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___.pdf



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



VAPOR INTRUSION EVALUATION REPORT

Greif, Inc. Facility
Town of Tonawanda
Erie County, New York
NYSDEC VCP Number V00334-9

November 2009

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Prepared for:

Sonoco Products Company

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Section 1

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.

Section 2

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	<u>Duplicate</u>
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 μ g /m³ for each compound, with the exception of sub-slab vapor samples, which shall achieve detection limits of 0.25 μ g /m³ 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.

Section 3

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 μ g/m³ (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 μ g/m³ (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 μ g/m³ (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

3-1

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 μ g/m³ (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 μ g/m³ (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 μ g/m³ (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 $\mu g/m^3$ (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 $\mu g/m^3$ (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 $\mu g/m^3$ (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 $14 \mu g/m^3$ (0.006 ppm).

Acetone was the only VOC detected in indoor air sample IA-09 and it was detected at a concentration of $20.4 \,\mu\text{g/m}^3$ (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 $6.9 \,\mu g/m^3$ (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.

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/m³)
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	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).

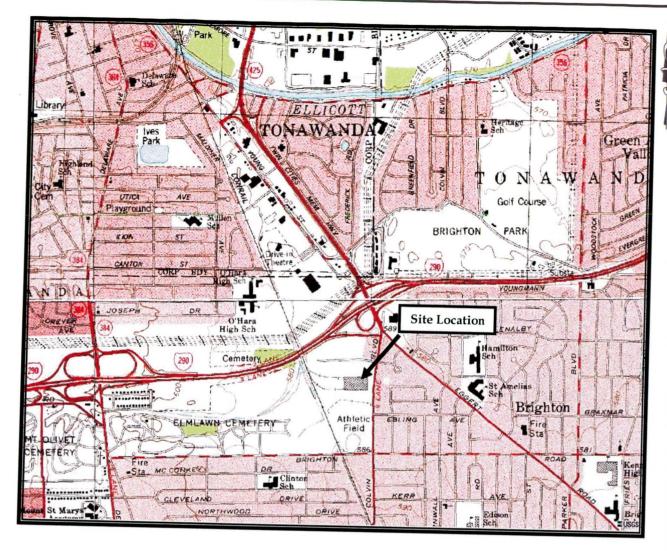
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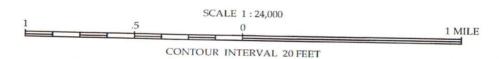
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Figures





Buffalo NE Quadrangle New York 7.5 Minute Series



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

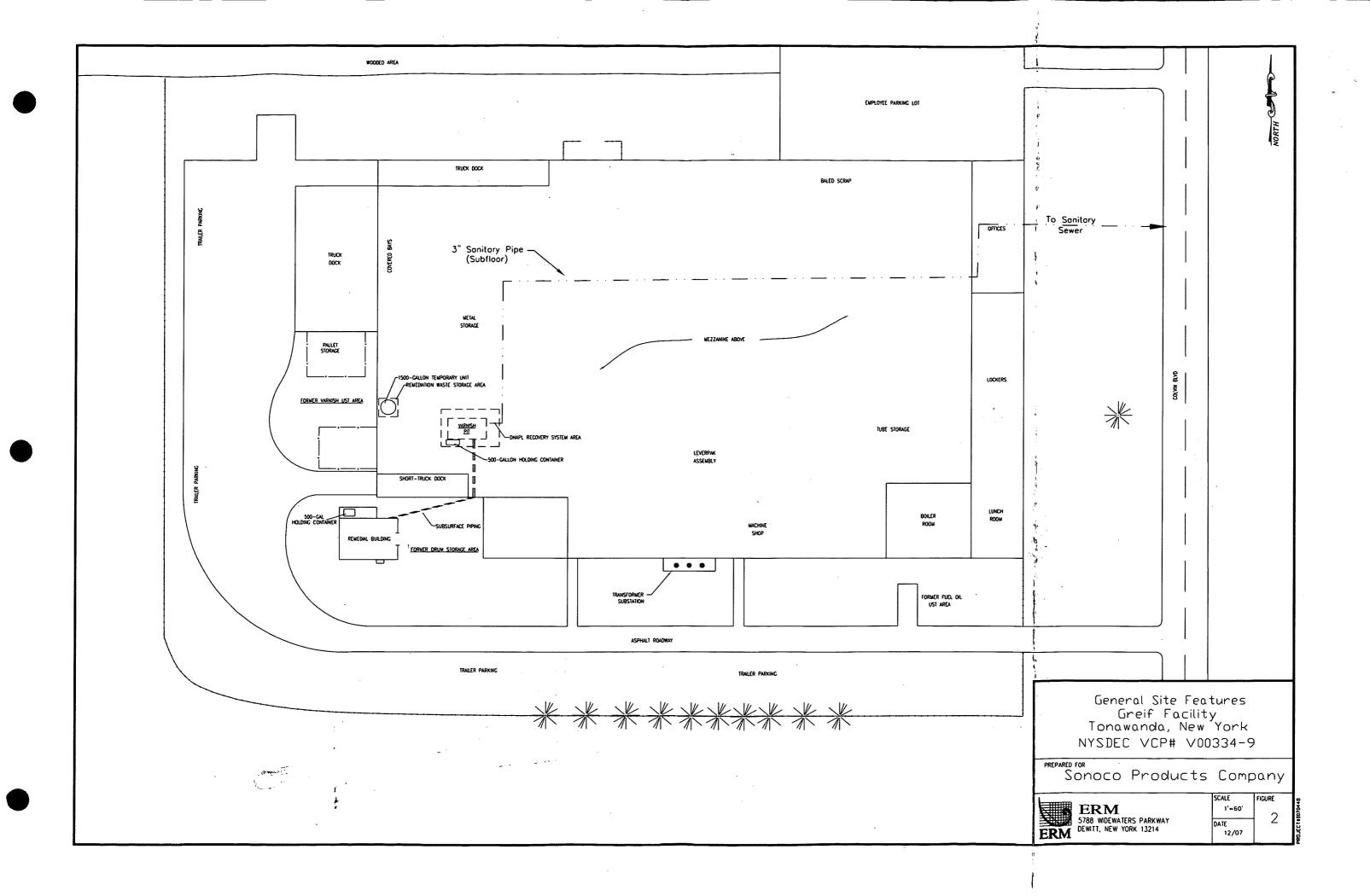
PREPARED FOR Sonoco Products Company

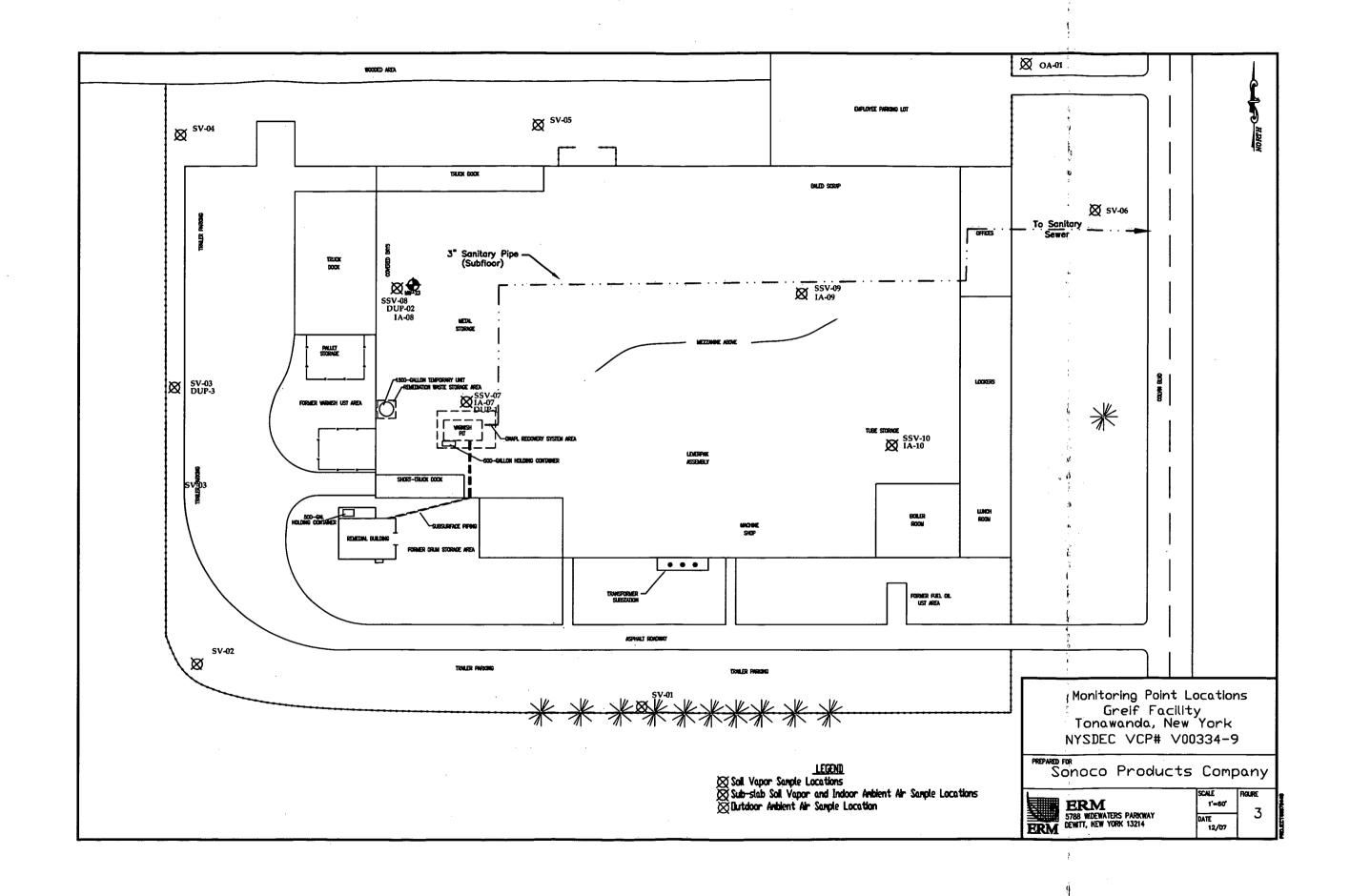


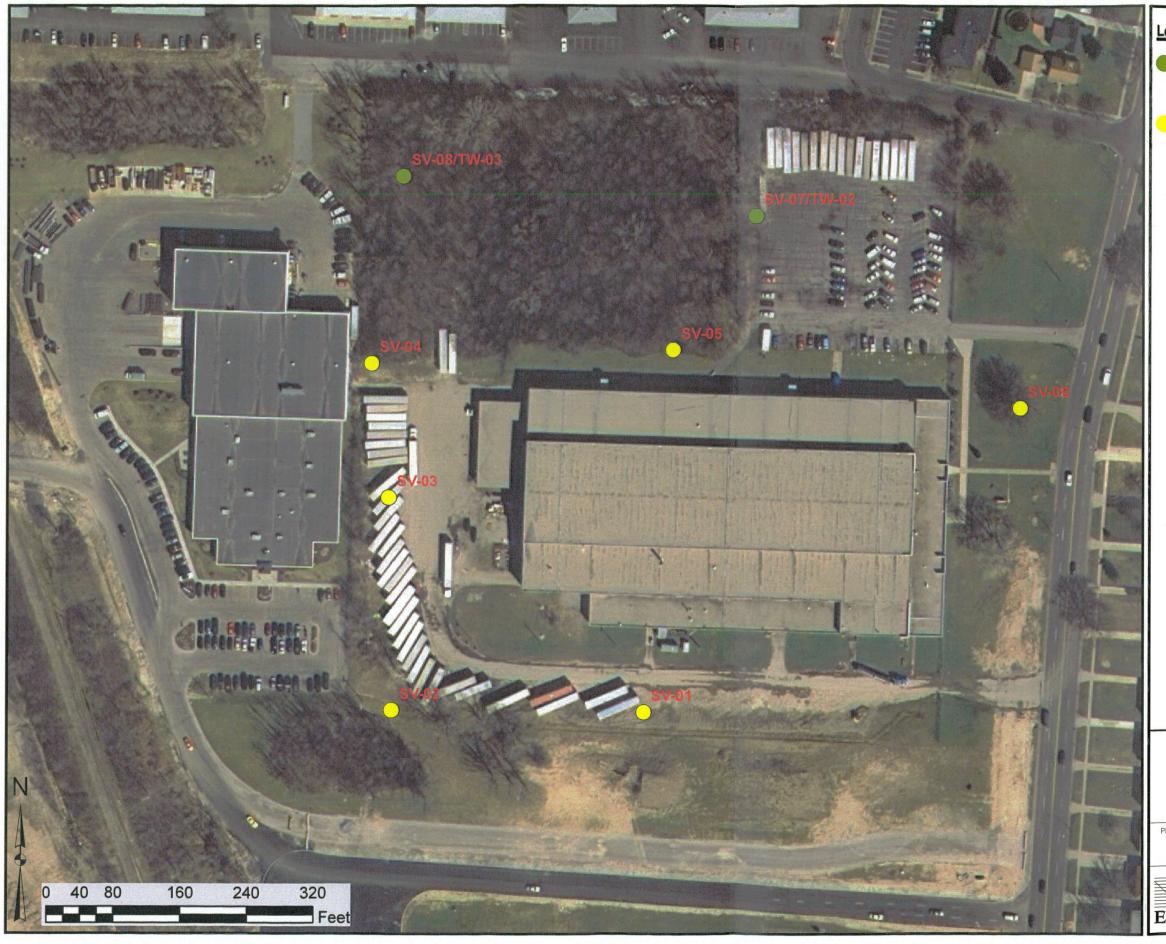
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SCALE NTS	FIGURE
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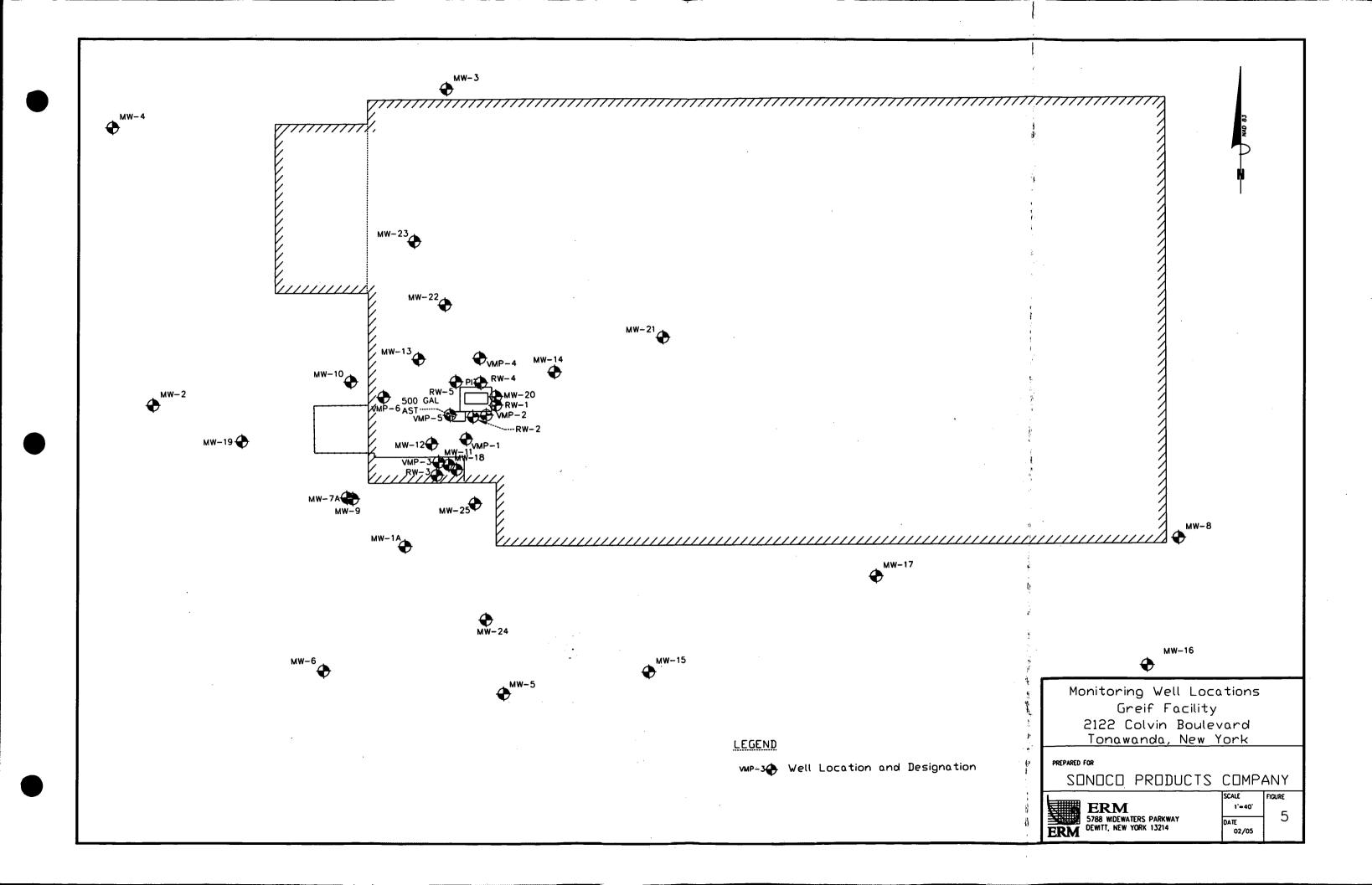
Legend

- 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





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
		Duplicate of Greif-	1.30
Greif-DUP-1	12-Dec-07	IA-07	Indoor Air
		Duplicate of Greif-	
Greif-DUP-2	12-Dec-07	SSV-08	Sub-Slab Vapor
		Duplicate of Greif-	-
Greif-DUP-3	12-Dec-07	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-S	V-01 ¹	Greif-9	SV-02 ²	Greif-	-SV-03	Greif-l	DUP-3	Greif-	SV-04 ²	Greif-SV-051		Greif-SV-06 ¹	
*	gram MW	μg/m³	ppm	μg/m³	ppm	μg/m ³	ppm	μg/m³	ppm	μg/m³	ppm	μg/m³	ppm	μg/m³	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	1	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	

^{&#}x27;: could not be analyzed for SIM due to high concentrations of target and/or non-target compounds present in the sample.

