Ethylene Oxide Air Monitoring Report

Village of Willowbrook

Prepared at the Request of Tom Bastian, Village Attorney

Tim Halik, Village Administrator
Village of Willowbrook
835 Midway Drive
Willowbrook, IL 60527

GHD | 11719 Hinson Road Suite 100, Little Rock, Arkansas 72212

11183332 | Phase 01 | Report No 01 | December 10, 2018

Executive Summary

On November 16, 2018, GHD Services Inc. (GHD) conducted air sampling for the Village of Willowbrook to assess the potential for exposures to Village workers and members of the community by ethylene oxide (EtO) produced by the Sterigenics facilities in Willowbrook, Illinois.

The sampling program for this assessment was designed to include public buildings, private residences, public parks, and schools, at locations upwind and downwind of the Sterigenics site. All samples were collected within a 1-mile radius of Sterigenics to evaluate this facility as a potential source of EtO. GHD performed continuous (24-hour) air sampling of 11 commercial and residential facilities, including 34 indoor and outdoor locations. Sample measurement and analysis incorporated SUMMA canisters and the US Environmental Protection Agency (USEPA) TO-15 testing method.

The air sampling data collected were compared to results from testing by the USEPA in May 2018, as further reported in the Consultation Letter published by the Agency for Toxic Substances and Disease Registry (ATSDR) in August 2018. The air sampling results indicated the presence of EtO throughout Willowbrook, in samples both upwind and downwind of Sterigenics. The EtO levels identified by the Village's sampling effort ranged from 5 to 10 times lower than those identified by the USEPA in May of 2018. Results from outdoor samples at specific upwind locations indicated the presence of EtO at an average of approximately 0.071 ppb. The Village's sampling results also indicated that EtO is present in locations both upwind and downwind of Sterigenics above the long-term risk-based level used by the USEPA and ATSDR in the May and August 2018 sampling and report. A longer-term sampling study is required to draw conclusions appropriate to long-term risk exposure criteria. It is important to recognize that we do not have enough testing data at this time to know if the concentrations measured by either the Village or USEPA accurately represent long-term exposure levels for the Village.

GHD evaluated the EtO concentrations inside buildings relative to the amounts of EtO outside buildings. The measured levels of EtO inside buildings were found to be higher than the outside at all locations sampled, with the exception of the Village Hall. This suggests possible indoor sources of EtO, which have been noted to be present in various household and consumer products such as cigarettes, auto products, cleaners, food which has been sterilized using EtO, and home maintenance products. Further research is needed to evaluate the potential adsorption of low levels of EtO to building and indoor materials over time; for example, indoor sources such as those noted above could yield low levels of EtO indoors, which could temporarily accumulate until exchange with outdoor air. Indoor samples in the Willowbrook Police Department indicated an average EtO level of 0.32 ppb. Indoor samples in the Village Hall indicated an average EtO level of 0.25 ppb. Indoor locations upwind of the Sterigenics facilities indicated an average EtO level of 0.137 ppb, while indoor locations downwind of the Sterigenics facilities indicated an average EtO level of 0.264 ppb (including the Village Hall and Police Department).

Based on these results, we conclude that further evaluation is recommended across a broader range of sampling conditions including: meteorological, Sterigenics production rates, further afield background locations, and further study, on a longer term basis, comparing indoor and outdoor levels at the same location, to completely assess the potential contribution by Sterigenics to air quality in the Village of Willowbrook.

All data contained in this report has been reviewed and interpreted by a GHD Certified Industrial Hygienist (CIH) and may be considered final.

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Appendix Index

1. Background

On November 16, 2018, GHD Services Inc. (GHD) was retained by the Village of Willowbrook to provide air monitoring to assess the potential community exposures of ethylene oxide (EtO) produced by the Sterigenics facilities in Willowbrook, Illinois. Air monitoring activities were conducted in accordance with the air monitoring plan prepared by GHD. Analysis of the samples was conducted using the USEPA TO-15 testing method.

On-site field staff included a GHD Certified Industrial Hygienist (CIH) Project Manager with specific training on hazard evaluation (including air monitoring instrumentation and field data collection). All air monitoring activities and field documentation were directed by the GHD Project Manager. All air monitoring strategies were implemented and coordinated by a GHD Certified Industrial Hygienist (CIH).

2. Objectives

The specific objectives of the overall assessment of the Willowbrook EtO Air Sampling were to:

- Identify if immediate public health concern is present to indicate need for action.
- Perform real time air monitoring for ethylene oxide and to determine airborne concentrations throughout the Willowbrook community.
- Begin assessing whether there is a notable difference between indoor air concentrations of EtO and outdoor air concentrations of EtO at the same locations.
- Identify additional sources of EtO emissions within the immediate areas around the Sterigenics facility.
- Ensure that the monitoring program is designed and implemented to comply with the air monitoring requirements of the applicable EPA methods.

3. Methodology

To determine the representative inhalation exposures for building occupants, GHD collected area air samples for EtO inside the occupied spaces. The area air samples were collected at breathing zone height (approximately 5 to 6 feet) in an effort to simulate representative inhalation exposures for the affected occupants in each area. GHD collected up to four area air samples in each building and up to eleven area air samples in selected outdoor locations. In total, thirty-four (34) SUMMA canisters (6-Liter) were employed.

Area air samples were collected using evacuated SUMMA canisters with 24-hour metered flow regulators. All air samples were collected according to the Environmental Protection Agency (EPA) Method TO-15 including the analysis for EtO. All samples were shipped under appropriate Chain of Custody (COC) procedures to SGS Galson Laboratory in East Syracuse, New York for analysis. Galson is accredited by the American Industrial Hygiene Association (AIHA) for the analysis of air samples. The laboratory results for the air samples were relied on to identify any occupied areas where airborne EtO concentrations are present in greater concentrations compared to background.

