58	Prepared:	12/20/07 08:50	Analyzed:	12/20/07 23:26
% Solids:		Preparation:	General Air Prep	Initial/Final:	200 ml / 200 ml
Batch:	7121541	Sequence:	S801746	Calibration:	0801024	Instrument:	Air2

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	20	2.76	7.1	UD
75-00-3	Chloroethane	20	3.16	8.3	UD
67-64-1	Acetone	20	8.20	19.5	JD
75-35-4	1,1-Dichloroethene	20	2.48	9.8	UD
75-09-2	Methylene chloride	20	2.20	7.6	UD
156-60-5	trans-1,2-Dichloroethene	20	1.40	5.6	UD
75-34-3	1,1-Dichloroethane	20	3.32	13.4	UD
78-93-3	2-Butanone (MEK)	20	2.10	6.2	UD
156-59-2	cis-1,2-Dichloroethene	20	2.42	9.6	UD
67-66-3	Chloroform	20	4.42	21.5	UD
107-06-2	1,2-Dichloroethane	20	4.98	20.2	UD
71-55-6	1,1,1-Trichloroethane	20	7.00	38.2	JD
71-43-2	Benzene	20	2.48	7.9	UD
56-23-5	Carbon tetrachloride	20	4.42	27.8	UD
79-01-6	Trichloroethene	20	41.8	224.6	D
108-10-1	4-Methyl-2-pentanone (MIBK)	20	6.78	27.8	UD
79-00-5	1,1,2-Trichloroethane	20	3.20	17.5	UD
108-88-3	Toluene	20	2.44	9.2	UD
127-18-4	Tetrachloroethene	20	2.86	19.4	UD
100-41-4	Ethylbenzene	20	2.82	12.2	UD
1330-20-7	m,p-Xylene	20	4.92	21.3	UD
95-47-6	o-Xylene	20	2.32	10.1	UD
79-34-5	1,1,2,2-Tetrachloroethane	20	5.06	34.7	UD
95-63-6	1,2,4-Trimethylbenzene	20	2.88	14.2	UD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene	10.0	8.94	89	75 - 125	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1136083	9.54	1431251	9.55	
1,4-Difluorobenzene	5405350	11.78	6818820	11.79	
Chlorobenzene-d5	2578612	17.38	3258375	17.38	

* Values outside of QC limits