^{&#}x27;: 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-S	SV-07 ¹	Greif-S	SV-08 ²	Greif-l	DUP-2 ¹	Greif-S	SV-091	Greif-S	SV-10 ¹
Compound	gram MW	μg/m³	ppm	μg/m³	ppm	μg/m³	ppm	μg/m³	ppm	μg/m³	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**

			······································			IND	OOR					OUTD	OOR
Compound	Molar Weight	Greif-	IA-07	Greif-I	DUP-12	Greif-l	A-081	Greif-I	A-09 ¹	Greif-	IA-10 ²	Greif-0	OA-01
Compound	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

	SAMPLE
Compound	Greif-TW-02
Compound	(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.

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Appendix A Field Forms

5788 Widewaters Parkway, Dewitt, New York 13214

Boring	Number
5V-	<i>I</i>

Project Name	& Location			***	Project Number	Date & Time Started:	,	
ے ا	A 1.00				0070440	Date & Time Completed: 17/	10/07- 10:	25
Drilling Com	ipany			***	Foreman	Sampler(s)	Sampler Hammer	Drop
					Paul Willow	_	_	
Drilling Equi	ipment			-	Method	Elevation & Datum	Completion Depth	Rock Depth
G	00 Gr	م ا			Direct Push	_	4'	
Bit Size(s)					Project Number 0070 448 Foreman Paul Willey Method Oreaf Push Core Barrel(s)	Geologist(s)		
					<u>.</u>	R. Sents		
DEPTH		SAMPL	ES					
			FID/		SOIL DES	CRIPTION	RE	EMARKS
(ft below	Sample	Recovery	PID	Blow	į.			
grade)	Number	(teet)	(ppm)	Counts				
	LOCATION	: •			SURFACE DESCRIPTION:		•	
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5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number

Project Name	e & Location					Project Numb	er	Date & Time Started:	7/10/07- 1000	
Drilling Com	rei ≠					0040	<u>448</u>	Date & Time Completed:	Sampler Hammer	Drop
					Pa	. Poreman	la.	Sampler(s)	Sampler Hammer	
Drilling Equ	ipment					Method	104 -	Elevation & Datum	Completion Depth	Rock Depth
Ġ	oo Cr	de				Piract F	ush	_	4'	
Bit Size(s)						Core Barrel(s)	Geologist(s) R. Sants	Sampler Hammer Completion Depth	
DEPTH	Γ	SAMPL	ES		1		 			
			FID/	1	1	SC	IL DES	CRIPTION	REN	MARKS
(ft below grade)	Sample Number	Recovery (teet)	PID (ppm)	Blow Counts						
	LOCATION	:			SURFAC	E DESCRIPTION	:			
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5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number 5U-5

Project Name	e & Location					Project Number	Date & Time Started: Date & Time Completed: 17/1 Sampler(s) Elevation & Datum Geologist(s) R. Sants	10/07- 11.2	
Drilling Con	rei #				_	Foreman	Sampler(s)	Sampler Hammer	Drop
TC Drilling Equ						Paul Willow		_	_
Drilling Equ	ipment					Method	Elevation & Datum	Completion Depth	Rock Depth
Bit Size(s)	ೲಀ	0/6				Com Rampile)	Geologist(s)	4.	
Dit Size(s)						Cone barrens	R. Sants		
DEPTH		SAMPL	ES						
			FID/			SOIL DE	RE	MARKS	
(ft below grade)	Sample Number	Recovery (reet)	PID (ppm)	Blov					
	LOCATION	: .				SURFACE DESCRIPTION:			
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5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number

5V-34

BORING LOG

Project Name	& Location			<u> </u>	Project Number	Date & Time Started:							
						Date & Time Completed:							
Drilling Com	pany	·			Foreman	Sampler(s)	Sampler Hammer	Drop					
Drilling Equi	ipment				Method	Elevation & Datum	Completion Depth	Rock Depth					
Bit Size(s)				-	Core Barrel(s)	Geologist(s)							
DEPTH		SAMPL	ES										
			FID/		SOIL D	ESCRIPTION	REMARKS						
(ft below grade)	Sample Number	Recovery (leet)	PID (ppm)	Blow Counts									
	LOCATION	:			SURFACE DESCRIPTION:		,						
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5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number

	e & Location						Project Number	Date & Time Started:	-1	•
Drilling Con	rei P						<u> </u>	Date & Time Completed:	0107-1	1:5<
							Foreman	Sampler(s)	Sampler Hammer	Drop
Drilling Equ	مد						ran Willey			
Drilling Equ	ipment	<u>.</u>	_				Method Core Barrel(s)	Date & Time Started: Date & Time Completed: 12//4 Sampler(s) Elevation & Datum	Completion Depth	Rock Depth
Bit Size(s)	oo br	0	_				Core Barrel(s)	Geologist(s)		
Dit Size(3)	•						Core barrer(o)	Risante		
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grade)	Number	(fee	t)	(ppm)	ىم	ınts			<u> </u>	
	LOCATION	V: ·					SURFACE DESCRIPTION:			
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5788 Widewaters Parkway, Dewitt, New York 13214

Boring Number

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Project Name					Project Number	Date & Time Started: Date & Time Completed: 17	110/07 17:	05
Drilling Com					Foreman	Sampler(s)	Sampler Hammer	Drop
Drilling Equi	oc.				Paul Willey Method	Elevation & Datum	Completion Depth	Rock Depth
ے ا	oo br	de			Great Push	_	4'	
Bit Size(s)					Project Number 0070 448 Foreman Paul Willry Method Core Barrel(s)	Geologist(s) R. Sants		
DEPTH		SAMPL	ES		•			
(ft below grade)	Sample Number	Recovery (teet)	FID/ PID (ppm)	Blow Counts		SCRIPTION	RE.	MARKS
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5788 Widewaters Parkway Dewitt, New York 13214 Boring Number: SV-O7/TW-OZ

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	me & location:				Project		ber	Date Started: 1/27/0	G Date Com	pleted: 1/2	7/09	
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Bit(s)					-	<u> </u>		R. Sonts				
DEPTH		SA	MPL	.ES								
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_ 9		$oldsymbol{\perp}$		0.3			J 1,50 -14	-/ -				
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	 _	+	+		-+		machine =	addict hour	and grava	<u> </u>	•	
10	ા ઉ	1	(0.0	\downarrow		bens c	roun clay, so ron maist oddish brann lay and silt,	film mois	- (60	140)	
	-	7										- 1

Page:	١	of	7
raye.		OI_	

Ori	
Signature: Hall	the

BORING LOG

	BOKING LOG									
DEPTH		SAMP	LES		SOIL DESCRIPTION	REMARKS				
(feet below grade)	Sample Number	Recovery (feet)	FID / PID (ppm)	Blow Counts	0012 B200141 11011					
10	,									
		4.0	0.0	کی	Same as above					
11	3			1	O Nich how in close and sitt					
			6.0		Radish brown clay and sitt, moist, i can	(6/40)				
12	\	<u> </u>			mersia nadish brews and					
:_	\	3.0	0.6		merslad nadish brews and silt seturated, soft	(00/40)				
13	(q)		0.0							
14					Radish brown sit and clay, some course send to small subround s rough, seturated, Nory soft					
			0.0		subrama s ravel, saturated,					
_ 15_		1				80% 5:14 clay).				
	\	1.2	0.0		Grayish brown siltand clay maislad with Roddish brown Silt and fine send	20% Silty Send				
_ 16_			0.0							
17	S									
18		-		4						
19										
20	ь		·							
_~~										
_ 21 _										
22			L							

Page: Z of Z

Signature: Fuls

Boring Number: <u>\$V-08 | TW-</u>03

BORING LOG

Project na	me & location:		•	Project num	ber	Date Started: 1/27/05	Date Comp	pieted. 1127/04
Grei	f Inc.	Topen	م محمد	NY.	96528	Time:	O a manufactura bu	Time:
				Geologist		Sampler(s)	Sampler h	
Not	pupment					Macrolore	Anto	
				Method	^ /	Elevation & datum	Completion	n depth Rock depth
6610	DT GO	اصروه	26	Di red	Persh		18	<u></u>
Bit(s)		•		Core barrel	(s)	Inspector(s)		
					,	R. Sonts		
DEPTH		SAME	PLES					
(feet below		Recovery	FID / PID		i	SOIL DESCRIPTION		REMARKS
grade)	Sample Number	(feet)	(ppm)	Blow Counts	1			
	BORING LOCA	TION:			SURFACE DES	SCRIPTION:		10.00
_ o _					İ			
- ° ⊣		1	Τ		Ockeray	silt and send, s	iome !	
	1	1.8	0.0	NM	clay,	noist firm		(6/36/10)
	1	1	1	,	media r	radish brown and s	reyish !	, , , ,
_ 1 _	1		0.2		50000	silt and clay,	Some	
			0.1		Fine Ser	noist firm adish brown and s silt and clay and, moist, firm	า	(coluo)
	1	 	10.1	 	<u> </u>			
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_ 2 _		- 	 		<u> </u>			
	(1)			}	l		ŀ	
	7							
3			<u> </u>	<u> </u>				
	1				ŀ			
		 	ļ					
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- ⁴ -	, , ,	*	 	 	michla)	noddish brown and Itend clay come noddish brown and Siltand clay in	5 reyish	
	\	4.0	0.0		horan Si	It and clay come	Dagsen	(50/40/10)
l	1	1			meible)	noddish brown and	5104/154	
_ 5 _	1				hours	siltand clayin	oist Dia	(so/4o/1o) ((o/4o)
			اء			•	· I	
		$\vdash \vdash$	0.0		0 (1)	100 100 (10	c car/155	
	(z)	1 1	i		ושנישוש ר	addish brown and clay and sill	L	(70/20)
_ 6 <u>_</u>	- Y-	 	 	 	hrown.	Clay GOD JILL	, , , , , , , , , , , , , , , , , , , ,	
	\		0.0					
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_ 7								·
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	1	$\vdash \vdash$	0.0		Sam	e as above		
_	\				\		、 I	
- ⁸ -	·	 * -		 	Marylan)	ill, some clay, w	2000/4	
Į	\	4.0	0.0		hours &	11. some clay in	Afos to	(80/20)
İ	1	1	T					
9 _							, 	
	1		0.0		Grayish 5	roun, silt and c	cay	
			10.0	 	moist, so	coun, silt and e oft and roddis	5)	
_,	Q	.	0.0		brown -	tine send and s	11T	
_ 10	—	_¥			1 107562			

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	120	-/	
Signature:	Hall	Klues	

BORING LOG

BORING LOG									
DEPTH	PTH SAMPLES SOIL DESCRIPTION	SOIL DESCRIPTION	REMARKS						
(feet below grade)	Sample Number	Recovery (feet)	FID / PID (ppm)	Blow Counts					
10					1 () () () ()				
		4.0	0.0	NM	Grayish brown clay and silt very soft, wet				
_ 11 _	3				·				
			0.0		1				
_ 12_		1			Meislad naddishologin and sterish	(20/20)			
	\	3.2	0.0		Meislad noddish brown and srevish brown klay and silt, seturated morbled grapish brown silty clay and noddish brown silty send seturated saturated soft	(70/30) (60/40)			
_ ¹³ _	\(\alpha\)	\vdash	0.1		saturated, soft				
14	 3								
- '*-			0.0		marbled nodish brown and scaped alay	(6/40)			
15		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			'mo'ist				
ľ	\	3.0	0.0		some as above				
16	\		<u> </u>		musted redist som and sievist been clay and silt, maist	(calu)			
ŀ	(S)	$\vdash\vdash$	0.0		bean clay and silt, moist	(60,140)			
- ¹⁷ -	7	+							
40			0.0						
_ ¹⁸ _		-							
19									
_ 20 _									
			-						
— ²¹ —	<u> </u>	-	-		·				
			1-						
_ ²² _	<u> </u>	L		<u> </u>					

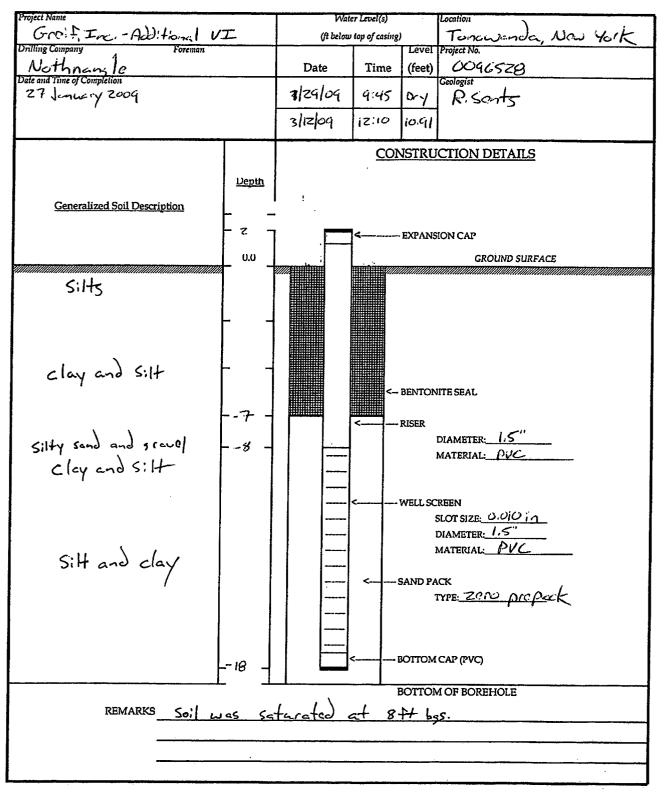
Page: **Z** of **Z**

Signature:

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

WELL: TINOZ

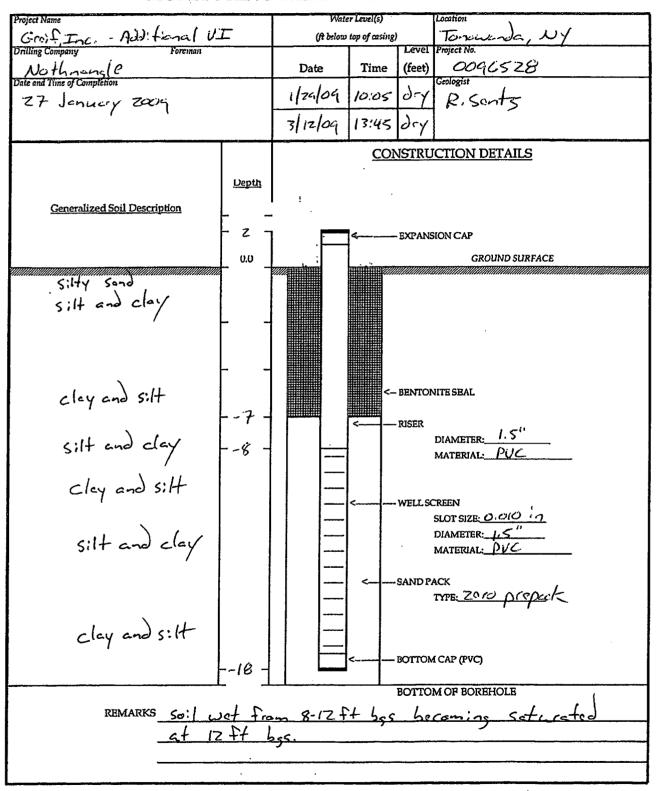
MONITORING WELL CONSTRUCTION



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

WELL: TW-03

MONITORING WELL CONSTRUCTION



Low-Flow Groundwater Sampling Form

Site Name



Well ID:	TW	-07
	, 1	

Date: 3/12/09 Sampling Personnel: R. Sonts

Weather Conditions: ±35°f, cless, wind 0.5moh auf of NW

Time: 12:10 -> 13:10

File Name: Some / Torchen / 1001 (528/ Task 07

2 510 1 12011101	DE COLI	CACCASC V	163601	101.512
				113.415
E . 175	1 (00 10)	· # . A . /		!
Total Dept	:h (1.D.):	18 ft L.c	フハン	+1.1.
	- (- · · · · / · · ·	70 11 325		

Depth to Water (D.T.W): (1) 10,91 ft

Total Volume Purged: ~0.75 scllens

Purge Rate: 90-300 ml/min

Tubing Type: polyathylene Pump Intake (ft below M.P.): 10, 50 ft

Well Diameter: 1,5" Casing Type: PVC

Sampling Device: Peristaltic Measuring Point: Toc gast side

Screen Length: 10 f+

color: clos odor: none

rump make	(It below M.)	7.): 14.50++				-	ر0101. <u>حرو</u>	47	ouor. mo	ne
Time:	DTW:	Comments:	Temp	SpC	Cond	DO	pН	Turb	ORP	Flow
(min)	(feet)		(°C)	(uS/cm)	(uS/cm)		std units	NTU	mV	(ml/min)
Stabalization	(see note		+/-	+/-	+/-	+/-	+/-	+/-	+/-	
Criteria ²	below)3		3%	3%	3%	10%	0.1 unit	10%*	10 mV	100-400
12:24	11.49	Jecrosse Flow	9.74	1710	1.710	7.01	7.78	23,9	21.9	300
12:29	13.57	rute	8.85	1694	1.171	2.55	7.19	22.4	46.5	175
12:34	16.16	į. Li	8,54	1663	1.140	1.65	7.02	17.2	44.1	100
17:39	17.3		8.29	1666	1.134	1.14	7.14	12.8	34,6	90
12144	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
17:54	19.11		7.73	1674	1.119	0.85	6.47	3.61	49.1	90
12:59	14.21		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	0.41	Z.18	55.2	90
13:05	*	sample collected								
		,								
		 								

Sampling Time: 13:05

Gro: F- TW-02

Samples Collected:

Analysis Requested:

site specific voclist

Preservative:

HCL



^{(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

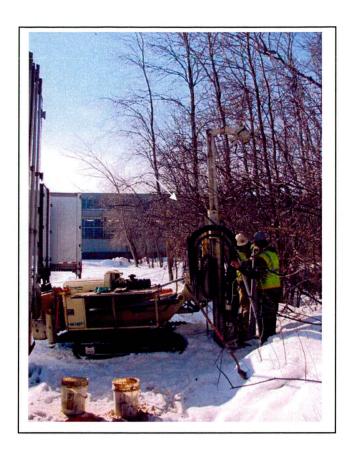
Project Name: Greif, Inc.

Project No.: 0096528

Prepared By: R. Sents/J. Fox

VCP Number: V00334-9

Date: 15 June 2009



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.

Project Name: Greif, Inc.

Project No.: 0096528

Prepared By: R. Sents/J. Fox

VCP Number: V00334-9

Date: 15 June 2009



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.

Project Name: Greif, Inc.