GHD conducted a visual inspection of each building prior to and during deployment of air sample canisters to evaluate the potential presence of other sources of ethylene oxide. GHD also placed sample canisters

to avoid interference from both natural and forced building ventilation by placing sample canisters away from vents windows.

The Galson laboratory analytical method specifies a detection limit of 0.04 ppbv (0.072 µg/m^3). The reported USEPA method detection limit is 0.045 ppbv (0.08 µg/m^3) which may account for the non-detects obtained in their sampling thus far.

4. Results

A GHD CIH took 34 indoor and outdoor SUMMA canister samples throughout the Village of Willowbrook. A map of the sample locations, alongside a table summarizing the results, can be found in Appendix A.

Throughout the sampling period (approximately 0800 on 11/16/2018 to 1700 on 11/17/18), the wind was blowing predominantly from the West and the North according to Wind Rose data retrieved from the Chicago DuPage Airport and the Chicago Midway Airport. Appendix B contains a Wind Rose plot of the meteorological data, which depicts the direction and speed *from which* the wind was blowing during the entire sample period. Based on these data, as well as on-site observations by sampling personnel, all samples to the north and west of both Sterigenics facilities may be considered upwind sample locations during the sampling period.

The average measured outdoor EtO levels of the upwind samples was 0.071 ppb EtO. The average downwind outdoor level was 0.201 ppb. The average indoor levels upwind and downwind were 0.137 and 0.264 ppb. The measured levels of EtO inside buildings were found to be higher than outside buildings, with the lone exception of the Village Hall, where the outside level was measured at 0.32 ppb, and the inside levels were an average of 0.25 ppb. Table 4.1 lists the results of all of the samples collected.

Table 4.1 - Summary of Area Air Sampling Results for Ethylene Oxide – Village of Willowbrook, Illinois (Collected on November 16-17, 2018)

Location ID	GHD Sample ID	Sample Location	Measured Airborne Concentration	
			µg/m^3	ppb
1	Air-11183332-001	Willowbrook Village Hall – Third Floor	0.34	0.19
	Air-11183332-002	Willowbrook Village Hall – Lower Level	0.52	0.29
	Air-11183332-003	Willowbrook Village Hall – Lobby	0.50	0.28
	Air-11183332-004	Willowbrook Village Hall – Outdoors	0.58	0.32
2	Air-11183332-005	Willowbrook Police Department – Patrol Room	0.49	0.27
	Air-11183332-006	Willowbrook Police Department – Evidence Room	0.22	0.12
	Air-11183332-007	Willowbrook Police Department – Records Front Office	0.77	0.43
	Air-11183332-008	Willowbrook Police Department – Detective Conference Room	0.81	0.45
	Air-11183332-009	Willowbrook Police Department – Outdoors	0.43	0.24

Location ID	GHD Sample ID	Sample Location	Measured Airborne Concentration	
			µg/m^3	ppb
3	Air-11183332-010	Farber Residence – Indoors	0.67	0.37
	Air-11183332-011	Farber Residence – Outdoors	0.15	0.085
4	Air-11183332-012	West Swim Club – Outdoors	0.10	0.055
	Air-11183332-013	West Swim Club - Pool	0.25	0.14
5	Air-11183332-014	Grimsby Residence - Indoors	0.31	0.17
	Air-11183332-015	Grimsby Residence - Outdoors	0.14	0.08
6	Air-11183332-016	Public Works Building – Outdoors	0.09	0.05
7	Air-11183332-017	Community Park – Outdoors	0.14	0.075
8	Air-11183332-018	Willow Pond – Outdoors	0.08	0.044
9	Air-11183332-019	Gower Elementary – Classroom 49	0.10	0.053
	Air-11183332-020	Gower Elementary – North Hallway	<0.07	0.04
	Air-11183332-021	Gower Elementary – Gymnasium	<0.07	0.04
	Air-11183332-022	Gower Elementary – Learning Center	0.32	0.18
	Air-11183332-023	Gower Elementary – Outdoors	0.20	0.11
10	Air-11183332-024	Gower Middle School – Classroom 106	0.29	0.16
	Air-11183332-025	Gower Middle School – Library	0.49	0.27
	Air-11183332-026	Gower Middle School – Classroom 123	0.45	0.25
	Air-11183332-027	Gower Middle School – North Hallway	0.34	0.19
	Air-11183332-028	Gower Middle School – Outdoors	0.08	0.043
11	Air-11183332-029	Hinsdale High School – Lower Level/Classroom 156	0.45	0.25
	Air-11183332-030	Hinsdale High School – 2nd Level/Classroom 224	0.15	0.083
	Air-11183332-031	Hinsdale High School – 2nd Level/Library	0.08	0.043
	Air-11183332-032	Hinsdale High School – 3rd Level/Hallway outside Classroom 311	0.25	0.14
	Air-11183332-033	Hinsdale High School – 3rd Level/Classroom 357	0.23	0.13
	Air-11183332-034	Hinsdale High School – Outdoors	0.12	0.069

5. Discussion

GHD tested at multiple locations within the Village of Willowbrook, including locations that were upwind of Sterigenics during the entire test. The test results confirm the presence of EtO throughout Willowbrook, in samples upwind and downwind of Sterigenics, which are present above the long-term risk-based level used by the USEPA and ATSDR in their May and August 2018 sampling and risk evaluation efforts.

The outdoor sample located at Willowbrook Village Hall was co-located with a USEPA canister. The Village's outside sample result was 0.32 ppb (0.576 ug/m^3) and USEPA's sample result on that day was 0.458 ppb (0.824 ug/m^3). The sampling times were slightly offset; the USEPA sample was observed being deployed approximately 2 hours after the GHD sample.

Based on the presence of EtO in samples upwind of the Sterigenics facilities, other upwind sources were determined to be present on the day of sampling. Outdoor samples at locations upwind of Sterigenics indicated the presence of EtO at an average of approximately 0.071 ppb. Samples downwind of Sterigenics indicated 0.201 ppb EtO, which is higher than samples collected upwind of Sterigenics.