Project No.: 0096528

Prepared By: R. Sents/J. Fox

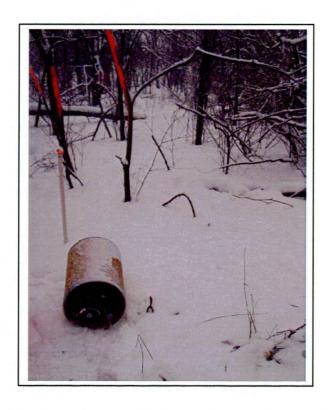
VCP Number: V00334-9

Date: 15 June 2009



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.

Project Name: Greif, Inc.

Project No.: 0096528

Prepared By: R. Sents/J. Fox

VCP Number: V00334-9

Date: 15 June 2009



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.

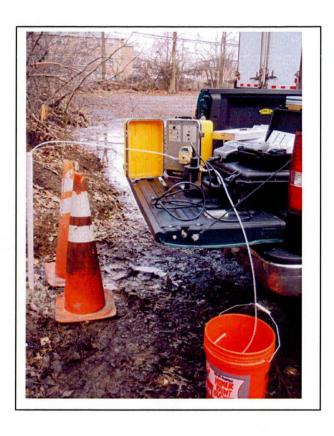
Project Name: Greif, Inc.

Project No.: 0096528

Prepared By: R. Sents/J. Fox

VCP Number: V00334-9

Date: 15 June 2009



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

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	Аiг	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).

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Maine # MA138

New Hampshire # 2538/2972

New Jersey # MA011/MA012

New York # 11393/11840

Rhode Island # 98

USDA # S-51435 Vermont # VT-11393 nelac 1

Authorized by:

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

Technical Reviewer's Initial:

M

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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 Greif-IA-07 SA72249-01

Client Project # 0070448

Matrix Air Collection Date/Time 12-Dec-07 08:48

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
Air Quali	ty Analyses									
PA TO-	<u>15</u>	ppbv	Prepare	d 20-Dec-07						
'5-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	20-Dec-07	7121541	WB
'5-00-3	Chloroethane	8RL	0.500	BRL	1.3			•	-	**
7-64-1	Acetone	5.01	0.500	11.9	1.2		tt	•		**
5-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		п	•	•	•
5-09-2	Methylene chloride	BRL	0.500	BRL	1.7		n	"	"	**
56-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		•	•	•	
5-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0			•	•	н
8-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		**	•	"	H
56-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		Ħ	"	"	
7-66-3	Chloroform	BRL	0.500	BRL	2.4		Ħ	•	•	
07-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		27	**		"
1-55-6	1,1,1-Trichloroethane	2.34	0.500	12.8	2.7		re .	"		
1-43-2	Benzene	BRL	0.500	BRL	1.6		19			
6-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		*			
9-01-6	Trichloroethene	1.09	0.500	5.9	2.7					
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1					
9-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7			н	**	
08-88-3	Toluene	1.76	0.500	6.6	1.9		n	n .		
27-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4				**	
00-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		н	н	•	
330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3			n	•	
5-47-6	o-Xylene	BRL	0.500	BRL	2.2			н	•	
9-34-5	1,1,2,2-Tetrachloroethane	8RL	0.500	BRL	3.4			н		
5-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5				4	
 Зитодаtе	recoveries:								*	
60-00-4	4-Bromofluorobenzene	87	75	-125 %			19		#	

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 09:38

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
Air Quali	ty Analyses			_	•					
PA TO-	<u>15</u>	ppbv	Prepare	d 19-Dec-07		GS				
5-01-4	Vinyl chloride	BRL	25.4	BRL	64.9		EPA TO-15	20-Dec-07	7121453	WB
5-00-3	Chloroethane	BRL	25.4	BRL	67.0				•	"
7-64-1	Acetone	89.9	25.4	214.0	60.4		n	*	•	
5-35-4	1,1-Dichloroethene	297	25.4	1180.0	101.0		*	**	•	**
5-09-2	Methylene chloride	BRL	25.4	BRL	88.2		n	•		
56-60-5	trans-1,2-Dichloroethene	BRL	25.4	BRL	101.0		,	•		
5-34-3	1,1-Dichloroethane	199	25.4	806.0	103.0		•		•	n
8-93-3	2-Butanone (MEK)	BRL	25.4	BRL	74.9		•	*	•	n
56-59-2	cis-1,2-Dichloroethene	62.0	25.4	246.0	101.0		**	•		•
7-66-3	Chloroform	BRL	25.4	BRL	124.0		•	•	•	
07-06-2	1,2-Dichloroethane	BRL	25.4	BRL	103.0				•	
1-55-6	1,1,1-Trichloroethane	6110	25.4	33300.0	139.0	ε	**			
1-43-2	Benzene	BRL	25.4	BRL	81.0		*		•	•
6-23-5	Carbon tetrachloride	BRL	25.4	BRL	160.0		•		n	"
9-01-6	Trichloroethene	1850	25.4	9940.0	137.0		*		u	"
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	25.4	BRL	104.0		*		н	
9-00-5	1,1,2-Trichloroethane	BRL	25.4	BRL	139.0		•	•	n	"
08-88-3	Toluene	BRL	25.4	BRL	95.6		*		n	**
27-18-4	Tetrachloroethene	BRL	25.4	BRL	172.0		•		m	•
00-41-4	Ethylbenzene	BRL	25.4	BRL	110.0		•		•	•
330-20-7	m,p-Xylene	BRL	50.8	BRL	220.0		•			
5-47-6	o-Xylene	BRL	25.4	BRL	110.0		•	,	•	
9-34-5	1,1,2,2-Tetrachloroethane	BRL	25.4	BRL	174.0			*	•	
63-6	1,2,4-Trimethylbenzene	BRL	25.4	BRL	125.0		•	*	•	•
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	91	75	-125 %			"	**	•	•
e-analys	sis of EPA TO-15									
1-55-6	1,1,1-Trichloroethane	4380	127	23900.0	693.0		EPA TO-15	18-Dec-07	7121342	WB
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	93	75	-125 %			**	**	н	

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 10:13

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analysi
Air Quali	ty Analyses	· · · · · · · · · · · · · · · · · · ·							•	
PA TO-	<u>15</u>	ppbv	Prepare	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	5.00	BRL	12.8	•	EPA TO-15	20-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	5.00	BRL	13.2			•	•	
7-64-1	Acetone	5.90	5.00	14.0	11.9			•		
5-35-4	1,1-Dichloroethene	BRL	5.00	BRL	19.8		n	•	•	•
5-09-2	Methylene chloride	BRL	5.00	BRL	17.4		n		n	
56-60-5	trans-1,2-Dichloroethene	BRL	5.00	BRL	19.8		n	•		•
5-34-3	1,1-Dichloroethane	BRL	5.00	BRL	20.2		H	•	•	•
8-93-3	2-Butanone (MEK)	BRL	5.00	BRL	14.7			*	•	•
56-59-2	cis-1,2-Dichloroethene	BRL	5.00	BRL	19.8		N			•
7-66-3	Chloroform	BRL	5.00	BRL	24.3		*	*		**
07-06-2	1,2-Dichloroethane	BRL	5.00	BRL	20.2		#		•	•
1-55-6	1,1,1-Trichloroethane	BRL	5.00	BRL	27.3		H	"	n	**
1-43-2	Benzene	BRL	5.00	BRL	16.0		*	**	•	•
6-23-5	Carbon tetrachloride	BRL	5.00	BRL	31.5		*			**
9-01-6	Trichloroethene	BRL	5.00	BRL	26.9		**		**	**
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	5.00	BRL	20.5				**	**
9-00-5	1,1,2-Trichloroethane	BRL	5.00	BRL	27.3		•	н	**	
08-88-3	Toluene	BRL	5.00	BRL	18.8		n	н		н
27-18-4	Tetrachloroethene	BRL	5.00	BRL	33.9		•	н		
00-41-4	Ethylbenzene	BRL	5.00	BRL	21.7			*		н
330-20-7	m,p-Xylene	BRL	10.0	BRL	43.4		•	n		H
5-47-6	o-Xylene	BRL	5.00	BRL	21.7					
9-34-5	1,1,2,2-Tetrachloroethane	BRL	5.00	BRL	34.3		•	**	-	**
5-63-6	1,2,4-Trimethylbenzene	BRL	5.00	BRL	24.6		•	"		
Surrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	90	75	-125 %			*			

Matrix Air Collection Date/Time 12-Dec-07 08:50

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analyst
Air Quali	ty Analyses		-							
PA TO-	<u>15</u>	ppby	Prepare	d 20-Dec-07						
5-01-4	Vinyl chloride	BRL	0.150	BRL	0.4		EPA TO-15	20-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	0.150	BRL	0.4			*		•
7-64-1	Acetone	6.43	0.150	15.3	0.4		•	•		*
5-35-4	1,1-Dichloroethene	4.29	0.150	17.0	0.6		•	•		•
5-09-2	Methylene chloride	0.720	0.150	2.5	0.5		•		n	•
56-60-5	trans-1,2-Dichloroethene	BRL	0.150	BRL	0.6		•			•
5-34-3	1,1-Dichloroethane	0.970	0.150	3.9	0.6		•	•		**
8-93-3	2-Butanone (MEK)	0.750	0.150	2.2	0.4		•	*		•
56-59-2	cis-1,2-Dichloroethene	0.155	0.150	0.6	0.6			*		••
7-66-3	Chloroform	BRL	0.150	BRL	0.7		•		**	
07-06-2	1,2-Dichloroethane	BRL	0.150	BRL	0.6		•	•	н	
1-55-6	1,1,1-Trichloroethane	1.13	0.150	6.2	0.8				н	"
1-43-2	Benzene	0.339	0.150	1.1	0.5		•		•	
6-23-5	Carbon tetrachloride	0.219	0.150	1.4	0.9			•	н	•
9-01-6	Trichloroethene	0.650	0.150	3.5	0.8			**		•
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.150	BRL	0.6			•	н	
9-00-5	1,1,2-Trichloroethane	BRL	0.150	BRL	0.8			•	n	
08-88-3	Toluene	1.37	0.150	5.2	0.6				"	
27-18-4	Tetrachloroethene	BRL	0.150	BRL	1.0		•	•	n	"
00-41-4	Ethylbenzene	BRL	0.150	BRL	0.7		n	•	п	
330-20-7	m,p-Xylene	0.330	0.150	1.4	0.7					
5-47-6	o-Xylene	BRL	0.150	BRL	0.7		"	*	•	
9-34-5	1,1,2,2-Tetrachloroethane	BRL	0.150	BRL	1.0		n	*		"
6-63-6	1,2,4-Trimethylbenzene	BRL	0.150	BRL	0.7		p .			
Surrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	88	75	-125 %						

Sample Identification
Greif-IA-09
SA72249-05

Matrix Air Collection Date/Time 12-Dec-07 08:53

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
Air Quali	ty Analyses			· ·			<u> </u>		-	
PA TO-	<u>15</u>	<u>vdqq</u>	<u>Prepare</u>	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	5.00	BRL	12.8		EPA TO-15	20-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	5.00	BRL	13.2		*	н	н	"
7- 6 4-1	Acetone	8.60	5.00	20.4	11.9		**	n		٠.
5-35-4	1,1-Dichtoroethene	BRL	5.00	BRL	19.8		**	н		*
5-09-2	Methylene chloride	BRL	5.00	BRL	17.4		er		п	•
56-60-5	trans-1,2-Dichloroethene	BRL	5.00	BRL	19.8		**	n		•
5-34-3	1,1-Dichloroethane	BRL	5.00	BRL	20.2			-	•	•
8-93-3	2-Butanone (MEK)	BRL	5.00	BRL	14.7		**	н	н	11
56-59-2	cis-1,2-Dichloroethene	BRL	5.00	BRL	19.8		**	n	н	"
7-66-3	Chloroform	BRL	5.00	BRL	24.3		•	п	n	n
07-06-2	1,2-Dichloroethane	BRL	5.00	BRL	20.2			н	н	"
1-55-6	1,1,1-Trichtoroethane	BRL	5.00	BRL	27.3					"
1-43-2	Benzene	BRL	5.00	BRL	16.0		*	•	•	11
6-23-5	Carbon tetrachloride	BRL	5.00	BRL	31.5		••	"		н
9-01-6	Trichloroethene	BRL	5.00	BRL	26.9		,,	n		•
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	5.00	BRL	20.5		•			п
9-00-5	1,1,2-Trichloroethane	BRL	5.00	BRL	27.3		**	-		n
08-88-3	Toluene	BRL	5.00	BRL	18.8		n	n		"
27-18-4	Tetrachioroethene	BRL	5.00	BRL	33.9		,,	"	•	н
00-41-4	Ethylbenzene	BRL	5.00	BRL	21.7		•	н	n	
330-20-7	m,p-Xylene	BRL	10.0	BRL	43.4		**		•	
5-47-6	o-Xylene	BRL	5.00	BRL	21.7		*		•	
9-34-5	1,1,2,2-Tetrachloroethane	BRL	5.00	BRL	34.3		**			
5-63-6	1,2,4-Trimethylbenzene	BRL	5.00	BRL	24.6		**	н	"	**
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	90	75	-125 %			•	*		11

Matrix Air Collection Date/Time 12-Dec-07 08:53

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analysi
ir Quali	ty Analyses				_					
PA TO-	<u>15</u>	ppbv	Prepare	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	5.00	BRL	12.8		EPA TO-15	20-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	5.00	8RL	13.2			**		
7-64-1	Acetone	6.30	5.00	15.0	11.9		•			
5-35-4	1,1-Dichloroethene	BRL	5.00	BRL	19.8		•		•	•
5-09-2	Methylene chloride	BRL	5.00	BRL	17.4			*		
56-60-5	trans-1,2-Dichloroethene	BRL	5.00	BRL	19.8					
5-34-3	1,1-Dichloroethane	BRL	5.00	BRL	20.2		H		n	•
8-93-3	2-Butanone (MEK)	BRL	5.00	BRL	14.7		10			
56-59-2	cis-1,2-Dichloroethene	BRL	5.00	BRL	19.8			. "		*
7-66-3	Chloroform	BRL	5.00	BRL	24.3			n		
07-06-2	1,2-Dichloroethane	BRL	5.00	BRL	20.2		'n	*		*
1-55-6	1,1,1-Trichloroethane	146	5.00	797.0	27.3		н	*	•	
1-43-2	Benzene	BRL	5.00	BRL	16.0		**	*	•	
5-23-5	Carbon tetrachloride	BRL	5.00	BRL	31.5		*	•	•	•
9-01-6	Trichloroethene	15.3	5.00	82.2	26.9		*	n	•	"
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	5.00	BRL	20.5		#	**		
9-00-5	1,1,2-Trichloroethane	BRL	5.00	BRL	27.3		**	**		
08-88-3	Toluenė	BRL	5.00	BRL	18.8		#			**
27-18-4	Tetrachloroethene	BRL	5.00	BRL	33.9		•			•
00-41-4	Ethylbenzene	BRL	5.00	BRL	21.7					
330-20-7	m,p-Xylene	BRL	10.0	BRL	43.4					
-47-6	o-Xylene	BRL	5.00	BRL	21.7		•			
-34-5	1,1,2,2-Tetrachloroethane	BRL	5.00	BRL	34.3			•		•
-63-6	1,2,4-Trimethylbenzene	BRL	5.00	BRL	24.6		*	"	•	
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	91	75	-125 %			*	. "	**	

Matrix Air Collection Date/Time 12-Dec-07 08:58

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
Air Quali	ty Analyses								· <u>-</u> .	
EPA TO-	<u>15</u>	ppbv	<u>Prepare</u>	d 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		•	*	н	"
67-64-1	Acetone	BRL	0.500	BRL	1.2		**	•	н	"
5-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		•		*	**
5-09-2	Methylene chloride	1.04	0.500	3.6	1.7		п	"		
56-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0					•
5-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		=		•	
8-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		•	*		**
56-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		•			17
7-66-3	Chloroform	BRL	0.500	BRL	2.4		vi		*	,
07-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0			"		
1-55-6	1,1,1-Trichloroethane	BRL	0.500	BRL	2.7		*			
1-43-2	Benzene	BRL	0.500	BRL	1.6					n
6-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		**	*	•	
9-01-6	Trichloroethene	BRL	0.500	BRL	2.7		**		*	•
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		**			**
9-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		**			
08-88-3	Toluene	1.83	0.500	6.9	1.9		*			**
27-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		**	•		"
00-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		**	•		n
330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		*			"
5-47-6	o-Xylene	BRL	0.500	BRL	2.2		**	•		•
9-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		*	*		
6-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		*	**	•	"
Surrogate	recoveries:									
160-00-4	4-Bromofluorobenzene	87	75-	-125 %						**

Sample Identification
Greif-SSV-10
_SA72249-08

Client Project # 0070448

Matrix Air Collection Date/Time 12-Dec-07 08:58

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses						-			
PA TO-	<u>15</u>	ydag	Prepare	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	10.0	BRL	25.6		EPA TO-15	20-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	10.0	BRL	26.4				•	•
7-64-1	Acetone	BRL	10.0	BRL	23.8		•			
5-35-4	1,1-Dichtoroethene	BRL	10.0	BRL	39.7		•		•	
5-09-2	Methylene chloride	BRL	10.0	BRL	34.7		•			
66-60-5	trans-1,2-Dichloroethene	BRL	10.0	BRL	39.7		•			
5-34-3	1,1-Dichloroethane	BRL	10.0	BRL	40.5					
3-93-3	2-Butanone (MEK)	BRL	10.0	BRL	29.5				•	•
56-59-2	cis-1,2-Dichloroethene	BRL	10.0	BRL	39.7		n	•		
-66-3	Chloroform	BRL	10.0	BRL	48.7		*		**	**
7-06-2	1,2-Dichloroethane	BRL	10.0	BRL	40.5					**
1-55-6	1,1,1-Trichloroethane	BRL	10.0	BRL	54.6		n	•		
1-43-2	Benzene	BRL	10.0	BRL	31.9		**	n	**	
6-23-5	Carbon tetrachloride	BRL	10.0	BRL	62.9		*	**		
-01-6	Trichloroethene	41.8	10.0	225.0	53.7		*	H		
18-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0	BRL	41.0		**			*
-00-5	1,1,2-Trichloroethane	BRL	10.0	BRL	54.6		**	**		
8-88-3	Toluene	BRL	10.0	BRL	37.6		10	*		
7-18-4	Tetrachloroethene	BRL	10.0	BRL	67.8					•
0-41-4	Ethylbenzene	BRL	10.0	BRL	43.4					
30-20-7	m,p-Xylene	BRL	20.0	BRL	86.7					
-47-6	o-Xylene	BRL	10.0	BRL	43.4			n	**	
-34-5	1,1,2,2-Tetrachloroethane	BRL	10.0	BRL	68.7			н	**	
-63-6	1,2,4-Trimethylbenzene	BRL	10.0	BRL	49.2			n	•	•
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	89	75	-125 %			n	•		**

Matrix Air Collection Date/Time 12-Dec-07 00:00

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses			•						
PA TO-	<u>15</u>	ppbv	Prepare	d 19-Dec-07		GS				
5-01-4	Vinyl chloride	BRL	59.5	BRL	152.0		EPA TO-15	20-Dec-07	7121453	WB
5-00-3	Chloroethane	BRL	59.5	BRL	157.0			**		
7-64-1	Acetone	295	59.5	701.0	141.0		•	**	*	"
5-35-4	1,1-Dichloroethene	1670	59.5	6630.0	236.0		er		n	
5-09-2	Methylene chloride	BRL	59.5	BRL	207:0		а	**	n	**
56-60-5	trans-1,2-Dichloroethene	BRL	59.5	BRL	236.0		н	"	*	
5-34-3	1,1-Dichloroethane	727	59.5	2940.0	241.0					**
8-93-3	2-Butanone (MEK)	BRL	59.5	BRL	175.0			"	*	*
56-59-2	cis-1,2-Dichloroethene	131	59.5	519.0	236.0		. •	"		**
7-66-3	Chloroform	BRL	59.5	BRL	290.0	×				•
07-06-2	1,2-Dichloroethane	BRL	59.5	BRL	241.0		•	"		"
1-55-6	1,1,1-Trichloroethane	2350	59.5	12800.0	325.0		**		"	"
1-43-2	Benzene	BRL	59.5	BRL	190.0			•	н	"
6-23-5	Carbon tetrachloride	BRL	59.5	BRL	374.0		0	**	"	
9-01-6	Trichloroethene	6050	59.5	32500.0	320.0		P	**		
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	59.5	BRL	244.0		*	89	•	"
9-00-5	1,1,2-Trichloroethane	BRL	59.5	BRL	325.0				•	
08-88-3	Toluene	83.3	59.5	313.0	224.0		•			
27-18-4	Tetrachloroethene	BRL	59.5	BRL	403.0			**	•	
00-41-4	Ethylbenzene	BRL	59.5	BRL	258.0		•	**		"
330-20-7	m,p-Xylene	BRL	119	BRL	516.0		•	**		"
5-47-6	o-Xylene	BRL	59.5	BRL	258.0		•	•		n
9-34-5	1,1,2,2-Tetrachloroethane	BRL	59.5	BRL	409.0		**	"	*	
5-63-6	1,2,4-Trimethylbenzene	BRL	59.5	BRL	293.0		#	"		**
Surrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	93	75	i-125 %			n		**	

Matrix Air Collection Date/Time 12-Dec-07 00:00

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses	 		<u> </u>						
PA TO-	<u>15</u>	ppbv	Prepare	d 20-Dec-07						
5-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	0.500	BRL	1.3		*	*		"
7-64-1	Acetone	6.34	0.500	15.1	1.2		•		-	
5-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		**		•	"
5-09-2	Methylene chloride	BRL	0.500	BRL	1.7			,		"
56-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		*	n		••
5-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		*	n	-	
3-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		**	,		n
56-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		**			*
7-66-3	Chloroform	BRL	0.500	BRL	2.4				•	**
07-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0			#		•
1-55-6	1,1,1-Trichloroethane	6.60	0.500	36.0	2.7		•			
1-43-2	Benzene	0.720	0.500	2.3	1.6					**
6-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		a	*		**
9-01-6	Trichtoroethene	2.94	0.500	15.8	2.7		n	H		••
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1			•		••
9-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7			*		**
08-88-3	Toluene	2.51	0.500	9.4	1.9			•		••
27-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4					
0-41-4	Ethylbenzene	BRL	0.500	BRL	2.2					*
330-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		**			•
5-47-6	o-Xylene	BRL	0.500	BRL	2.2					
9-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		•	•		
63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5					
urrogate	recoveries:			11						
50-00-4	4-Bromofluorobenzene	90	75-	-125 %			•		**	. 10

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 10:55

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses			· <u>-</u>						
PA TO-	<u>15</u>	ppbv	Prepare	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	1.00	BRL	2.6		EPA TQ-15	21-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	1.00	BRL	2.6					"
7-64-1	Acetone	15.9	1.00	37.8	2.4				•	n
5-35-4	1,1-Dichloroethene	BRL	1.00	BRL	4.0		n			n
5-09-2	Methylene chloride	BRL	1.00	BRL	3.5		n			**
56-60-5	trans-1,2-Dichloroethene	BRL	1.00	BRL	4.0					•
5-34-3	1,1-Dichloroethane	BRL	1.00	BRL	4.1			n	•	
8-93-3	2-Butanone (MEK)	1.66	1.00	4.9	3.0		н		n	
56-59-2	cis-1,2-Dichloroethene	BRL	1.00	BRL	4.0			н	•	
7-66-3	Chloroform	BRL	1.00	BRL	4.9			*	•	
07-06-2	1,2-Dichloroethane	BRL	1.00	BRL	4.1					
1-55-6	1,1,1-Trichloroethane	4.96	1.00	27.1	5.5		**			"
1-43-2	Benzene	BRL	1.00	BRL	3.2					
6-23-5	Carbon tetrachloride	BRL	1.00	BRL	6.3		n			
9-01-6	Trichloroethene	3.80	1.00	20.4	5.4		н			**
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	1.00	BRL	4.1		H	*		
9-00-5	1,1,2-Trichloroethane	BRL	1.00	BRL	5.5		**	**		
08-88-3	Toluene	1.68	1.00	6.3	3.8			•		
27-18-4	Tetrachloroethene	BRL	1.00	BRL	6.8		•		*	"
00-41-4	Ethylbenzene	BRL	1.00	BRL	4.3				•	n
330-20-7	m,p-Xylene	BRL	2.00	BRL	8.7					**
5-47-6	o-Xylene	8RL	1.00	BRL	4.3		,,		n	н
9-34-5	1,1,2,2-Tetrachloroethane	BRL	1.00	BRL	6.9					н
5-63-6	1,2,4-Trimethylbenzene	BRL	1.00	BRL	4.9				"	
urrogate	recoveries:				·					
60-00-4	4-Bromofluorobenzene	88	75	-125 %					**	

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 11:05

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses									
PA TO-	<u>15</u>	<u>vdqq</u>	Prepare	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	1.00	BRL	2.6		EPA TO-15	21-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	1.00	BRL	2.6					
7-64-1	Acetone	26.6	1.00	63.2	2.4		*			
5-35-4	1,1-Dichloroethene	BRL	1.00	BRL	4.0		n	•		
5-09-2	Methylene chloride	BRL	1.00	BRL	3.5		п		n	•
56-60-5	trans-1,2-Dichloroethene	BRL	1.00	BRL	4.0		н			**
5-34-3	1,1-Dichloroethane	1.12	1.00	4.5	4.1		n	•	н	**
3-93-3	2-Butanone (MEK)	1.50	1.00	4.4	3.0		•		n	**
56-59-2	cis-1,2-Dichloroethene	BRL	1.00	BRL	4.0			"		
7-66-3	Chloroform	BRL	1.00	BRL	4.9			n	*	*
7-06-2	1,2-Dichloroethane	BRL	1.00	BRL	4.1			*	4	
1-55-6	1,1,1-Trichloroethane	38.8	1.00	212.0	5.5					**
1-43-2	Benzene	BRL	1.00	BRL	3.2		•	#	**	
6-23-5	Carbon tetrachloride	BRL	1.00	BRL	6.3			**	•	
9-01-6	Trichloroethene	2.50	1.00	13.4	5.4			**		
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	1.00	BRL	4.1			•		**
9-00-5	1,1,2-Trichloroethane	BRL	1.00	BRL	5.5			**		
08-88-3	Toluene	1.82	1.00	6.9	3.8					
27-18-4	Tetrachloroethene	BRL	1.00	BRL	6.8		•			n
00-41-4	Ethylbenzene	BRL	1.00	BRL	4.3		**			••
330-20-7	m,p-Xylene	BRL	2.00	BRL	8.7				**	
-47-6	o-Xylene	BRL	1.00	BRL	4.3		•		n	
-34-5	1,1,2,2-Tetrachloroethane	BRL	1.00	BRL	6.9		"	n	n	
-63-6	1,2,4-Trimethylbenzene	BRL	1.00	BRL	4.9		N	n		
ırrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	92	75	-125 %			•			

Sample Identification Greif-OA-01 SA72249-13

Client Project # 0070448

Matrix Air Collection Date/Time 12-Dec-07 11:00

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analysi
ir Quali	ty Analyses									
PA TO-	<u>15</u>	ppbv	Prepare	d 20-Dec-07						
5-01-4	Vinyl chloride	BRL	0.150	BRL	0.4		EPA TO-15	21-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	0.150	BRL	0.4		"		-	
7-64-1	Acetone	2.64	0.150	6.3	0.4		**		**	•
5-35-4	1,1-Dichloroethene	BRL	0.150	BRL	0.6			•	-	•
5-09-2	Methylene chloride	0.273	0.150	1.0	0.5				**	
56-60-5	trans-1,2-Dichloroethene	BRL	0.150	BRL	0.6				**	
5-34-3	1,1-Dichloroethane	BRL	0.150	BRL	0.6			•		
8-93-3	2-Butanone (MEK)	0.400	0.150	1.2	0.4					
56-59-2	cis-1,2-Dichloroethene	BRL	0.150	BRL	0.6		•			
7-66-3	Chloroform	BRL	0.150	BRL	0.7				**	n
07-06-2	1,2-Dichloroethane	BRL	0.150	BRL	0.6		•			
1-55-6	1,1,1-Trichloroethane	0.530	0.150	2.9	0.8					
1-43-2	Benzene	0.310	0.150	1.0	0.5		•	•		
8-23-5	Carbon tetrachloride	0.220	0.150	1.4	0.9		**		**	n
9-01-6	Trichloroethene	0.295	0.150	1.6	0.8			,,	**	
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.150	BRL	0.6		n		**	
9-00-5	1,1,2-Trichloroethane	BRL	0.150	BRL	8.0		ti			
08-88-3	Toluene	1.35	0.150	5.1	0.6		н			
27-18-4	Tetrachloroethene	0.167	0.150	1.1	1.0				**	"
00-41-4	Ethylbenzene	0.196	0.150	0.9	0.7		н		n	"
330-20-7	m,p-Xylene	0.370	0.150	1.6	0.7		н	**		
5-47-6	o-Xylene	0.229	0.150	1.0	0.7	•	n	n		**
9-34-5	1,1,2,2-Tetrachloroethane	BRL	0.150	BRL	1.0			n		•
-63-6	1,2,4-Trimethylbenzene	0.228	0.150	1.1	0.7		н	•		•
urrogate	recoveries:			<u> </u>						
50-00-4	4-Bromofluorobenzene	90	75-	125 %				**	**	

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 13:40

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analysi
Air Quali	ty Analyses							<u> </u>		
PA TO-	<u>15</u>	<u>vdqq</u>	<u>Prepare</u>	d 20-Dec-07		R05				
5-01-4	Vinyl chloride	BRL	2.50	BRL	6.4		EPA TO-15	21-Dec-07	7121541	WB
5-00-3	Chloroethane	BRL	2.50	BRL	6.6			•		•
7-64-1	Acetone	BRL	2.50	BRL	5.9			"		
5-35-4	1,1-Dichloroethene	BRL	2.50	BRL	9.9		•	**		••
5-09-2	Methylene chloride	BRL	2.50	BRL	8.7			•		
56-60-5	trans-1,2-Dichloroethene	BRL	2.50	BRL	9.9		•			
5-34-3	1,1-Dichloroethane	BRL	2.50	BRL	10.1		•	**		
8-93-3	2-Butanone (MEK)	BRL	2.50	BRL	7.4		•			
56-59-2	cis-1,2-Dichloroethene	BRL	2.50	BRL	9.9					
7-66-3	Chloroform	BRL	2.50	BRL	12.2		•	**		**
07-06-2	1,2-Dichloroethane	BRL	2.50	BRL	10.1		•	**		"
1-55-6	1,1,1-Trichloroethane	5.60	2.50	30.6	13.6		•	**		•
1-43-2	Benzene	BRL	2.50	BRL	8.0		**	**		"
6-23-5	Carbon tetrachloride	BRL	2.50	BRL	15.7			*		"
9-01-6	Trichloroethene	2.60	2.50	, 14.0	13.4		**	••		••
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	2.50	BRL	10.2		•	**		"
9-00-5	1,1,2-Trichloroethane	BRL	2.50	BRL	13.6		u	**		•
08-88-3	Toluene	BRL	2.50	BRL	9.4			••		
27-18-4	Tetrachloroethene	BRL	2.50	BRL	17.0		,	•		
00-41-4	Ethylbenzene	BRL	2.50	BRL	10.8		u			"
330-20-7	m,p-Xylene	BRL	5.00	BRL	21.7			•		•
5-47-6	o-Xylene	BRL	2.50	BRL	10.8		,			
9-34-5	1,1,2,2-Tetrachloroethane	BRL	2.50	BRL	17.2		*		n	"
5-63-6	1,2,4-Trimethylbenzene	BRL	2.50	BRL	12.3		*	. "		
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	88	75	-125 %			*		**	

Matrix Air Collection Date/Time 12-Dec-07 13:50

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analyst
Air Quali	ty Analyses							-		
EPA TO-	<u>15</u>	<u>vdqq</u>	Prepare	d 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	8RL	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			n		U
75-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0					
78-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5			19		н
156-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		,,	н	۳.	
67-66-3	Chloroform	BRL	0.500	BRL	2.4		n			*
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		н	H		
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		*	n	н	н
79-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		**	n	n	
108-88-3	Toluene	BRL	0.500	BRL	1.9		**	•	ń	
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		H	n		
95-47-6	o-Xylene	BRL	0.500	BRL	2.2		н	n	•	**
9-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		•	и		**
5-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5			11		н
Surrogate	recoveries:									
160-00-4	4-Bromofluorobenzene	84	75	-125 %					• .	•

Sample Identification Greif-SV-03 SA72249-16

Client Project # 0070448

Matrix Air Collection Date/Time 12-Dec-07 14:00

CAS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
Air Quali	ty Analyses				· -					
EPA TO-	<u>15</u>	<u>vdqq</u>	Prepare	d 21-Dec-07						
75-01-4	Vinyl chloride	BRL	0.150	BRL	0.4		EPA TO-15	21-Dec-07	7121849	WB
5-00-3	Chloroethane	BRL	0.150	BRL	0.4				-	**
7-64-1	Acetone	1.40	0.150	3.3	0.4			•		,
5-35-4	1,1-Dichloroethene	BRL	0.150	BRL	0.6				•	"
5-09-2	Methylene chloride	0.950	0.150	3.3	0.5		•		n	
56-60-5	trans-1,2-Dichtoroethene	BRL	0.150	BRL	0.6		•	н	**	•
5-34-3	1,1-Dichloroethane	BRL	0.150	BRL	0.6		•			•
8-93-3	2-Butanone (MEK)	0.805	0.150	2.4	0.4		•	н	*	
56-59-2	cis-1,2-Dichloroethene	BRL	0.150	BRL	0.6					
7-66-3	Chloroform	BRL	0.150	BRL	0.7		n			
07-06-2	1,2-Dichloroethane	BRL	0.150	BRL	0.6		•			**
1-55-6	1,1,1-Trichloroethane	0.155	0.150	0.9	8.0		•			**
1-43-2	Benzene	0.680	0.150	2.2	0.5					
6-23-5	Carbon tetrachloride	0.193	0.150	1.2	0.9		•		н	"
9-01-6	Trichloroethene	0.218	0.150	1.2	0.8		•	•		
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.150	BRL	0.6		•	•	*	
9-00-5	1,1,2-Trichloroethane	BRL	0.150	BRL	0.8			**		
08-88-3	Toluene	0.450	0.150	1.7	0.6		•	n	**	
27-18-4	Tetrachloroethene	BRL	0.150	BRL	1.0		•		•	
00-41-4	Ethylbenzene	0.185	0.150	0.8	0.7				•	**
330-20-7	m,p-Xylene	0.486	0.150	2.1	0.7		*			**
5-47-6	o-Xylene	0.191	0.150	0.8	0.7			•	•	**
9-34-5	1,1,2,2-Tetrachloroethane	BRL	0.150	BRL	1.0		**	*	•	**
5-63-6	1,2,4-Trimethylbenzene	0.258	0.150	1.3	0.7		•	•	•	**
Surrogate	recoveries:	-								
60-00-4	4-Bromofluorobenzene	87	75	-125 %			•	•		

Sample Identification Greif-SV-04 SA72249-17

Client Project # 0070448

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 14:15

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses						,,			-
PA TO-	<u>15</u>	ppbv	<u>Prepare</u>	d 21-Dec-07						
5-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121849	WB
5-00-3	Chloroethane	BRL	0.500	BRL	1.3			•	•	n
'-64-1	Acetone	11.6	0.500	27.6	1.2					
5-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		•		*	n
-09-2	Methylene chloride	0.510	0.500	1.8	1.7		n	•	n	
6-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0				B	n
i-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		•		*	
3-93-3	2-Butanone (MEK)	0.830	0.500	2.5	1.5		"		n	
6-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0					
-66-3	Chloroform	BRL	0.500	BRL	2.4		•	•	•	19
7-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0			•		P
-55-6	1,1,1-Trichloroethane	6.43	0.500	35.1	2.7		•	•		".
-43-2	Benzene	BRL	0.500	BRL	1.6		•			n
3-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2			*	•	n
-01-6	Trichloroethene	2.47	0.500	13.3	2.7				**	
8-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		•	•	**	
-00-5	1,1,2-Trichloroethane	BRL	0.500	BRL	2.7		•		*	"
8-88-3	Toluenė	1.56	0.500	5.9	1.9		•		*	
7-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		•		•	
0-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		•	*		
30-20-7	m,p-Xylene	BRL	1.00	BRL	4.3		•			**
-47-6	o-Xylene	BRL	0.500	BRL	2.2		n			
-34-5	1,1,2,2-Tetrachioroethane	BRL	0.500	BRL	3.4		•	•	*	
-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		*		**	
ırrogate	recoveries:			•						
0-00-4	4-Bromofluorobenzene	88	75-	-125 %			n			**