Hydrocarbon combustion is thought to be a potential source of EtO emissions, however, not enough information is available to quantify these emissions. A California study indicated a range from 0.016 ppb EtO in remote coastal locations, to 0.03 ppb EtO in the Los Angeles suburbs, to 0.8 ppb EtO in downtown Los Angeles.[1] Other studies have yielded similar results.

GHD also evaluated the levels of EtO inside buildings relative to the levels of EtO outside buildings. The measured levels of EtO inside buildings were found to be higher than outside buildings, with the lone exception of the Village Hall. Indoor samples in the Willowbrook Police Department indicated similar EtO levels as other indoor locations such as the Farber Residence.

Potential sources of indoor EtO include food products, pest control procedures (fumigation), vehicle exhaust, and tobacco which has been fumigated. Certain new building or furnishing material may also contain trace amounts of EtO, among other volatile organic compounds (VOCs). Building materials paints and coatings have been found to contain EtO ranging from trace amounts to 0.5% by weight. EtO may also be present and detectible in skin care/beauty products.[2] Food products, especially spices not containing salt, may be fumigated with EtO.

GHD reviewed a number of studies to gain an understanding of how EtO may behave inside occupied spaces, and to what degree it may be present in other indoor spaces previously studied. The Village's sampling study has shown that indoor concentrations were generally higher than outdoor concentrations, GHD consulted the limited scientific literature to help understand what may have caused this result. A previous study in Canada concluded that EtO released to air is believed to remain in atmosphere and is unlikely to be transferred to other media.[3] The study detected EtO at a level of 4 µg/m^3 in 1 of 50 randomly selected residences, using a laboratory method with a detection limit of 0.19 µg/m^3. EtO was detected at 5 µg/m^3 in 3 of 24 personal air samples collected from an occupant of each of the 50 residences. The literature reviewed indicates the presence of EtO in indoor spaces not specifically correlated with outdoor sources. Further research would be needed to better explain or explore the possibility of potential adsorption of low levels of EtO

6. Electronic Field Documentation and Reporting

Appropriate field documentation was collected including a daily activity log, sampling field forms, site observations, and other pertinent documentation. The daily activity logs consisted of observations and field notes taken throughout the day. The daily log were recorded either in bound log books or on pre-printed daily log forms. GHD Field Staff utilized mobile data collection and data management tools for field data collection, archiving, and reporting. Mobile iPads were used during the project to increase the accuracy of the data collected and decrease the reporting time.

[1] California Environmental Protection Agency Air Resources Board. Research Note 93-6. November 1993.
[2] Filser, J.G., Kreuzer, P.E., Greim, H. et al. Archives of Toxicology (1994) 68: 401.
[3] World Health Organization. Concise International Chemical Assessment Document 54. 2003.

All sampling data and supporting documentation collected during this project were stored in a comprehensive on-Site electronic database. GHD used a custom database application that uploaded field data directly to a secure GHD server. GHD and approved users were granted access to view current and historical photographs and other supporting documentation collected in real time through a secure GHD website. GHD used mobile data collection and data management tools for field data collection, archiving and reporting.

7. Conclusions and Recommendations

The test results from our monitoring confirm the presence of EtO throughout Willowbrook, in samples upwind and downwind of Sterigenics. The EtO levels identified through our monitoring program range from 5 to 10 times lower than those identified by the USEPA in May of 2018. The sampling results indicate that EtO is present in locations both upwind and downwind of Sterigenics above certain long-term risk-based levels established by the USEPA. Outdoor samples at upwind locations indicate presence of EO at average of approximately 0.071 ppb.

GHD evaluated the amounts of EtO inside buildings relative to the amounts of EtO outside buildings. According to the results, the measured levels of EtO inside buildings were found to be higher than the outside with the exception of the Village Hall. This suggests that indoor EtO may originate from other indoor sources, such as household and consumer products such as cigarettes, auto products, cleaners, food sterilized with EtO, and home maintenance products. Indoor samples in the Willowbrook Police Department indicated similar EtO levels as other indoor locations such as the Farber Residence. Further research is needed to evaluate the potential adsorption of low levels of EtO to building and indoor materials over time; for example, indoor sources such as those noted above could yield low levels of EtO indoors, which could temporarily accumulate until exchange with outdoor air.

Based on these results, we conclude that further evaluation is recommended across a broader range of sampling conditions including: meteorological, Sterigenics production rates, further afield background locations, and further study, on a longer-term basis, comparing indoor and outdoor levels at the same location, to completely assess the potential contribution by Sterigenics to air quality in the Village of Willowbrook. A longer-term sampling study is required to draw conclusions appropriate to long-term risk exposure criteria.

8. Quality Assurance/Quality Control and Reporting

All sampling records were reviewed to ensure accuracy and completeness. The sampling information was uploaded into an electronic database and each record was subjected to a Quality Assurance/Quality Control (QA/QC) review. All project related records and documents were reviewed to ensure accuracy and completeness and will be archived in GHD's Laserfiche system upon completion of the project. All data contained in the final report has been reviewed by a GHD CIH and is considered final. This report and supporting documentation was prepared and reviewed according to GHD's ISO 9001 quality review process. The air sampling activities were performed under the direction of a GHD CIH and all air sampling data were reviewed by a GHD CIH.

Respectfully Submitted,

GHD Services, Inc.

This report was prepared by:

Dyron Hamlin, MS, PE, CIH

This report was reviewed by:

Benjamin Chandler, MS, CIH, CSP

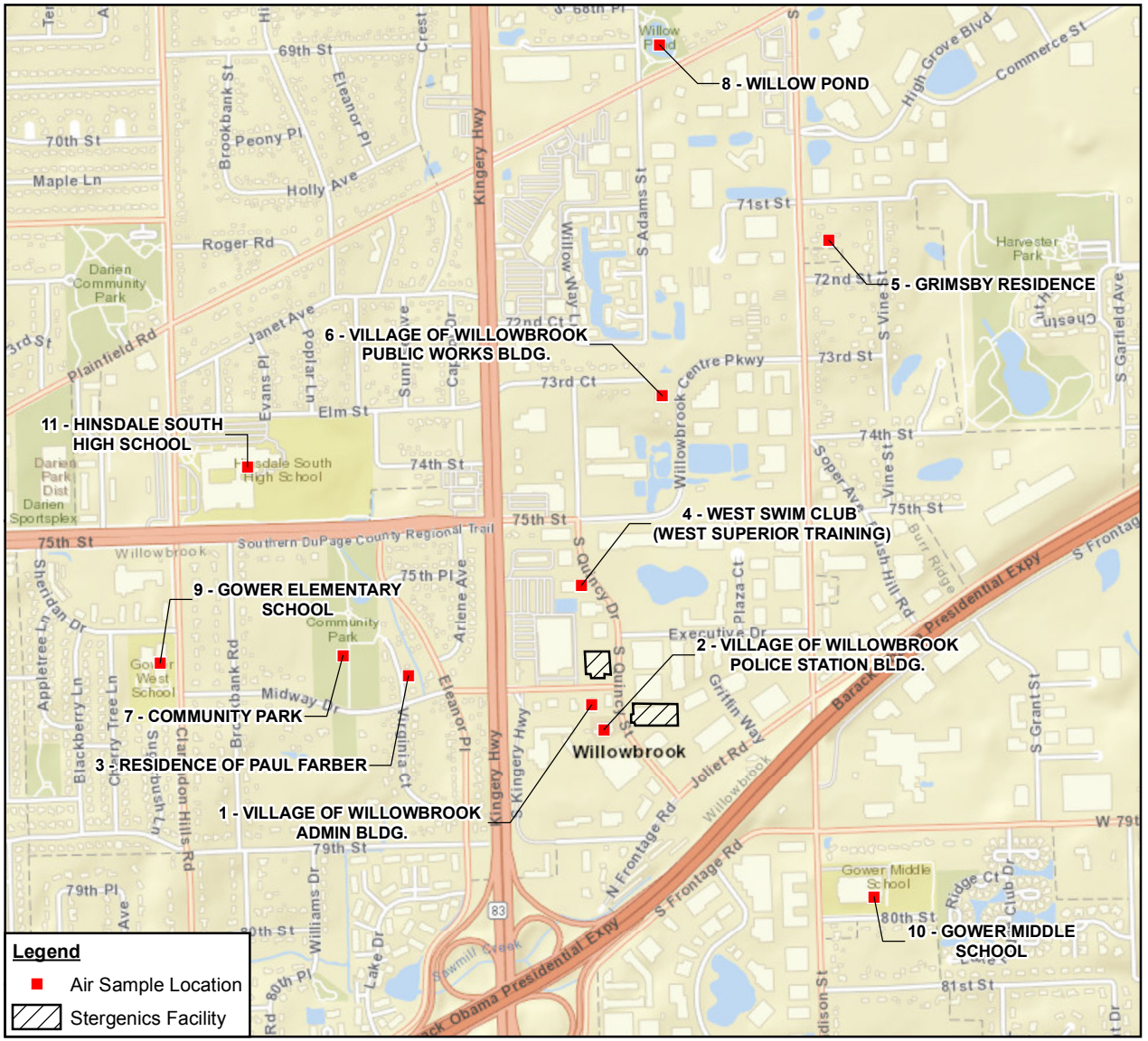
This report was reviewed by:

Kevin Kearney, MS, ASP

Appendix A
Air Sampling Map

Summary of Area Air Sampling Results for Ethylene Oxide
Village of Willowbrook, Illinois

Location ID	Sample Location	Measured Airborne Concentration
1	Willowbrook Village Hall – Third Floor	0.19 ppb
	Willowbrook Village Hall – Lower Level	0.29 ppb
	Willowbrook Village Hall – Lobby	0.28 ppb
	Willowbrook Village Hall – Outdoors	0.32 ppb
2	Willowbrook Police Department – Patrol Room	0.27 ppb
	Willowbrook Police Department – Evidence Room	0.12 ppb
	Willowbrook Police Department – Records Front Office	0.43 ppb
	Willowbrook Police Department – Detective Conference Room	0.45 ppb
	Willowbrook Police Department – Outdoors	0.24 ppb
3	Farber Residence – Indoors	0.37 ppb
	Farber Residence – Outdoors	0.085 ppb
4	West Swim Club – Outdoors	0.055 ppb
	West Swim Club - Pool	0.14 ppb
5	Grimsby Residence - Indoors	0.17 ppb
	Grimsby Residence - Outdoors	0.080 ppb
6	Public Works Building – Outdoors	0.050 ppb
7	Community Park – Outdoors	0.075 ppb
8	Willow Pond – Outdoors	0.044 ppb
9	Gower Elementary – Classroom 49	0.053 ppb
	Gower Elementary – North Hallway	< 0.040 ppb
	Gower Elementary – Gymnasium	< 0.040 ppb
	Gower Elementary – Learning Center	0.18 ppb
	Gower Elementary – Outdoors	0.11 ppb
10	Gower Middle School – Classroom 106	0.16 ppb
	Gower Middle School – Library	0.27 ppb
	Gower Middle School – Classroom 123	0.25 ppb
	Gower Middle School – North Hallway	0.19 ppb
	Gower Middle School – Outdoors	0.043 ppb
11	Hinsdale High School – Lower Level/Classroom 156	0.25 ppb
	Hinsdale High School – 2nd Level/Classroom 224	0.083 ppb
	Hinsdale High School – 2nd Level/Library	0.043 ppb
	Hinsdale High School – 3rd Level/Hallway outside Classroom 311	0.14 ppb
	Hinsdale High School – 3rd Level/Classroom 357	0.13 ppb
	Hinsdale High School – Outdoors	0.069 ppb