<u>Matrix</u> Air Collection Date/Time 12-Dec-07 00:00

AS No.	Analyte(s)	Result Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Batch	Analys
ir Quali	ty Analyses								_	
PA TO-	<u>15</u>	<u>ppbv</u>	Prepare	d 21-Dec-07						
5-01-4	Vinyl chloride	BRL	0.500	BRL	1.3		EPA TO-15	21-Dec-07	7121849	WB
5-00-3	Chloroethane	BRL	0.500	BRL	1.3			**	n	
7-64-1	Acetone	BRL	0.500	BRL	1.2		**		**	
5-35-4	1,1-Dichloroethene	BRL	0.500	BRL	2.0		•	•	**	•
5-09-2	Methylene chloride	BRL	0.500	BRL	1.7				D	
56-60-5	trans-1,2-Dichloroethene	BRL	0.500	BRL	2.0		Ħ	**		
5-34-3	1,1-Dichloroethane	BRL	0.500	BRL	2.0		n	•		
3-93-3	2-Butanone (MEK)	BRL	0.500	BRL	1.5		n		**	
6-59-2	cis-1,2-Dichloroethene	BRL	0.500	BRL	2.0		**	•	•	
7-66-3	Chloroform	BRL	0.500	BRL	2.4		n	•	•	
07-06-2	1,2-Dichloroethane	BRL	0.500	BRL	2.0		н		*	
1-55-6	1,1,1-Trichloroethane	BRL	0.500	BRL	2.7		19			
-43-2	Benzene	BRL	0.500	BRL	1.6		*		•	
6-23-5	Carbon tetrachloride	BRL	0.500	BRL	3.2		Ħ		•	
9-01-6	Trichloroethene	BRL	0.500	BRL	2.7		m			
08-10-1	4-Methyl-2-pentanone (MIBK)	BRL	0.500	BRL	2.1		н			**
9-00-5	1,1,2-Trichloroethane	BRĹ	0.500	BRL	2.7				•	"
8-88-3	Toluene	BRL	0.500	BRL	1.9		H			"
7-18-4	Tetrachloroethene	BRL	0.500	BRL	3.4		н			
0-41-4	Ethylbenzene	BRL	0.500	BRL	2.2		19		•	"
30-20-7	m,p-Xylene	8RL	1.00	BRL	4.3		н			
-47-6	o-Xylene	BRL	0.500	BRL	2.2		Ħ	**		**
-34-5	1,1,2,2-Tetrachloroethane	BRL	0.500	BRL	3.4		**	n	n	*
-63-6	1,2,4-Trimethylbenzene	BRL	0.500	BRL	2.5		•	n	10	•
urrogate	recoveries:									
60-00-4	4-Bromofluorobenzene	86	75	·125 %			n			

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

	<u>.</u> .			Spike	Source	0/555	%REC	n ===	RPD	r.
Analyte(s)	Result	*RDL	Units	Level	Result	%REC	Limits	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 ppbv	10.0		94	70-130			
Bromomethane	9.57		ppbv	10.0		96	70-130			
Chloroethane	9.37			10.0		94	70-130			
Acetone	9.57 8.60		ppbv	10.0		86	70-130			
			ppbv							
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	Ī	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	1	ppbv	10.0		87	70-130			
Isopropyl alcohol	9.09		ppbv	10.0		91	70-130			
2-Butanone (MEK)	8.41	1	ppbv	10.0		84	70-130			
cis-1,2-Dichloroethene	8.88	1	ppbv	10.0		89	70-130			
Hexane	9.93		ppbv	10.0		99	70-130			
Ethyl acetate	9.57	1	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 ppbv	10.0		84	70-130			
Cyclohexane	8.85		ppbv ppbv	10.0		88	70-130			
1,2-Dichloropropane Bromodichloromethane	9.14		ppbv	10.0		91 92	70-130 70-130			
	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	I	ppbv	10.0		94	70-130			
Toluene	10.8	1	ppbv	10.0		108	70-130			
2-Hexanone (MBK)	10.1	1	ppbv	10.0		101	70-130	•		
Dibromochloromethane	14.1	1	ppbv	10.0		141	70-130			QC2
1,2-Dibromoethane (EDB)	9.27	1	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 &	k 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	0.01		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)	Sour	rce: SA72345-01	Prepared &	k Analyzed:	18-Dec-07				
Propene	3,55	0.500 ppbv		3.43			3	30	
Dichlorodifluoromethane (Freon 12)	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	
Benzene Carbon tetrachloride	BRL	• •		BRL			,	30	
	BRL	0.500 ppbv		BRL				30	
Cyclohexane		0.500 ppbv						30	
1,2-Dichloropropane	BRL	0.500 ppbv		BRL			-		
Bromodichloromethane	BRL	0.500 ppbv		BRL				30 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						<u>-</u> -				
Duplicate (7121342-DUP1)	Sour	rce: SA72345	i-01	Prepared &	Analyzed:	18-Dec-07				
Toluene	1.69	0.500 p	pbv		1.60			5	30	
2-Hexanone (MBK)	1.46	0.500 p	pbv		1.47			0.7	30	
Dibromochloromethane	BRL	0.500 p	pbv		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500 p	pbv		BRĻ				30	
Tetrachloroethene	BRL	0.500 p	pbv		BRL				30	
Chlorobenzene	BRL	0.500 p	pbv		BRL				30	
Ethylbenzene	BRL	0.500 p	pbv		BRL				30	
m,p-Xylene	0.890	1,00 p	pbv		0.870			2	30	J
Bromoform	BRL	0.500 p	pbv		BRL				30	
Styrene	BRL	0.500 p	pbv		BRL				30	
o-Xylene	0.410	0.500 p	pbv		0.400			2	30	J
I,1,2,2-Tetrachloroethane	BRL	0.500 p	pbv		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500 p	pbv		BRL				30	
4-Ethyltoluene	BRL	0.500 p	pbv		BRL				30	
1,2,4-Trimethylbenzene	0.590	0.500 p	pbv		0.590			0	30	
1,3-Dichlorobenzene	BRL	0.500 pi	pbv		BRL				30	
Benzyl chloride	BRL	0.500 p	pbv		BRL				30	
1,4-Dichlorobenzene	BRL	0.500 p	pbv		BRL				30	
1,2-Dichlorobenzene	BRL	0.500 p _l	pbv		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500 p	pbv		BRL				30	
Hexachlorobutadiene	BRL	0.500 p	pbv		BRL				30	
Batch 7121453 - General Air Prep Blank (7121453-BLKI)				Prepared &	: Analyzed:	19-Dec-07				
Propene	BRL	0.500 p	pbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500 p	-							
Chloromethane	BRL	0.500 p	pbv							
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500 p								
Vinyl chloride	BRL	0.500 pj	pbv							
1,3-Butadiene	BRL	0.500 pj								
Bromomethane	BRL	0.500 pj	•							
Chloroethane	BRL	0.500 pj	pbv							
Acetone	BRL	0.500 pj								
Trichlorofluoromethane (Freon 11)	BRL	0.500 p _l	-							
Ethanol	BRL	0.500 p								
1,1-Dichloroethene	BRL	0.500 p	-				•			
Methylene chloride	BRL	0.500 p _l								
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500 p _l								
Carbon disulfide	BRL	0.500 pj								
trans-1,2-Dichloroethene	BRL	0.500 p								
1,1-Dichloroethane	BRL	0.500 pj								
Methyl tert-butyl ether	BRL	0.500 pj								
Isopropyl alcohol	BRL	0.500 pr								
2-Butanone (MEK)	BRL	0.500 pg								
cis-1,2-Dichloroethene	BRL	0.500 pr								
Hexane	BRL	0.500 pr								
Ethyl acetate	BRL	0.500 pp	•							
Chloroform	BRL	0.500 p								
Fetrahydrofuran	BRL	0.500 pr								
		PI								

0.500 ppbv

0.500 ppbv

0.500 ppbv

0.500 ppbv

BRL

BRL

BRL

BRL

1,2-Dichloroethane

Benzene

1,1,1-Trichloroethane

Carbon tetrachloride

Analyte(s)	Result	•RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Fla
Batch 7121453 - General Air Prep	· .				<u></u>					
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								
Chlorobenzene	BRL	0.500								
Ethylbenzene	BRL	0.500								
m,p-Xylene	BRL	1.00								
Bromoform	BRL	0.500								
Styrene	BRL	0.500								
o-Xylene	BRL	0.500								
1,1,2,2-Tetrachloroethane	BRL	0.500	• •							
1,3,5-Trimethylbenzene	BRL	0.500	• •							
I-Ethyltoluene	BRL	0.500								
1,2,4-Trimethylbenzene	BRL	0.500								
1,3-Dichlorobenzene	BRL	0.500	• •							
Benzyl chloride	BRL	0.500								
1,4-Dichlorobenzene	BRL	0.500	• •							
1,2-Dichlorobenzene	BRL	0.500	• •							
1,2,4-Trichlorobenzene	BRL	0.500	- •							
Hexachlorobutadiene	BRL	0.500	• •							
Surrogate: 4-Bromofluorobenzene	9.19		ppbv	10.0		92	75-125	***************************************		
			PPC.				70 120			
LCS (7121453-BS1)	9.07				Analyzed:		#0.120			
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			
,2-Dichlorotetrafluoroethane (Freon 114)	9.62		ppbv	10.0		96	70-130			
/inyl chloride	9.11		ppbv	10.0		91	70-130			
,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			
Frichlorofluoromethane (Freon 11)	9.00		ppbv	10.0		90	70-130			
Ethanol	8.66		ppbv	10.0		87	55.1-230			
,1-Dichloroethene	8.73		ppbv	10.0		87	70-130			
Methylene chloride	8.95		ppbv	10.0		90	70-130			
,1,2-Trichlorotrifluoroethane (Freon 113)	9.07		ppbv	10.0		91	70-130			
Carbon disulfide	9.02		ppbv	10.0		90	70-130			
rans-1,2-Dichloroethene	9.19		ppbv	10.0		92	70-130			
,1-Dichloroethane	9.28	1	ppbv	10.0		93	70-130			
Methyl tert-butyl ether	8.46	1	ppbv	10.0		85	70-130			
sopropyl alcohol	8.64	i	ppbv	10.0		86	70-130			
-Butanone (MEK)	8.13	1	ppbv	10.0		81	70-130			
is-1,2-Dichloroethene	8.57	ı	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-0	7			
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	0.01	. 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			
I,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)	Soui	rce: SA72461-01	Prepared &	k Analyzed: 19-Dec-0	7			
Propene	2.94	0.500 ppbv		2.74		7	30	
Dichlorodifluoromethane (Freon 12)	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	
Frichlorofluoromethane (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	
vicalyrene emoriae	BKL	0.500 рроч		DILL			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)	Soui	ce: SA72461-	-01	Prepared &	Analyzed:	19-Dec-07				
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500 pp	obv		BRL				30	
Carbon disulfide	0.310	0.500 pp	obv		BRL				30	J
trans-1,2-Dichloroethene	BRL	0.500 pp			BRL				30	
1,1-Dichloroethane	BRL	0.500 pp			BRL				30	
Methyl tert-butyl ether	BRL	0.500 pp			BRL				30	
Isopropyl alcohol	3.06	0.500 pp	obv		2.89			6	30	
2-Butanone (MEK)	5.43	0.500 pp			5.06			7	30	
cis-1,2-Dichloroethene	BRL	0.500 pp	obv		BRL				30	
Hexane	BRL	0.500 pp	obv		BRL				30	
Ethyl acetate	BRL	0.500 pp	obv		BRL				30	
Chloroform	BRL	0.500 pp			BRL				30	
Tetrahydrofuran	BRL	0.500 pp			BRL				30	
1,2-Dichloroethane	BRL	0.500 pp	bv		BRL				30	
1,1,1-Trichloroethane	BRL	0.500 pp			BRL				30	
Benzene	0.460	0.500 pp			0.430			7	30	J
Carbon tetrachloride	BRL	0.500 pp			BRL				30	
Cyclohexane	BRL	0.500 pp			BRL				30	
1,2-Dichloropropane	BRL	0.500 pp			BRL				30	
Bromodichloromethane	BRL	0.500 pp			BRL				30	
Trichloroethene	BRL	0.500 pp			BRL				30	
n-Heptane	BRL	0.500 pp			BRL				30	
4-Methyl-2-pentanone (MIBK)	BRL	0.500 pp			BRL				30	
cis-1,3-Dichloropropene	BRL	0.500 pp			BRL				30	
trans-1,3-Dichloropropene	BRL	0.500 pp			BRL				30	
1,1,2-Trichloroethane	BRL	0.500 pp			BRL				30	
Toluene	0.780	0.500 pp			0.760			3	30	
2-Hexanone (MBK)	0.510	0.500 pp			0.500			2	30	
Dibromochloromethane	BRL	0.500 pp			BRL			-	30	
1,2-Dibromoethane (EDB)	BRL	0.500 pp			BRL				30	
Tetrachloroethene	BRL	0.500 pp			BRL				30	
Chlorobenzene	BRL	0.500 pp			BRL				30	
Ethylbenzene	BRL	0.500 pp			BRL				30	
m,p-Xylene	0.440	1.00 pp			0.460			4	30	J
Bromoform	BRL	0.500 pp			BRL				30	
Styrene	BRL	0.500 pp			BRL				30	
o-Xylene	BRL	0.500 pp			BRL				30	
1,1,2,2-Tetrachloroethane	BRL	0.500 pp			BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500 pp			BRL				30	
4-Ethyitoluene	BRL	0.500 pp			BRL				30	
1,2,4-Trimethylbenzene	BRL	0.500 pp			BRL				30	
1,3-Dichlorobenzene	BRL	0.500 pp			BRL				30	
Benzyl chloride	BRL	0.500 pp			BRL				30	
1,4-Dichlorobenzene	BRL	0.500 pp			BRL				30	
1,2-Dichlorobenzene	BRL	0.500 pp			BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500 рр			BRL				30	
Hexachlorobutadiene	BRL	0.500 рр			BRL				30	
Surrogate: 4-Bromofluorobenzene	9.39	рр		10.0		94	75-125			
Batch 7121541 - General Air Prep		**								
Blank (7121541-BLK1)				Prepared &	Analyzed:	20-Dec-07				
Propene	BRL	0.500 pp	bv	• • • • • • • • • • • • • • • • • • • •						
Dichlorodifluoromethane (Freon12)	BRL	0.500 pp								
Chloromethane	BRL	0.500 pp								
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500 pp								

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	ррьу							
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 1	ppbv							
Cyclohexane	BRL	0.500	ppbv							
1,2-Dichloropropane	BRL	0.500 1	ppbv							
Bromodichloromethane	BRL	0.500 1	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 I	ppbv							
trans-1,3-Dichloropropene	BRL	0.500 1	ppbv							
1,1,2-Trichloroethane	BRL	0.500	ppbv							
Toluene	BRL	0.500	ppbv							
2-Hexanone (MBK)	BRL	0.500 j								
Dibromochloromethane	BRL	0.500								
1,2-Dibromoethane (EDB)	BRL	0.500								
Tetrachloroethene	BRL	0.500								
Chlorobenzene	BRL	0.500 [-							
Ethylbenzene	BRL	0.500 լ	ppbv							
m,p-Xylene	BRL	1.00 g	ppbv							
Bromoform	BRL	0.500 p	-							
Styrene	BRL	0.500 g	•							
o-Xylene	BRL	0.500 բ								
1,1,2,2-Tetrachloroethane	BRL	0.500 բ								
1,3,5-Trimethylbenzene	BRL	0.500 բ								
4-Ethyltoluene	BRL	0.500 г								
1,2,4-Trimethylbenzene	BRL	0.500 p								
1,3-Dichlorobenzene	BRL	0.500 г								
Benzyl chloride	BRL	0.500 p								
1,4-Dichlorobenzene	BRL	0.500 g								
1,2-Dichlorobenzene	BRL	0.500 p								
,2,4-Trichlorobenzene	BRL	0.500 g	ppbv							