Source: ESRI World Street Map. Esri, DeLorme, HERE, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Tomtom

0 850 1,700
Feet

Coordinate System:
NAD 1983 StatePlane Illinois East
FIPS 1201 Feet

VILLAGE OF WILLOWBROOK, ILLINOIS

11183332
Dec 7, 2018

NOVEMBER 16-17, 2018
AREA AIR SAMPLING LOCATIONS

FIGURE 3

GIS File: Q:\GIS\PROJECTS\11183000s\11183332\Layouts\001\11183332-00(001)GIS-WA003.mxd

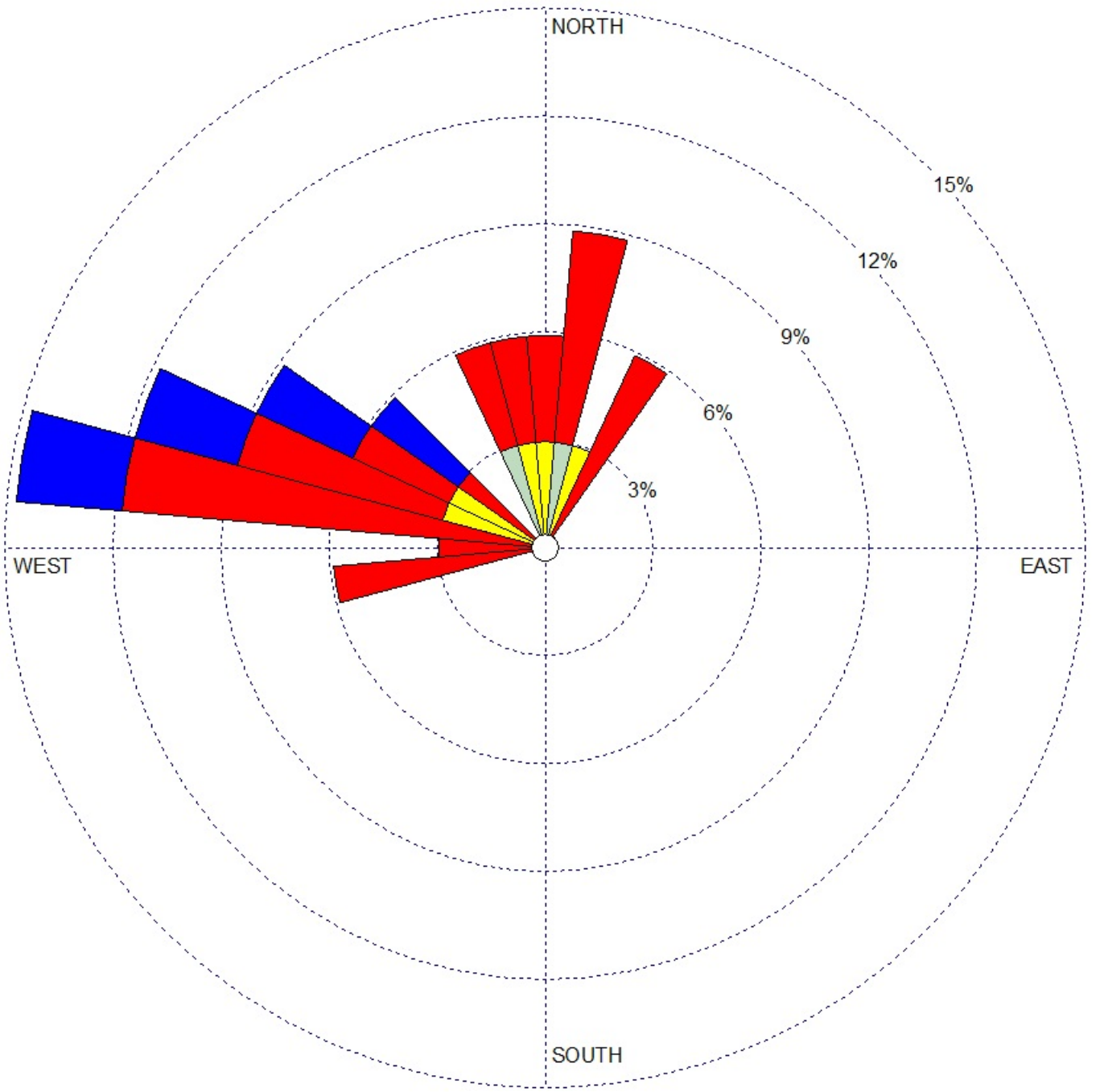
Appendix B
Wind Rose Map

WIND ROSE PLOT:

Chicago Midway Airport 11/116/2018, 0800 - 11/17/2018, 1700

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

High pressure system centered over northern South Dakota brought predominantly north winds to the Chicago area on 11/16/18. Low pressure system in northeast Canada brought west winds to the Chicago area on 11/17/18. Overcast conditions with light snow changing to rain reported on 11/17/18.

DATA PERIOD:

Start Date: 11/16/2018 - 00:00
End Date: 11/17/2018 - 17:00

TOTAL COUNT:	CALM WINDS:
33 hrs.	**11.76%**

AVG. WIND SPEED:

3.68 m/s

COMPANY NAME:

GHD

MODELER:

Tom Ashcraft

DATE:

12/10/2018

PROJECT NO.:

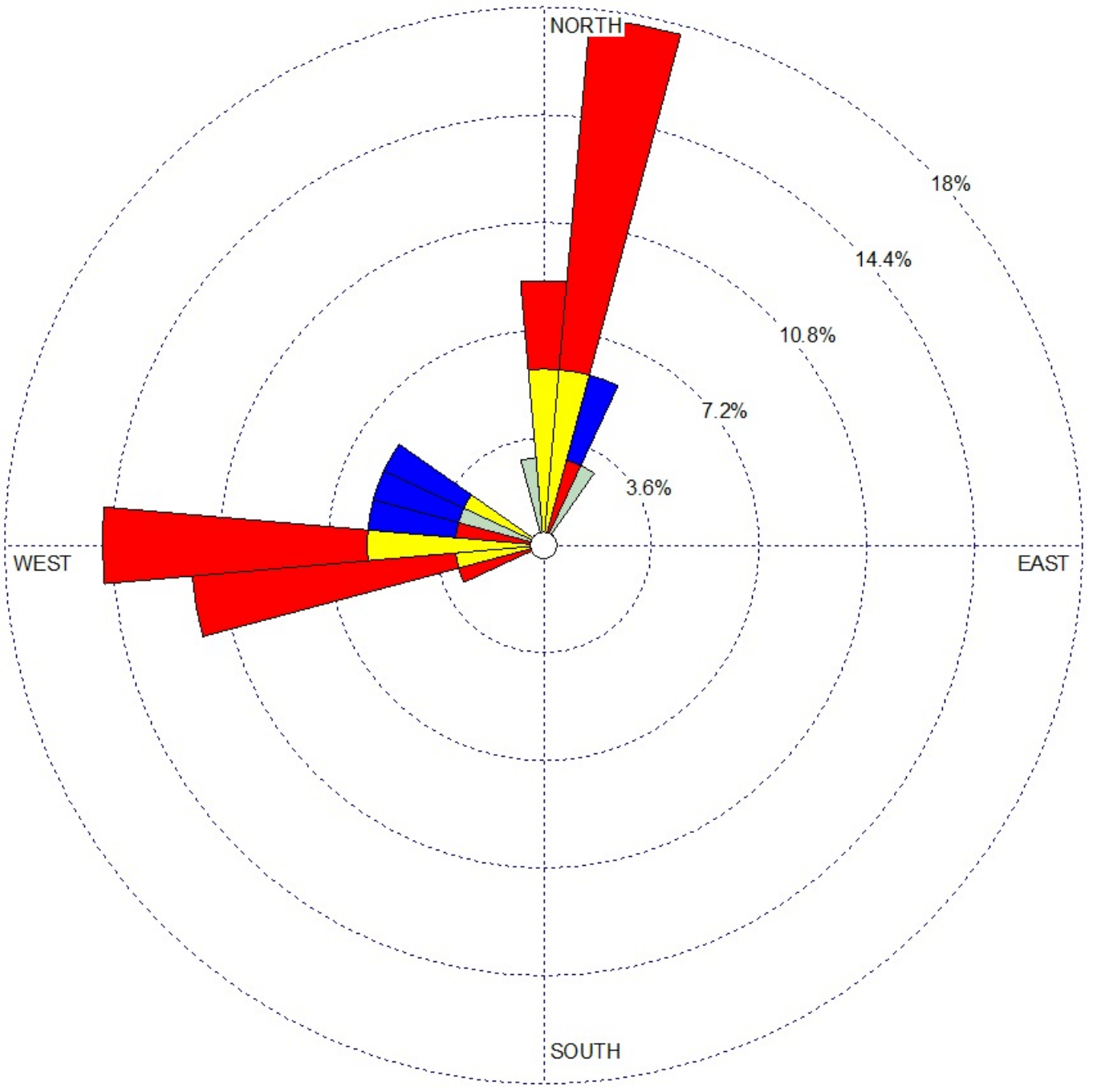
11183332

WIND ROSE PLOT:

Chicago DuPage Airport 11/16/2018, 0800 - 11/17/2018, 1700

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

High pressure system centered over northern South Dekota bringing predominantly north winds to the Chicago area on 11/16/18. Low pressure system in northeast Canada brought west winds to the Chicago area on 11/17/18.Overcast conditions with light snow reported on 11/17/18.

DATA PERIOD:

Start Date: 11/16/2018 - 00:00
End Date: 11/17/2018 - 17:00

TOTAL COUNT:	CALM WINDS:
33 hrs.	**11.76%**

AVG. WIND SPEED:

6.59 Knots

COMPANY NAME:

GHD

MODELER:

Tom Ashcraft

DATE:

12/10/2018

PROJECT NO.:

11183332

Appendix C
Lab Reports

SGS GALSON

Mr. Ben Chandler
GHD Services Inc.
11719 Hinson Road
Suite 100
Little Rock, AR 72212

November 28, 2018

DOH ELAP #11626
AIHA-LAP #100324

Account# 29016

Login# L463406

Dear Mr. Chandler:

Enclosed are the analytical results for the samples received by our laboratory on November 19, 2018. All test results meet the quality control requirements of AIHA-LAP and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Sample AIR-11183332-11/16/2018-035 was rejected and does not appear on this report due to being received at full vacuum, indicating no sample was taken.

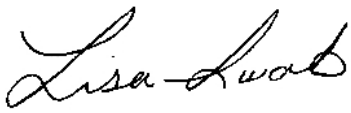
Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. When possible, non-IOM samples will be retained for 14 days following the date of this report (unless an extension is specifically requested). IOM samples are retained for 7 days.

Current Scopes of Accreditation can be viewed at www.sgsgalson.com in the accreditations section of the "About" page.