				Spike	Source		%REC		RPD	
Analyte(s)	Result	*RDL	Units	Level	Result	%REC	Limits	RPD	Limit	Flag
Batch 7121541 - General Air Prep	•									
Blank (7121541-BLK1)				Prepared &	: Analyzed:	20-Dec-07				
Hexachlorobutadiene	BRL	0.500 pp	bv							
Surrogate: 4-Bromofluorobenzene	8.85	pr	obv	10.0		88	75-125			
LCS (7121541-BS1)				Prepared &	: Analyzed:	20-Dec-07				
Propene	9.61	PE	bv	10.0		96	70-130		-	-
Dichlorodifluoromethane (Freon12)	8,50	pr	bv	10.0		85	70-130			
Chloromethane	12.3		bv	10.0		123	70-130			
1,2-Dichlorotetrafluoroethane (Freon 114)	11,1	pr	bv	10.0		111	70-130			
Vinyl chloride	10.8	pr	bv	10.0		108	70-130			
1,3-Butadiene	10.6	PI	bv	10,0		106	70-130			
Bromomethane	10.9	pr	bv	10.0		109	70-130			
Chloroethane	10.8	pr	bv	10.0		108	70-130			
Acetone	9.40	pr	bv	10.0		94	70-130			
Trichlorofluoromethane (Freon 11)	9.95	pr	bv	10.0		100	70-130			
Ethanol	9.71		bv	10.0		97	55.1-230			
1,1-Dichtoroethene	9.55		bv	10.0		96	70-130			
Methylene chloride	10.2		bv	10.0		102	70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	9.80		bv	10.0		98	70-130			
Carbon disulfide	10.2		bv	10.0		102	70-130			
trans-1,2-Dichloroethene	10.5		bv	10.0		105	70-130			
1,1-Dichloroethane	10.9		ıbv	10.0		109	70-130			
Methyl tert-butyl ether	9.44		ıbv	10.0		94	70-130			
Isopropyl alcohol	10.6		ıbv	10.0		106	70-130			
2-Butanone (MEK)	9.60		bv	10.0		96	70-130			
cis-1,2-Dichloroethene	9.83		bv	10.0		98	70-130			
Hexane	10.3		bv	10.0		103	70-130			
Ethyl acetate	10.8		bv	10.0		108	70-130			
Chloroform	10.0		bv	10.0		100	70-130			
Tetrahydrofuran	10.1		bv	10.0		101	70-130			
1,2-Dichloroethane	9.66		bv	10.0		97	70-130			
1,1,1-Trichloroethane	9.47		bv	10.0		95	70-130			
Benzene	10.6	• • •	bv	10.0		106	70-130			
Carbon tetrachloride	9.00		bv	10.0		90	70-130			
Cyclohexane	9.54		bv	0.01		95	70-130			
1,2-Dichloropropane	10.8		bv	10.0		108	70-130			
Bromodichloromethane	10.8		bv	10.0		108	70-130			
Trichloroethene	11.1		bv	10.0		111	70-130			
n-Heptane	10,7		bv	10.0		107	70-130			
4-Methyl-2-pentanone (MIBK)	11.2		bv	10.0		112	70-130			
cis-1,3-Dichloropropene	9.77		bv	10.0		98	70-130			
trans-1,3-Dichloropropene	10.5		bv	10.0		105	70-130			
1,1,2-Trichloroethane	11.0		bv	10.0		110	70-130			
Toluene	11.0		bv	10.0		110	70-130			
2-Hexanone (MBK)	12.2		bv	10.0		122	70-130			
Dibromochloromethane	15.6	pp		10.0		156	70-130			QC
1,2-Dibromoethane (EDB)	10.2	pp		10.0		102	70-130			•
Tetrachloroethene	8.59	PP PP		10.0		86	70-130			
Chlorobenzene	8.83	pp		10.0		88	70-130			
Ethylbenzene	9.29		bv	10.0		93	70-130			
m,p-Xylene	18.1	PP PP		20.0		90	70-130			
Bromoform	7.84	pp pp		10.0		78	70-130			
Styrene	8.52	pp pp		10.0		76 85	70-130			
o-Xylene	9.05					83 90	70-130 70-130			
1,1,2,2-Tetrachloroethane	10.2	pp pp		10.0 10.0		102	70-130 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 &	k 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	0.01		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	ррбу	10.0		95	75-125			
Duplicate (7121541-DUP1)	Sour	re: SA72512-01	Prenared &	2 Analyzed:	20-Dec-07				
Propene	BRL	0.500 ppbv	. repared to	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			ı	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	3
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)	Sou	rce: SA7251	2-01	Prepared &	Analyzed:	20-Dec-07				
Tetrachloroethene	0.850	0.500		• •	0.800			6	30	
Chlorobenzene	BRL	0.500	ppbv		BRL				30	
Ethylbenzene	0.550	0.500 1			0.530			4	30	
m,p-Xylene	1.65	1.00 j			1.58			4	30	
Bromoform	BRL	0.500	-		BRL				30	
Styrene	BRL	0.500	•		BRL				30	
o-Xylene	0.620	0.500			0.590			5	30	
1,1,2,2-Tetrachloroethane	BRL	0.500			BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500			BRL				30	
4-Ethyltoluene	. BRL	0.500			BRL				30	
1,2,4-Trimethylbenzene	0.420	0.500			0.400		•	5	30	J
1,3-Dichlorobenzene	BRL	0.500			BRL			•	30	
	BRL	0.500			BRL				30	
Benzyl chloride	BRL	0.500 [-		BRL				30	
1,4-Dichlorobenzene		_			BRL				30	
1,2-Dichlorobenzene	BRL	0.500							30	
1,2,4-Trichlorobenzene	BRL	0.500 1	-		BRL					
Hexachlorobutadiene	BRL	0.500 1	ppbv		BRL				30	
Surrogate: 4-Bromofluorobenzene	8.87	1	ppbv	10.0		89	75-125			
Batch 7121749 - General Air Prep										
Blank (7121749-BLK1)				Prepared &	k Analyzed:	24-Dec-07				
Propene	BRL	0.500	ppbv							
Dichlorodifluoromethane (Freon12)	BRL	0.500	ppbv							
Chloromethane	BRL	0.500								
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500	ppbv							
Vinyl chloride	BRL	0.500								
1,3-Butadiene	BRL	0.500								
Bromomethane	BRL	0.500								
Chloroethane	BRL .	0.500		•						
Acetone	BRL	0.500								
Trichlorofluoromethane (Freon 11)	BRL	0.500								
Ethanol	BRL	0.500								
1,1-Dichloroethene	BRL	0.500								
	BRL	0.500 [
Methylene chloride										
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500	• •							
Carbon disulfide	BRL	0.500 1								
trans-1,2-Dichloroethene	BRL	0.500 1		*						
1,1-Dichloroethane	BRL	0.500								
Methyl tert-butyl ether	BRL	0.500 1								
Isopropyl alcohol	BRL	0.500 1								
2-Butanone (MEK)	BRL	0.500 1								
cis-1,2-Dichloroethene	BRL	0.500 1								
Hexane	BRL	0.500 1	ppbv							
Ethyl acetate	BRL	0.500 1			,	•				•
Chloroform	BRL	0.500 1								
Tetrahydrofuran	BRL	0.500 1	ppbv							
	BRL	0.500 1	ppbv		*				. •	
1,2-Dichloroethane										
	BRL	0.500 [ppbv							
1,2-Dichloroethane	BRL BRL	0.500 ₁								
1,2-Dichloroethane 1,1,1-Trichloroethane		0.500	ppbv	<i>:</i>						
1,2-Dichloroethane 1,1,1-Trichloroethane Benzene Carbon tetrachloride	BRL BRL	0.500 ₁	ppbv ppbv	,						
1,2-Dichloroethane 1,1,1-Trichloroethane Benzene Carbon tetrachloride Cyclohexane	BRL BRL BRL	0.500 ₁ 0.500 ₁ 0.500 ₁	ppbv ppbv ppbv	· · · · · .						
1,2-Dichloroethane 1,1,1-Trichloroethane Benzene Carbon tetrachloride	BRL BRL	0.500 ₁	ppbv ppbv ppbv 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 &	k 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								
1,2,4-Trimethylbenzene	BRL	0.500	ppbv							
1,3-Dichlorobenzene	BRL	0.500								
Benzyl chloride	BRL	0.500								
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 &	k 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			
• • • • • • • • • • • • • • • • • • • •	11.0		ppbv	10.0		110	70-130			
2-Butanone (MEK)	11.0		• •							
, ,			ppbv	10.0		114	70-130			
cis-1,2-Dichloroethene	11.4	i	ppbv ppbv	10.0 10.0		114 117	70-130 70-130			
2-Butanone (MEK) cis-1,2-Dichloroethene Hexane Ethyl acetate	11.4 11.7	1	ppbv	10.0		117	70-130			
cis-1,2-Dichloroethene	11.4	 	• •							

Analyte(s)	Result	*RDL Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Fla
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			QC
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			
n,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)	Sour	ce: 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
,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500 ppbv		BRL			•	30	
/inyl chloride	BRL	0.500 ppbv		BRL				30	
,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	
richlorofluoromethane (Freon 11)	BRL	0.500 ppbv		BRL			•	30	
Ethanol	8.41	0.500 ppbv		8.81			5	30	
	BRL						,	30	
,I-Dichloroethene		0.500 ppbv		BRL					
Methylene chloride	BRL	0.500 ppbv		BRL				30 30	
,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500 ppbv		BRL				30	
Carbon disulfide	BRL	0.500 ppbv		BRL				30	
rans-1,2-Dichloroethene	BRL	0.500 ppbv		BRL				30	
1,1-Dichloroethane	BRL	0.500 ppbv		BRL				30	

BRL 1.46 BRL BRL BRL	0.500 p 0.500 p 0.500 p	pbv	Prepared &						
BRL 1.46 BRL BRL BRL	0.500 p 0.500 p 0.500 p 0.500 p	pbv	Prepared &						
1.46 BRL BRL BRL 3.300	0.500 p 0.500 p 0.500 p			Prepared & Analyzed: 24-Dec-07					
BRL BRL BRL .300	0.500 p 0.500 p 0.500 p			BRL				30	
BRL BRL .300	0.500 p			1.49			2	30	
BRL .300	•	pbv		BRL				30	
.300	0.500	opbv		BRL				30	
	0.500 p	opbv		BRL				30	
nnı	0.500 p	opbv		0.310			3	30	J
BRL	0.500 p	opbv		BRL				30	
BRL	0.500 p	opbv		BRL				30	
BRL	0.500 p	opbv		BRL				30	
BRL	0.500 p	opbv		BRL				30	
.310	0.500 г	opbv		0.320			3	30	J
BRL	0.500 p	opbv		BRL				30	
BRL	0.500 г	opbv		BRL		_		30	
BRL	0.500 р	opbv		BRL	•			30	
BRL	0.500 p	opbv		BRL				30	
BRL	0.500 p	opbv		BRL				30	
BRL	0.500 p	pbv		BRL				30	
BRL	0.500 p	pbv		BRL				30	
BRL	0.500 p	pbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
.420	0.500 բ	ppbv		0.430			2	30	J
BRL	0.500 p	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
BRL	0.500 բ	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
BRL	1.00 g	ppbv		BRL				30	
BRL	0.500 g	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL				30	
BRL	0.500 p	ppbv		BRL					
BRL	0.500 p	ppbv		BRL					
BRL	0.500 p	ppbv		BRL					
BRL	-	-		BRL					
				BRL					
				BRL				30	
	•	•							
	-	-							
			*	BRL					
	-	-							
		•		BRL		75 135			
8.97	Ī	ppbv	10.0		90	/3-125			
DD1	0.500		Prepared &	Analyzed:	21-Dec-07				
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	BRL BRL BRL BRL BRL BRL BRL BRL BRL BRL	BRL 0.500 BRL 0.500	BRL 0.500 ppbv BRL 0.500 ppbv	BRL 0.500 ppbv BRL 0.500 ppbv	BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL 8.97 Prepared & Analyzed: BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv	BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL 8.97 ppbv 10.0 90 Prepared & Analyzed: 21-Dec-07 BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv	BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL 8.97 Prepared & Analyzed: 21-Dec-07 BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv	BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL BRL 0.500 ppbv BRL 8.97 ppbv 10.0 90 75-125 Prepared & Analyzed: 21-Dec-07 BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv	BRL 0.500 ppbv BRL 30 BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv BRL 0.500 ppbv 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		ppbv							
Ethanol	BRL		ppbv							
1.1-Dichloroethene	BRL		ppbv							
Methylene chloride	BRL		ppbv							
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL		ppbv							
Carbon disulfide	BRL		ppbv							
trans-1,2-Dichloroethene	BRL		ppbv							
1,1-Dichloroethane	BRL	0.500	ppbv							
Methyl tert-butyl ether	BRL		ppbv							
Isopropyl alcohol	BRL		ppbv							
2-Butanone (MEK)	BRL	0.500	ppbv							
cis-1,2-Dichloroethene	BRL		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		ppbv							
1,1,1-Trichloroethane	BRL	0.500	ppbv							
Benzene	BRL		ppbv							
Carbon tetrachloride	BRL		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								
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		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								
1,2,4-Trimethylbenzene	BRL	0.500								
1,3-Dichlorobenzene	. BRL	0.500	ppbv							
Benzyl chloride	BRL	0.500								
1,4-Dichlorobenzene	BRL	0.500								
1,2-Dichlorobenzene	BRL	0.500								
1,2,4-Trichlorobenzene	BRL	0.500	ppbv							
Hexachlorobutadiene	BRL	0.500	ppbv							
Surrogate: 4-Bromofluorobenzene	8.94	- ,	ppbv	10.0		89	75-125			

Air Quality Analyses - Quality Control

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 &	k Analyzed:	21-Dec-07				
Propene	9.81	ppbv	10.0	•	98	70-130			
Dichlorodifluoromethane (Freon 12)	9.04	ppbv	10.0		90	70-130			
Chloromethane	12.5	ppbv	0.01		125	70-130			
1,2-Dichlorotetrafluoroethane (Freon 114)	11.5	ppbv	10.0		115	70-130			
Vinyl chloride	11.0	ppbv	0.01		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			
Frichlorofluoromethane (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		10.0		99	70-130			
Methylene chloride	10,5	ppbv	10.0		105	70-130 70-130			
1,1,2-Trichlorotrifluoroethane (Freon 113)	10.3	ppbv	10.0		103	70-130 70-130			
Carbon disulfide		ppbv			102				
	10.4	ppbv	10.0			70-130 70-130			
rans-1,2-Dichloroethene	11.1	ppbv	10.0		111	70-130			
,1-Dichloroethane	11.2	ppbv	10.0		112	70-130			
Methyl tert-butyl ether	9.82	ppbv	10.0		98	70-130			
sopropyl alcohol	10.8	ppbv	10.0		108	70-130			
2-Butanone (MEK)	9.65	ppbv	10.0		96	70-130			
sis-1,2-Dichloroethene	10.1	ppbv	10.0		101	70-130			
lexane	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			
l'etrahydrofuran	10.5	ppbv	10.0		105	70-130			
,2-Dichloroethane	10.0	ppbv	10.0		100	70-130			
,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			
,2-Dichloropropane	11.0	ppbv	10.0		110	70-130			
Bromodichloromethane	11.1	ppbv	10.0		111	70-130			
Frichloroethene	11.6	ppbv	10.0		116	70-130			
-Heptane	10.9	ppbv	10.0		109	70-130			
-Methyl-2-pentanone (MIBK)	11.4	ppbv	10.0		114	70-130			
is-1,3-Dichloropropene	9.99	ppbv	10.0		100	70-130			
rans-1,3-Dichloropropene	10.8		10.0		108	70-130			
• •		ppbv							
,1,2-Trichloroethane	11.3	ppbv	10.0		113	70-130			
Toluene (ALPAS)	11,4	ppbv	10.0		114	70-130			
-Hexanone (MBK)	12.3	ppbv	0.01		123	70-130			
Dibromochloromethane	16.3	ppbv	10.0		163	70-130			QC:
,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			
n,p-Xylene	19.0	ppby	20.0		95	70-130			
Bromoform	8.29	ppbv	10.0		83	70-130			
ityrene	8.81	ppbv	10.0		88	70-130			
-Xylene	9.61	ppbv	10.0		96	70-130			
,1,2,2-Tetrachloroethane	10.7	ppbv	10.0		107	70-130			
,3,5-Trimethylbenzene	9.22	ppbv	10,0		92	70-130			
-Ethyltoluene	9.03	ppbv	10.0		90	70-130			
,2,4-Trimethylbenzene	8.78	ppbv	10.0		88	70-130			
, ,,		PP".							

Air Quality Analyses - Quality Control

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	Ţ	ppbv	10.0		99	70-130			
1,2,4-Trichlorobenzene	7.89	ı	ppbv	10.0		79	70-130			
Hexachlorobutadiene	7.01	,	ppbv	10.0		70	70-130			
Surrogate: 4-Bromofluorobenzene	9.51	ſ	ppbv	10.0		95	75-125			
Duplicate (7121849-DUPI)	Sour	rce: SA7248.	3-01	Prepared &	Analyzed:	21-Dec-07				
Propene	BRL	0.500 p	ppbv		BRL				30	
Dichlorodifluoromethane (Freon12)	0.480	0.500 J	pphv		0.440			9	30	J
Chloromethane	BRL	0.500 p	ppbv		BRL				30	
1,2-Dichlorotetrafluoroethane (Freon 114)	BRL	0.500 p	pbv		BRL				30	
Vinyl chloride	BRL	0.500 p	ppbv		BRL				30	
1,3-Butadiene	BRL	0.500 p	pbv		BRL				30	
Bromomethane	BRL	0.500 p	opbv		BRL				30	
Chloroethane	BRL	0.500 p	opbv		BRL				30	
Acetone	BRL	0.500 p	opbv		BRL				30	
Trichlorofluoromethane (Freon 11)	BRL	0.500 p	opbv		BRL				30	
Ethanol	2.66	0.500 p	opbv		2.45			8	30	
1,1-Dichloroethene	BRL	0.500 p	opbv		BRL				30	
Methylene chloride	BRL	0.500 p	pbv		BRL				30	
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL	0.500 p	opbv		BRL				30	
Carbon disulfide	24.2	0.500 p	pbv		25.5			5	30	
trans-1,2-Dichloroethene	BRL	0.500 p	pbv		BRL				30	
1,1-Dichloroethane	0.490	0.500 p	pbv		0.450			9	30	J
Methyl tert-butyl ether	BRL	0.500 p	pbv		BRL				30	
Isopropyl alcohol	0.700	0.500 p	pbv		0.610			14	30	
2-Butanone (MEK)	BRL	0.500 p	pbv		BRL				30	
cis-1,2-Dichloroethene	BRL	0.500 p	pbv		BRL				30	
Hexane	3.96	0.500 p	pbv		3.85			3	30	
Ethyl acetate	BRL	0.500 p	pbv		BRL				30	
Chloroform	BRL	0.500 p	pbv		BRL				30	
Tetrahydrofuran	BRL	0.500 p	pbv		BRL				30	
1,2-Dichloroethane	BRL	0.500 p	pbv		BRL				30	
1,1,1-Trichloroethane	12.1	0.500 p	pbv		11.8			3	30	
Benzene	3.83	0.500 p	pbv		3.74			2	30	
Carbon tetrachloride	BRL	0.500 p			BRL				30	
Cyclohexane	25.4	0.500 p			25.4			0.2	30	
1,2-Dichloropropane	BRL	0.500 p			BRL				30	
Bromodichloromethane	0.470	0.500 p			0.450			4	30	J
Trichloroethene	97.9	0.500 p	-		97.8			0.08	30	
n-Heptane	1.33	0.500 p			1.27			5	30	
4-Methyl-2-pentanone (MIBK)	BRL	0.500 p	-		1.80				30	
cis-1,3-Dichloropropene	BRL	0.500 p	-		BRL				30	
trans-1,3-Dichloropropene	BRL	0.500 p	•		BRL				30	
1,1,2-Trichloroethane	BRL	0.500 p			BRL				30	
Toluene	6.40	0.500 p	-		6.35			0.8	30	
2-Hexanone (MBK)	BRL	0.500 p	-		BRL				30	
Dibromochloromethane	BRL	0.500 p	-		BRL				30	
1,2-Dibromoethane (EDB)	BRL	0.500 р	-		BRL				30	
Tetrachloroethene	12.5	0.500 p	-		12.5			0.4	30	
Chlorobenzene	BRL	0.500 p	-		BRL				30	
Ethylbenzene	0.370	0.500 p			0.340		•	8	30	J
m,p-Xylene	0.960	1.00 p	-		0.870			10	30	j

Air Quality Analyses - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7121849 - General Air Prep		<u>-</u>				_		,		
Duplicate (7121849-DUP1)	Soui	rce: SA72483-	01	Prepared &	: Analyzed:	21-Dec-07				
Bromoform	BRL	0.500 ppt	ov		BRL				30	
Styrene	BRL	0.500 ppt	ov		BRL				30	
o-Xylene	0.410	0.500 ppt	ov		0.380			8	30	J
1,1,2,2-Tetrachioroethane	BRL	0.500 ppt	ov		BRL				30	
1,3,5-Trimethylbenzene	BRL	0.500 ppt	ov		BRL				30	
4-Ethyltoluene	BRL	0.500 ppt	ov		BRL				30	
1,2,4-Trimethylbenzene	BRL	0.500 ppt	ov		BRL				30	
1,3-Dichlorobenzene	BRL	0.500 ppt	ov		BRL				30	
Benzyl chloride	BRL	0.500 ppt	ov		BRL				30	
1,4-Dichlorobenzene	BRL	0.500 ppt	ov		BRL				30	
1,2-Dichlorobenzene	BRL	0.500 ppt	ov		BRL				30	
1,2,4-Trichlorobenzene	BRL	0.500 ppt	ov		BRL				30	
Hexachlorobutadiene	BRL	0.500 ppt	ov		BRL				30	
Surrogate: 4-Bromofluorobenzene	9.93	ppt	ov	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.

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

E

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.

<u>Laboratory Control Sample (LCS)</u>: 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.

<u>Matrix Spike</u>: 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.

<u>Surrogate</u>: 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



CHAIN OF CUSTODY RECORD

Page _ 1 _ of _ Z_

Special Handling:

Distandard 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

HANDAL TECHNO	LOGY									-						nstructed.	
Report To: ERM			Invoic	e To:		<u></u>						Project No.:		<u> </u>	<u>>7049</u>	មេ	
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Project Mgr.: Jon Fo						448			N:			- 		····			
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CHAIN OF CUSTODY RECORD

Page 2 of 2

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 Samples disposed of after 60 days unless otherwise instructed.

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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



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.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

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:

[&]quot;ND" = analyzed for but not detected.

[&]quot;E" = Result has been estimated, calibration limit exceeded.

[&]quot;D" = Duplicate results outside QC limits. May indicate a non-homogenous matrix.

[&]quot;M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.

[&]quot;B" = Method blank contained trace levels of analyte. Refer to included method blank report.



Volatile Analysis Report for Non-potable Water

Client: ERM

Client Job Site:

Client Job Number:

Greif Tonawanda

Lab Project Number: 09-0911

Lab Sample Number: 3328

N/A

Date Sampled:

03/12/2009

Field Location: Field ID Number:

Greif-TW-02 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 Hoogesteger Aechylical Director

PARADIGM ENVIRONMENTAL

CHAIN OF CUSTODY

ENVIRONMENTAL SERVICES, INC.

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

Greif Townwarda

TIME

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PROJECT NAME/SITE NAME:

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LAB USE ONLY BELOWTHIS LINE

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

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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:

<u>Sample ID</u>		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/m³ while the required minimum RL for all requested compounds for samples denoted with an "SSV" was 0.25 ug/m³. 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.

And Comen

Andrew J. Coenen **ERM QA Officer**

Signed:

Dated: 27 March 2008

Greif-OA-01

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Project:

Greif - Trinawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-13

File ID:

B22051.D

Sampled:

<u>Air</u>

12/20/07 08:50

Analyzed:

12/21/07 02:28

% Solids:

12/12/07 11:00

Prepared: Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

0801024

Air2

<u>7121541</u>

Sequence:

Environmental Resources Management - Dewitt, NY

S801746

Calibration:

Instrument:

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	Ū
67-64-1	Aceione	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	I	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	Ū
79-00-5	1,1,2-Trichloroethane	1	0.150	0.8	ប
108-88-3	Tolucne	L	1.35	5.1	
127-18-4	Tetrachloroethene	1	0.167	1.1	J
100-41-4	Ethylbenzene	1	0.196	0.8	<u> </u>
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	l	0.228	1.1	

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QCLIMITS	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

Greif-SV-01

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Trinawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

<u>Air</u>

Laboratory ID:

SA72249-14

File ID:

B22052,D

Sampled:

12/20/07 08:50

Analyzed:

12/21/07 03:12

% Solids:

12/12/07 13:40

Prepared: Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

7121541

Sequence:

S801746

Calibration:

0801024

Instrument:

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	5	0.690	1.8	UI
75-00-3	Chloroethane	5	0.790	2.1	UD
67-64-1	Acetone	5	1.11	2.6	υp
75-35-4	1,1-Dichloroethene	5	0.620	2.5	ហ
75-09-2	Methylene chloride	5	0.550	1.9	ហ
156-60-5	trans-1,2-Dichloroethene	5	0.350	1.4	U
75-34-3	1,1-Dichloroethane	5	0.830	3.4	ហា
78-93-3	2-Butanone (MEK)	5	0.525	1.5	ហ
156-59-2	cis-1,2-Dichloroethene	5	0.605	2.4	ហ្វ
67-66-3	Chloroform	5	1.10	5.4	UU
107-06-2	1,2-Dichloroethane	5	1.24	5.0	UI
71-55-6	1,1,1-Trichloroethane	5	5.60	30.6	П
7143-2	Benzene	5	0.620	2.0	Uþ
56-23-5	Carbon tetrachloride	5	1.10	6.9	Ú
79-01-6	Trichloroethene	5	2.60	14.0	D
108-10-1	4-Methyl-2-pentanone (MIBK)	5	1.70	7.0	υþ
79-00-5	1,1,2-Trichloroethane	5	0,800	4.4	மு
108-88-3	Toluene	5	2.25	8.5	ло
127-18-4	Tetrachloroethene	5	0.715	4.8	Uþ
100-41-4	Ethylbenzene	5	0.705	3.1	ហ
1330-20-7	m,p-Xylene	5	1.23	5.3	UD
95-47-6	o-Xylene	5	0.580	2.5	បារ
79-34-5	1,1,2,2-Tetrachloroethane	5	1.26	8.7	ហា
95-63-6	1,2,4-Trimethylbenzene	5	0:720	3.5	ហ

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITIS:	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

Greif-SV-02

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-15

File ID:

B22069.D

Sampled:

<u>Air</u>

12/12/07 13:50

Prepared:

12/21/07 07:14

Analyzed: Initial/Final: 12/21/07 21:32 200 ml / 200 ml

% Solids:

Preparation:

General Air Prep

0801024

Air2 Instrument:

S800622 Batch: 7121849 Calibration: Sequence: DILUTION CONC. (ppbv) CONC. (ug/m3) Q CAS NO. COMPOUND U 0.138 0.4 1 75-01-4 Vinyl chloride 1 0.158 0.4 Ú Chloroethane 75-00-3 U 1 0.222 0.5 Acetone 67-64-1 U 0.5 1,1-Dichloroethene Ĺ 0.124 75-35-4 U L 0.110 0.4 Methylene chloride 75-09-2 0.3 U 0.0699 156-60-5 trans-1,2-Dichloroethene Į U I 0.166 0.7 1,1-Dichloroethane 75-34-3. 0.3 U 1 0.105 78-93-3 2-Butanone (MEK) 1 0.121 0.5 U cis-1,2-Dichloroethene 156-59-2 U 1.1 1. 0.221 Chloroform 67-66-3 U 1.0 107-06-2 1,2-Dichloroethane 1 0.249 I 0.130 0.7 U 71-55-6 1,1,1-Trichloroethane U 0.124 0.4 1 71-43-2 Benzene 1.4 U Carbon tetrachloride ١ 0.221 56-23-5 ı 0.153 0.8 U Trichloroethene 79-01-6 U 0.339 1.4 108-10-1 4-Methyl-2-pentanone (MIBK) L 1,1,2-Trichloroethane ì 0.160 0.9 U 79-00-5 U 0.5 0.122 Toluene ı 108-88-3 U 1.0 i. 0.143 127-18-4 Tetrachloroethene U 1 0.141 0.6 100-41-4 Ethylbenzene **T.1** U ı 0.246 m,p-Xylene 1330-20-7 U 0.116 0.5 I 95-47-6 o-Xylene U ı 0.253 1.7 79-34-5 1,1,2,2-Tetrachloroethane 0.7 U 1,2,4-Trimethylbenzene i 0.144 95-63-6

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q [.]
4-Bromofluorobenzene	10.0	8.43	84	75 - 125	
INTERNAL STANDARD	AREA	рт	REE AREA	REFRT	0

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

Greif-SV-03

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-16

File ID:

B22070.D

Sampled:

<u>Air</u>

12/21/07 22:20

12/12/07 14:00

Prepared: Preparation: 12/21/07 07:14 General Air Prep Analyzed:

200 ml / 200 ml

% Solids: Batch:

7121849

Sequence:

S800622

Calibration:

Initial/Final: 0801024

Instrument:

	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	ı	0.150	0.4	ប រ
75-00-3	Chloroethane	1	0.150	0.4	U 🕽
67-64-1	Acetone	1	1.40	3.3	J
75-35-4	1,1-Dichloroethene	 1	0.150	0.6	υ 3
75-09-2	Methylene chloride	1	0.950	3.3	ゴ
156-60-5	trans-1,2-Dichloroethene	1	0.150	0.6	ΰŢ
75-34-3	1,1-Dichloroethane	 1	0.150	0.6	UJ
78-93-3	2-Butanone (MEK)	l	0.805	2.4	
156-59-2	cis-1,2-Dichloroethene	1	0.150	0.6	'U 3 T
67-66-3	Chloroform	 1	0.150	0.7	U
107-06-2	1,2-Dichtoroethane	 1	0.150	0.6	·U
71-55-6	1,1,1-Trichloroethane	1	0.155	0.8	5
71-43-2	Benzene	 1	0.680	2.2	丁 丁
56-23-5	Carbon tetrachloride	ı	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	UJ
79-00-5	1,1,2-Trichloroethane	 1	0.150	0.8	U J
108-88-3	Toluene	 1	0.450	1.7	.
127-18-4	Tetrachloroethene	1	0.150	1.0	Ŭ 3
100-41-4	Ethylbenzene	1	0.185	0.8	J
1330-20-7	m,p-Xylene	 ı	0.486	2.1	チ
95-47-6	o-Xylene	1	0.191	0.8	<u>J</u>
79-34-5	1,1,2,2-Tetrachloroethane	ı	0.150	1.0	ひず
95-63-6	1,2,4-Trimethylbenzene	1	0.258	1.3	

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

Greif-DUP-3

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project;

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-18

File ID:

B22072.D

Sampled:

<u>Air</u>

Prepared:

12/21/07 07:14

Analyzed:

12/21/07 23:55

% Solids:

12/12/07 00:00

Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

7121849

Sequence:

S800622

Calibration:

0801024

Instrument:

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	U J .
75-00-3	Chloroethane	1	0.158	0.4	U
67-64-1	Acetone	1	0.222	0.5	Ū
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	ָּט
78-93-3	2-Butanone (MEK)	1	0.105	0.3	บ
156-59-2	cis-1,2-Dichloroethene	1	0.121	0.5	ប
67-66-3	Chloroform	1	0.221	1.1	ប
107-06-2	1,2-Dichloroethane	1	0.249	1.0	U
71-35-6	1,1,1-Trichloroethane	1	0.130	0.7	บ
71-43-2	Benzene	1	0.124	0.4	บ
56-23-5	Carbon tetrachloride	1	0.221	1.4	บ
79-01-6	Trichloroethene	1	0.153	0.8	Ŭ
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	ับ
108-88-3	Toluene	1	0.122	0.5	บ
127-18-4	Tetrachloroethene	1	0.143	1.0	υ
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	บ
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	υ 🗸

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

Greif-SV-04

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

Environmental Resources Management - Dewitt, NY

SDG:

72249

Client:

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Air

Laboratory ID:

SA72249-17

File ID:

B22071.D

Sampled:

12/21/07 23:07

12/12/07 14:15

Prepared: Preparation:

12/21/07 07:14 General Air Prep Analyzed: Initial/Final:

200 ml / 200 ml

% Solids: Batch:

7121849

Sequence:

\$800622

Calibration:

0801024

Instrument:

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	1	0.138	0.4	υ
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	บ
75-34-3	1,1-Dichloroethane	1	0.166	0.7	U
78-93-3	2-Butanone (MEK)	ı	0.830	2.4	
156-59-2	cis-1,2-Dichloroethene	t	0.121	0.5	υ
67-66-3	Chloroform	1	0.221	1.1	บ
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	Bénzené	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	τ
79-00-5	1,1,2-Trichloroethane	1	0.160	0.9	U
108-88-3	Tolucne	1	1.56	5.9	
127-18-4	Tetrachloroethene	1	0.143	1.0	บ
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	บ
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	บ

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	
I,4-Difluorobenzene	9009810	11.78	8107328	11.79	
Chlorobenzene-d5	4074778	17.38	3858679	17.39	

^{*} Values outside of QC limits

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tanawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-11

File ID:

B22049.D

Sampled:

<u>Air</u>

12/12/07 10:55

· Prepared:

12/20/07 08:50

Analyzed:

12/21/07 01:00 200 ml / 200 ml

% Solids:

Preparation:

General Air Prep

Initial/Final:

Batch:

7121541

Sequence:

S801746

Calibration:

0801024

Instrument:

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	В
75-35-4	1,1-Dichloroethene	2	0.248	1.0	UD
75-09-2	Methylene chloride	2	0.220	0.8	ហ្វ
156-60-5	trans-1,2-Dichloroethene	2	0.140	0.6	ហ
75-34-3	1,1-Dichloroethane	2	0.332	1.3	ហ
78-93-3	2-Butanone (MEK)	2	1.66	4.9	T.
156-59-2	cis-1,2-Dichloroethene	2	0.242	1.0	υb
67-66-3	Chloroform	2	0.442	2.2	υp
107-06-2	1,2-Dichloroethane	2	0.498	2.0	ហ
71-55-6	1,1,1-Trichloroethane	2	4.96	27.1	
71-43-2	Benzene	2	0.248	0.8	U D
56-23-5	Carbon tetrachloride	2	0.442	2.8	UT
79-01-6	Trichloroethene	2	3.80	20.4	T)
108-10-1	4-Methyl-2-pentanone (MIBK)	2	0.678	2.8	סט
79-00-5	1,1,2-Trichloroethane	2	0.320	1.7	ហ
108-88-3	Toluene	2	1.68	6.3	Ţ
127-18-4	Tetrachloroethene	2	0.286	1.9	סט
100-41-4	Ethylbenzene	2	0.282	1.2	บอ
1330-20-7	m,p-Xylene	2	1.08	4.7	n
95-47-6	o-Xylene	2	0.232	1.0	ប្រ
79-34-5	1,1,2,2-Tetrachloroethane	2	0.506	3:5	υþ
95-63-6	1,2,4-Trimethylbenzene	2	0.288	1.4	បា

SYSTEM MONITORING COMPOUND	ADDED (ppov)	CONC (ppov)	% REC	QCLIMITS	Ų
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

Greif-SV-06

Laboratory:

Environmental Resources Management - Dewitt, NY

SDG:

72249

Client:

Spectrum Analytical, Inc. - Agawam, MA

Project:

Greif - Tonawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-12

File TD:

B22050,D

Sampled:

<u>Air</u>

12/12/07 11:05

Prepared:

12/20/07 08:50

Analyzed:

12/21/07 01:44 200 ml / 200 ml

17.38

3258375

% Solids:

Preparation:

General Air Prep

Initial/Final: 0801024

<u>Air2</u> Instrument:

S801746 .<u>7121541</u> Batch: Sequence: Calibration:

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	2	0.276	0.7	புற
75-00-3	Chloroethane	·2	0.316	0.8	ហ្វា
67-64-1	Acetone	2	26.6	63.2	Ţ
75-35-4	1,1-Dichloroethene	2	0:680	2.7	лþ
75-09-2	Methylene chloride	2	0.220	0.8	υþ
156-60-5	trans-1,2-Dichloroethene	2	0.140	0.6	UD
75-34-3	1,1-Dichloroethane	2	1.12	4.5.	ц
78-93-3	2-Butanone (MEK)	2	1.50	4.4.	Ţ.
156-59-2	cis-1,2-Dichloroethene	2	0.242	1.0	υ p
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	Ţ
71-43-2	Benzene	2	0.640	2.0	д
56-23-5	Carbon tetrachloride	2	0.442	2.8	υþ
79-01-6	Trichloroethene	2	2.50	13.4	I
108-10-1	4-Methyl-2-pentanone (MIBK)	2	0.678	2.8	υ b
79-00-5	T,1,2-Trichloroethane	2	0.320	1.7	បារ
108-88-3	Toluene	2	1.82	6:8	Ü
127-18-4	Tetrachloroethene	2	0.286	19	Ü
100-41-4	Ethylbenzene	·2	0.282	1.2	UD
1330-20-7	m,p-Xylene	.2	0.740	3.2	л
95-47-6	o-Xylene	2	0.232	1.0	υ p
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	RŤ	REF AREA	REF RT	Q.
Bromochloromethane	1314430	9.55	1431251	9.55	
1.4-Difluorobenzene	6248283	11.78	6818820	11.79	

17.38

2932945

Chlorobenzené-d5

^{*} Values outside of QC limits

Greif-IA-07

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tinawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-01

File ID:

B22041,D

Sampled:

<u>Air</u>

12/12/07 08:48

Prepared:

12/20/07 08:50 General Air Prep Analyzed: Initial/Final: 12/20/07 19:04 200 ml / 200 ml

% Solids: Batch:

7121541

Preparation: Sequence:

S801746

Calibration:

0801024

Instrument:

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	ı	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	บ
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	Ŭ
75-34-3	1,1-Dichloroethane	1	0.166	0.7	Ŭ
78-93 <i>-</i> 3	2-Butanone (MEK)	i	0.105	0.3	υJ
156-59-2	cis-1,2-Dichloroethene	l l	0.121	0.5	บ
67-66-3	Chloroform	l	0.221	1.1	U
107-06-2	1,2-Dichloroethane		0.249	1.0	บ
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	υ
79-01-6	Trichloroethene	ı	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	l.	0.160	0.9	U
108-88-3	Toluene	l l	1.76	6.6	
127-18-4	Tetrachloroethene		0.143	1.0	U
100-41-4	Ethylbenzene	ı	0.141	0.6	υJ
1330-20-7	m,p-Xylene	1	0.670	2.9	J
95-47-6	o-Xylene	i	0.116	0.5	υJ
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

Greif-DUP-1

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tanawanda, NY

Project Number:

Received:

12/13/07 10:48

Matrix:

0070448

SA72249-10

File ID:

B22048.D

Sampled:

<u>Air</u>

Laboratory ID:

12/12/07 00:00

Prepared:

12/20/07 08:50 General Air Prep Analyzed: Initial/Final:

12/21/07 00:13 200 ml / 200 ml

% Solids: Batch:

7121541

Preparation:

Sequence:

S801746 Calibration:

0801024

Instrument:

CAS NO.	COMPOUND	DILUTION	CONC, (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	ı	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	-0.4	U
67-64-1	Acetone	l	6.34	15.1	
75-35-4	1,1-Dichloroethene	ı	0.124	0.5	ับ"
75-09-2	Methylene chloride	l	0.110	0.4	U
156-60-5	trans-1,2-Dichloroethene	1	0.0699	0.3	υ
75-34-3	1,1-Dichloroethane	1	0.166	0.7	ับ
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	ប
107-06-2	1,2-Dichloroethane	1	0.249	1.0	ប
71-55-6	1,1,1-Trichloroethane	1	6.60	36.0	
71-43-2	Benzene	ı	0.720	2,3	
56-23-5	Carbon tetrachloride	ĵ	0.221	1.4	ប
79-01-6	Trichloroethene	i	2.94	15.8	
108-10-1	4-Methyl-2-pentanone (MIBK)	I	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	ı	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	บ

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	13,00671	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

Greif-SSV-07

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

\$DG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-02

File ID:

B22026.D

Sampled:

<u>Air</u>

12/19/07 08:33

Analyzed:

12/20/07 01:33

% Solids:

12/12/07 09:38

Prepared:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

7121453

Preparation: Sequence:

S801745

Calibration:

0801024

Instrument:

		<u> </u>		· · · · · · · · · · · · · · · · · · ·	
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	UI
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	80 -6H0 23	372.133, 336: 4	- 9€ -
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	Ŋ
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	UIP
1330-20-7	m,p-Xylene	50.8	12.5	54.2	UD)
95-47-6	o-Xylene	50.8	5.89	25.5	Up
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	QCLIMITS	Q
4-Bromofluorobenzene	10,0	9.06	91	75 - 125	
INTERNAL STANDARĎ	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

Greif-SSV-07

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

Calibration:

12/13/07 10:48

Matrix:

Laboratory ID:

S801737

SA72249-02RE1

File ID:

B21992.D

Sampled:

<u>Air</u>

12/12/07 09:38

Prepared:

12/18/07 08:17

Analyzed:

12/18/07 17:36

% Solids: Batch:

7121342

Preparation:

Sequence:

General Air Prep

Initial/Final: 0801024

200 ml / 200 ml Instrument

CAS NO.	COMPOUND		DILUTION	CONC. (ppby)	CONC. (ug/m3)	.Q.
71-55-6	1,1,1-Trichloroethane		254	1-4380 →	-23,897.4	ø
SYSTEM MON	NITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorol	benzene	10.0	9.28	93	75 - 125	
INTERNAL ST	FANDARD	AREA	ŔT	REF AREA	REF RT	Q
Bromochlorom	ethane.	1561010	9,55	1442460	9.55	
1,4-Difluorober	nzene	7575852	11.78	7113840	. 1,1.79	
Chlorobenzene	-d5	3490523	17.38	3205009	17.39	

^{*} Values outside of QC limits

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Laboratory ID:

SA72249-03

File ID:

B22042.D

Sampled:

<u>Air</u>

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	UII
67-64-1	Acetone	10	5.90	14.0	ď
75-35-4	1,1-Dichloroethene	10	1.24	4.9	υψ
75-09-2	Methylene chloride	10	1.10	3.8	UD
156-60-5	trans-1,2-Dichloroethene	10	0.699	2.8	מט
75-34-3	1,1-Dichloroethane	10	1.66	6.7	UD
78-93-3	2-Butanone (MEK)	10	1.05	3.1	UI
156-59-2	cis-1,2-Dichloroethene	10	1.21	4.8	U
67-66-3	Chloroform	10	2.21	10.8	UD
107-06-2	1,2-Dichloroethane	10	2.49	10.i	U
71-55-6	1,1,1-Trichloroethane	10	3.40	18.6	118
71-43-2	Benzene	10	1.24	4.0	UD
56-23-5	Carbon tetrachloride	10	2.21	13.9	បា
79-01-6	Trichloroethene	10	1.53	8.2	UI
108-10-1	4-Methyl-2-pentanone (MIBK)	10	3.39	13.9	UI
79-00-5	1,1,2-Trichloroethane	10	1.60	8.7	ហ
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	UID
1330-20-7	m,p-Xylene	10	2.46	10.7	UD
95-47-6	o-Xylene	10	1.16	5.0	ŪΙ
79-34-5	1,1,2,2-Tetrachloroethane	10	2.53	17.4	UI
95-63-6	1,2,4-Trimethylbenzene	10	1.44	7.1	UI)

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QCLIMITS	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	

17.38

3258375

17.38

2951580

Chlorobenzene-d5

^{*} Values outside of QC limits

Greif-SSV-08

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tynawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Air

Laboratory ID:

SA72249-04

File ID:

B22043.D

Sampled:

Oπ

Prepared:

12/20/07 08:50

Analyzed:

12/20/07 20:34

% Solids:

12/12/07 08:50

Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

<u>7121541</u>

Sequence:

S801746

Calibration: 080

0801024

Instrument:

COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q.	
Vinyl chloride	1	0.150	0.4	U.J	•
Chloroethane	1	0.150	0.4_	U	
Acetone	1	6.43	15.3		
1,1-Dichloroethene	1	4.29	17.0		Ĺ
Methylene chloride	l.	0.720	2.5		
trans-1,2-Dichloroethene	l	0.150	0.6	ប	Ĺ.
1,1-Dichloroethane	1.	0.970	3.9		L
2-Butanone (MEK)	ı	0.750	2.2		Ĺ
cis-1,2-Dichloroethene	1	0.155	0.6		
Chloroform	1	0.150	0.7	U	Ĺ
1,2-Dichloroethane	1	0.150	0.6	U .	Ŀ
1,1,1-Trichloroethane	1	1.13	6.2		
Benzene	1	0.339	1.1		
Carbon tetrachloride	1	0,219	1.4		
Trichloroethene	1	0.650	3.5		·
4-Methyl-2-pentanone (MIBK)	1	0.150	0.6	บ	
1,1,2-Trichloroethane	1	0.150	0.8	U	
Toluenc	ı	1.37	5.2		
Tétrachloroethene	1	0.150	1.0	υ	
Ethylbenzene	1	0.150	0.7	υ	
m,p-Xylene	ı	0.330	1.4		
o-Xylene	1	0.150	0.7	υ	
1,1,2,2-Tetrachloroethane	1	0.150	1.0	U	
	Vinyl chloride Chloroethane Acetone 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Benzene Carbon tetrachloride Trichloroethene 4-Methyl-2-pentanone (MIBK) 1,1,2-Trichloroethane Toluenc Tetrachloroethene Ethylbenzene m,p-Xylene o-Xylene	Vinyl chloride 1 Chloroethane 1 Acetone 1 I,1-Dichloroethene 1 Methylene chloride 1 trans-1,2-Dichloroethene 1 1,1-Dichloroethane 1 2-Butanone (MEK) 1 cis-1,2-Dichloroethene 1 Chloroform 1 1,2-Dichloroethane 1 1,1,1-Trichloroethane 1 Benzene i Carbon tetrachloride 1 Trichloroethene 1 4-Methyl-2-pentanone (MIBK) 1 1,1,2-Trichloroethane 1 Toluenc 1 Tetrachloroethene 1 Ethylbenzene 1 m,p-Xylene i o-Xylene 1	Vinyl chloride 1 0.150 Chloroethane 1 0.150 Acctone 1 6.43 I,1-Dichloroethene 1 4.29 Methylene chloride 1 0.720 trans-1,2-Dichloroethene 1 0.150 I,1-Dichloroethane 1 0.970 2-Butanone (MEK) 1 0.750 cis-1,2-Dichloroethene 1 0.155 Chloroform 1 0.150 I,2-Dichloroethane 1 0.150 I,1,1-Trichloroethane 1 1.13 Benzene 1 0.339 Carbon ietrachloride 1 0.219 Trichloroethene 1 0.650 4-Methyl-2-pentanone (MIBK) 1 0.150 Toluenc 1 0.150 Totrachloroethene 1 0.150 Ethylbenzene 1 0.150 m,p-Xylene 1 0.150	Vinyl chloride 1 0.150 0.4 Chloroethane 1 0.150 0.4 Acetone 1 6.43 15.3 1,1-Dichloroethene 1 4.29 17.0 Methylene chloride 1 0.720 2.5 trans-1,2-Dichloroethene 1 0.150 0.6 1,1-Dichloroethane 1 0.970 3.9 2-Butanone (MEK) 1 0.750 2.2 cis-1,2-Dichloroethene 1 0.155 0.6 Chloroform 1 0.150 0.7 1,2-Dichloroethane 1 0.150 0.7 1,2-Dichloroethane 1 0.150 0.6 1,1,1-Trichloroethane 1 1.13 6.2 Benzene 1 0.339 1.1 Carbon tetrachloride 1 0.219 1.4 Trichloroethane 1 0.650 3.5 4-Methyl-2-pentanone (MIBK) 1 0.150 0.6 1,1,2-Trichloroethane	Vinyl chloride 1 0.150 0.4 U Tolloroethane Chloroethane 1 0.150 0.4 U Acctone 1 6.43 15.3 U I,1-Dichloroethene 1 4.29 17.0 U Methylene chloride 1 0.720 2.5 U trans-1,2-Dichloroethene 1 0.150 0.6 U 1,1-Dichloroethane 1 0.970 3.9 U 2-Butanone (MEK) 1 0.750 2.2 C <td< td=""></td<>

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

Greif-DUP-2

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

<u>72249</u>

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tanawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

Air

Laboratory ID:

SA72249-09

File ID:

B22027.D

Sampled:

Laboratory 10.

Analyzed:

12/20/07 02:18

% Solids:

12/12/07 00:00

Prepared:

12/19/07 08:33

Initial/Final:

200 ml / 200 ml

70 30Hus

Preparation:

General Air Prep

0801024

Instrument:

Batch:

7121453

Sequence:

S801745

Calibration:

11024 Instru

CÁS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	119	16.4	41.9	முத்
75-00-3	Chloroethane	119	18.8	49.6	បា
67-64-1	Acetone	119	295	701.0	T)
75-35-4	1,1-Dichloroethene	119	1670	6,625.4	Ī
75-09-2	Methylene chloride	119	13.1	45.5	ហ
156-60-5	trans-1,2-Dichloroethene	119	8,32	33.0	ហ
75-34-3	1,1-Dichloroethane	119	72 7	2,943.7	TØ
78-93-3	2-Butanone (MEK)	119	12.5	36.9	U
156-59-2	cis-1,2-Dichloroethene	119	131	519.4	Ū
67-66-3	Chloroform	119	26.3	128.0	υb
107-06-2	1,2-Dichloroethane	119	29.6	119.9	UI
71-55-6	1,1,1-Trichloroethane	119	2350	12,821.7	Ū
71-43-2	Benzene	119	14.8	47.2	υt
56-23-5	Carbon tetrachloride	119	26.3	165.4	UŢ
79-01-6	Trichloroethene	119	6050	32,514.1	Ιβ
108-10-1	4-Methyl-2-pentanone (MIBK)	119	40.3	165.2	υ p
79-00-5	1,1,2-Trichloroethane	119	19.0	103.7	שט
108-88-3	Toluene	119	83.3	313.4	П
127-18-4	Tetrachloroethene	119.	17.0	115.3	υb
100-41-4	Ethylbenzene	119	16.8	72.8	UID
1330-20-7	m,p-Xylene	119	29.3	127.0	'UI)
95-47-6	o-Xylene	119	13.8	59.8	បា
79-34-5	1,1,2,2-Tetrachloroethane	119	30.1	206.7	ហ
95-63-6	1,2,4-Trimethylbenzene	119	17.1	84.1	vi √

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

Greif-IA-09

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Trinawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

File ID:

B22044.D

<u>Air</u>

Laboratory ID:

SA72249-05

Sampled:

Prepared:

12/20/07 08:50

Analyzed:

12/20/07 21:17

% Solids:

12/12/07 08:53

Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

7121541

Sequence:

S801746

Calibration:

0801024

Instrument:

CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	10	1.38	3.5	ÜÜ
75-00-3	Chloroethane	10	1.58	4.2	ហ
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	UU
156-60-5	trans-1,2-Dichloroethene	10	0.699	2.8	U
75-34-3	1,1-Dichloroethane	10	1.66	6.7	שט
78-93-3	2-Butanone (MEK)	10	1:05	3.1	ับเ
156-59-2	cis-1,2-Dichloroethene	10	1.21	4.8	UD
67-66-3	Chloroform	10	2.21	10.8	ับเ
107-06-2	1,2-Dichloroethane	10	2.49	10.1	மு
71-55-6	1,1,1-Trichloroethane	10	3.50	19.1	л
71-43-2	Benzene	10	1.24	4.0	'UID
56-23-5	Carbon tetrachloride	10	2.21	13.9	U
79-01-6	Trichloroethene	10	3.30	17.7	л
108-10-1	4-Methyl-2-pentanone (MIBK)	10	3.39	13.9	UB
79-00-5	1,1,2-Trichloroethane	10	1.60	8.7	ហា
108-88-3	Toluene	10	3.40	12.8).D
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	സ
95-47-6	o-Xylene	10	1.16	5.0	ហ
79-34-5	1,1,2,2-Tetrachloroethane	10	2.53	17.4	UD
		10	1.44	7.1	ប្រ

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

Greif-SSV-09

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tunawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

<u>Air</u>

Laboratory ID:

SA72249-06

File ID:

B22045,D

Sampled:

12/20/07 08:50

Analyzed:

12/20/07 22:00

% Solids:

12/12/07 08:53

Prepared: Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

7121541

Sequence:

S801746

Calibration:

0801024

Instrument:

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

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

Laboratory;

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Trinawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

SA72249-07

File ID:

B22116.D

Sampled:

<u>Air</u>

Laboratory ID:

Preparation:

Analyzed:

12/24/07 15:26

% Solids:

12/12/07 08:58

Prepared:

12/24/07 07:15 General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

7121749

Sequence:

S801883

Calibration:

0801024

Instrument:

ion.	7121712 Sequence. <u>5501653</u>	Canoragon.	<u>950102.1</u>	usu ament.	ZAILE .
CAS NO.	COMPOUND	DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride	i	0.138	0.4	U
75-00-3	Chloroethane	1	0.158	0.4	บ
67-64-1	Acetone	1	0.222	0.5	Ū
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	Ū
75-34-3	1,1-Dichloroethanc	1	0.166	0.7	ับ
78-93-3	2-Butanone (MEK)	l	0.105	0.3	ប
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	บ
71-55-6	1,1,1-Trichloroethane	1	0.130	0.7	υ
71-43-2	Benzene	1	0.124	0.4	U
56-23-5	Carbon tetrachloride	1.	0.221	1.4	ับ
79-01-6	Trichloroethene	1	0,153	0.8	υ
108-10-1	4-Methyl-2-pentanone (MTBK)	1	0.339	1.4	υ
79-00-5	1,1,2-Trichloroethane	i.	0.160	0.9	υ
108-88-3	Toluene	1	1.83	6.9	
127-18-4	Tetrachloroethene	l l	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	Ü
95-47-6	o-Xylene	l l	0.116	0.5	υ
79-34-5	1,1,2,2-Tetrachloroethane	1	0.253	1.7	υ
95-63-6	1,2,4-Trimethylbenzene	ı	0.144	0.7	U
		. 1	7		

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QCLIMITS	Q
4-Bromofluorobenzene	10.0	8.66	87	75 - 125	
INTERNAL STANDARD	AREA	'nΤ	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

Greif-SSV-10

Laboratory:

Spectrum Analytical, Inc. - Agawam, MA

SDG:

72249

Client:

Environmental Resources Management - Dewitt, NY

Project:

Greif - Tanawanda, NY

Project Number:

0070448

Received:

12/13/07 10:48

Matrix:

<u>Air</u>

Laboratory ID:

SA72249-08

File ID:

B22047.D

Sampled:

Prepared:

12/20/07 08:50

Analyzed:

12/20/07 23:26

% Solids:

12/12/07 08:58

Preparation:

General Air Prep

Initial/Final:

200 ml / 200 ml

Batch:

<u>7121541</u>

Sequence:

S801746

Calibration:

0801024

Instrument:

						
CAS NO.	COMPOUND		DILUTION	CONC. (ppbv)	CONC. (ug/m3)	Q
75-01-4	Vinyl chloride		20	2.76	7.1	UND
75-00-3	Chloroethane		20	3.16	8.3	UD
67-64-1	Acetone		20	8.20	19.5	л
75-35-4	1,1-Dichloroethene		20	2.48	9.8	υþ
75-09-2	Methylene chloride		20	2.20	7.6	ய
156-60-5	trans-1,2-Dichloroethene		20	1.40	5.6	UD
75-34-3	1,1-Dichloroethane		20	3.32	13.4	U
78-93-3	2-Butanone (MEK)		20	2.10	6.2	UD
156-59-2	cis-1,2-Dichloroethene		20	2.42	9.6	U
67-66-3	Chloroform		20	4.42	21.5	UD
107-06-2	1,2-Dichloroethane		20	4.98	20.2	Up
71-55-6	1,1,1-Trichloroethane		20	7.00	38.2	वार
71-43-2	Benzenc		20	2.48	7.9	υþ
56-23-5	Carbon tetrachloride		20	4.42	27.8	UD
79-01-6	Trichloroethene		20	41.8	224,6	r
108-10-1	4-Methyl-2-pentanone (MIBK)		20	6.78	27.8	υþ
79-00-5	1,1,2-Trichloroethane		20	3.20	17.5	U
108-88-3	Toluene		20	2.44	9.2	ហ
127-18-4	Tetrachloroethene		20	2.86	19.4	ហ
100-41-4	Ethylbenzene		20	2.82	12.2	បា
1330-20-7	m,p-Xylene		20	4.92	21.3	ហ
95-47-6	o-Xylene		20	2.32	10.1	បា
79-34-5	1,1,2,2-Tetrachloroethane		20	5.06	34.7	U
95-63-6	1,2,4-Trimethylbenzene		20	2.88	14.2	ហា
			001104	T		1

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QCLIMITS	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