Please contact Charlene Moser at (888) 432-5227, if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson



Lisa Swab
Laboratory Director

Enclosure(s)

SGS GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-1	L463406-2	L463406-3
Client ID:	ppbv	AIR-11183332-001	AIR-11183332-002	AIR-11183332-003
Ethylene oxide	0.040	0.19	0.29	0.28

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS
Collection Media : 6L Summa
Submitted by : DJW

QC by : SAP
Approved by : SAP
Date : 28-NOV-18

Supervisor: SAP
NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

SGS GALSON

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East Syracuse, NY 13057
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www.sgsgalson.com

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LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
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Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
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Report ID : 1104572

Galson ID:	LOQ	L463406-4	L463406-5	L463406-6
Client ID:	ppbv	AIR-11183332-004	AIR-11183332-005	AIR-11183332-006
Ethylene oxide	0.040	0.32	0.27	0.25

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

SGS GALSON

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Report ID : 1104572

Galson ID:	LOQ	L463406-7	L463406-8	L463406-9
Client ID:	ppbv	AIR-11183332-007	AIR-11183332-008	AIR-11183332-009
Ethylene oxide	0.040	0.43	0.45	0.24

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
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Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-10	L463406-11	L463406-12
Client ID:	ppbv	AIR-11183332-010	AIR-11183332-011	AIR-11183332-012
Ethylene oxide	0.040	0.37	0.085	0.055

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS
Collection Media : 6L Summa
Submitted by : DJW

QC by : SAP Supervisor: SAP
Approved by : SAP
Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

SGS GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-13	L463406-14	L463406-15
Client ID:	ppbv	AIR-11183332-013	AIR-11183332-014	AIR-11183332-015
Ethylene oxide	0.040	0.14	0.17	0.080

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-16	L463406-17	L463406-18
Client ID:	ppbv	AIR-11183332-016	AIR-11183332-017	AIR-11183332-018
Ethylene oxide	0.040	0.050	0.075	0.044

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-19	L463406-20	L463406-22
Client ID:	ppbv	AIR-11183332-020	AIR-11183332-019	AIR-11183332-021
Ethylene oxide	0.040	<0.040	0.053	<0.040

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-23	L463406-25	L463406-26
Client ID:	ppbv	AIR-11183332-022	AIR-11183332-023	AIR-11183332-024
Ethylene oxide	0.040	0.18	0.11	0.16

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-27	L463406-29	L463406-30
Client ID:	ppbv	AIR-11183332-025	AIR-11183332-026	AIR-11183332-027
Ethylene oxide	0.040	0.27	0.25	0.19

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-31	L463406-32	L463406-33
Client ID:	ppbv	AIR-11183332-028	AIR-11183332-029	AIR-11183332-030
Ethylene oxide	0.040	0.043	0.10	0.083

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

Galson ID:	LOQ	L463406-34	L463406-35	L463406-36
Client ID:	ppbv	AIR-11183332-031	AIR-11183332-032	AIR-11183332-033
Ethylene oxide	0.040	<0.040	0.14	0.13

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS QC by : SAP Supervisor: SAP
Collection Media : 6L Summa Approved by : SAP
Submitted by : DJW Date : 28-NOV-18 NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

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LELAP Lab ID #04083

LABORATORY ANALYSIS REPORT

Client : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received : 19-NOV-18 Login No. : L463406
Date Analyzed : 26-NOV-18 - 28-NOV-18 Units : ppbv
Report ID : 1104572

	Galson ID:	LOQ	L463406-37
	Client ID:	ppbv	AIR-11183332-034
Ethylene oxide		0.040	0.069

Analytical Method: mod. OSHA PV2120/mod. EPA TO15; GC/MS
Collection Media : 6L Summa
Submitted by : DJW

QC by : SAP
Approved by : SAP
Date : 28-NOV-18

Supervisor: SAP
NYS DOH # : 11626

< -Less Than mg -Milligrams m3 -Cubic Meters ppbv-Parts per Billion Volume NS -Not Specified L -Liters
> -Greater Than ug -Micrograms ND -Not Detected ppmv-Parts per Million Volume LOQ -Limit of Quantitation NA -Not Applicable

LABORATORY FOOTNOTE REPORT

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East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client Name : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received: 19-NOV-18 Login No. : L463406
Date Analyzed: 26-NOV-18 - 28-NOV-18

Unless otherwise noted below, all quality control results associated with the samples were within established control limits or did not impact reported results.

Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgsgalson.com

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

Unless otherwise noted below, reported results have not been blank corrected for any field blank or method blank.

L463406 (Report ID: 1104572):
SOPs: in-vocs(35)

L463406-16 (Report ID: 1104572):
Sample canister was received at/near ambient pressure.

<	-Less Than	mg	-Milligrams	m3	-Cubic Meters	kg	-Kilograms	ppm	-Parts per Million
>	-Greater Than	ug	-Micrograms	l	-Liters	NS	-Not Specified	ND	-Not Detected	NA	-Not Applicable

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LABORATORY FOOTNOTE REPORT

Client Name : GHD Services Inc.
Site : Village of Willowbrook
Project No. : 11183332

Date Sampled : 16-NOV-18 Account No.: 29016
Date Received: 19-NOV-18 Login No. : L463406
Date Analyzed: 26-NOV-18 - 28-NOV-18

L463406 (Report ID: 1104572):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Ethylene oxide	N/A	N/A

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms ppm -Parts per Million
> -Greater Than ug -Micrograms l -Liters NS -Not Specified ND -Not Detected NA -Not Applicable

783830864345
Date:11/19/18
Shipper:FEDEX
Initials:MAK
Prep:UNKNOWN

783830864356
Date:11/19/18
Shipper:FEDEX
Initials:MAK
Prep:UNKNOWN

L 4 6 3 4 0 6

3-
gray cart

☐ New Client? Report To*: Ben Chandler / Dyron Hamlin
11719 Hinson Road, Suite 100
Client Account No.*: Little Rock, Arkansas 722212

Invoice To*: Art Greeley

Phone No.*: 501-224-1926
Cell No.: 501-366-3999
Email Results to: benjamin.chandler@ghd.com
Email address: dyron.hamlin@ghd.com

Phone No.:
Email: art.greeley@ghd.com
P.O. No.:
*Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☐ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: Village of Willowbrook Project: 11183332 Sampled by: Ben Chandler

Comments:

List description of industry or Process/interferences present in sampling area:

State samples were collected in (e.g., NY): IL

Please indicate which OEL this data will be used for:
☐ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☑ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
AIR-11183332-11/16/2018-001	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-002	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-003	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-004	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-005	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-006	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-007	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-008	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-009	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-010	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-011	11/16/18	Summa	6L		Ethylene Oxide	TO-15	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☐ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Greg Wesley /	11/17/18	0930	Received by:			
Relinquished by:				Received by:	Michelle Krause	11/19/18	0933

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 1 of 3

783834246920
Date: 11/19/18
Shipper: FEDEX
Initials: MAK
Prep: UNKNOWN

783834155910
Date: 11/19/18
Shipper: FEDEX
Initials: MAK
Prep: UNKNOWN

N

☐ New Client? Report To*: Ben Chandler / Dyron Hamlin
11719 Hinson Road, Suite 100
Client Account No.*: Little Rock, Arkansas 722212

Phone No.*: 501-224-1926
Cell No.: 501-366-3999
Email Results to: benjamin.chandler@ghd.com
Email address: dyron.hamlin@ghd.com

Invoice To*: Art Greeley
Phone No.:
Email: art.greeley@ghd.com
P.O. No.:
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☐ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: Village of Willowbrook Project: 11183332 Sampled by: Ben Chandler

*** Didn't receive ZRK 11/19/18

Comments:

SKH 11/19/18

* Recvd 2- WL158, WL282 mini -019's, 2- mini -021's - WL128, WL148, 2- mini 0-27's WL285, WL087

List description of industry or Process/interferences present in sampling area:

State samples were collected in (e.g., NY): IL

Please indicate which OEL this data will be used for:
☐ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☑ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
AIR-11183332-11/16/2018-012	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-013	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-014	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-015	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-016	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-017	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-018	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-019	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
+++ AIR-11183332-11/16/2018-020	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-021	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
+++ AIR-11183332-11/16/2018-022	11/16/18	Summa	6L		Ethylene Oxide	TO-15	

Per client:
WL158 = 020
WL148 = 022
WL285 = 026
WL282 = 019
WL128 = 021
WL087 = 027

ZRK 11/20/18

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☐ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Greg Wesley /	11/17/18	0930	Received by:			
Relinquished by:				Received by:	Michelle Krause	11/19/18	0933

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 2 of 4

783834155900
Date: 11/19/18
Shipper: FEDEX
Initials: MAK
Prep: UNKNOWN

Tel: (315) 432-5227
888-432-LABS (5227)

www.sgsgalson.com

☐ New Client?

Report To*: Ben Chandler / Dyron Hamlin
11719 Hinson Road, Suite 100
Little Rock, Arkansas 722212

Client Account No.*:

Phone No.*: 501-224-1926
Cell No.: 501-366-3999
Email Results to: benjamin.chandler@ghd.com
Email address: dyron.hamlin@ghd.com

Invoice To*: Art Greeley

Phone No.:
Email: art.greeley@ghd.com
P.O. No.:
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☐ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: Village of Willowbrook Project: 11183332 Sampled by: Ben Chandler

Comments:

List description of industry or Process/interferences present in sampling area:

State samples were collected in (e.g., NY): IL

Please indicate which OEL this data will be used for:
☐ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☑ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
AIR-11183332-11/16/2018-023	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-024	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-025	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-026	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-027	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-028	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-029	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-030	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-031	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-032	11/16/18	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-033	11/16/18	Summa	6L		Ethylene Oxide	TO-15	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☐ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

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Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Greg Wesley /	11/17/18	0930	Received by:			
Relinquished by:				Received by:	Michelle Krause	11/19/18	0933

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 3 of 4

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888-432-LABS (5227)

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☐ New Client? Report To*: Ben Chandler / Dyson Hamlin
11719 Hinson Road, Suite 100
Little Rock, Arkansas 72212

Client Account No.*:

Invoice To*: Art Greenley

Phone No.*: 501-224-1926
Cell No.: 501-366-3999
Email Results to: benjamin.chandler@gsh.com
Email address: dyson.hamlin@gsh.com

Phone No.:
Email: art.greenley@gsh.com
P.O. No.:
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☐ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: Village of Willowbrook Project: 11183332 Sampled by: Ben Chandler

Comments:

List description of industry or Process/interferences present in sampling area:

State samples were collected in (e.g., NY): IL

Please indicate which OEL this data will be used for:
☐ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☑ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
AIR-11183332-11/16/2018-0334	11/16/2018	Summa	6L		Ethylene Oxide	TO-15	
AIR-11183332-11/16/2018-0335	11/16/2018	Summa	6L		Ethylene Oxide	TO-15	

^Galson Laboratories will subsitute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☐ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Greg Wang	11/18/2018	0930	Received by:			
Relinquished by:				Received by:	Michelle Krause	11/19/18	0933

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

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Appendix D
Electronic Sample Collection Information

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-005

Personnel: Ben Chandler

Sample Location: Willowbrook PD - Patrol Room

Pump ID: 10686

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1380.18333 Minutes

Regulator ID: 04465

Sample Comments:

Galson ID:

Regulator-WR537
Canister-WL032

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:08:40 AM
Latitude:	41.747770
Longitude:	-87.941384

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	18	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-006

Personnel: Ben Chandler

Sample Location: Willowbrook PD -Evidence

Pump ID: 160

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1378.53333 Minutes

Regulator ID: 04145

Sample Comments:

Galson ID:

Regulator-RR170
Canister-WL152

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:11:57 AM
Latitude:	41.748337
Longitude:	-87.941532

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	7	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-002

Personnel: DH

Sample Location: Lower level Village Hall

Pump ID: 10650

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1439.63333 Minutes

Regulator ID: N/A

Sample Comments:

Galson IDs:

Can: WL036
Reg: WR362

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:13:47 AM
Latitude:	41.748210
Longitude:	-87.941727

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	10	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-007

Personnel: Ben Chandler

Sample Location: Willowbrook PD - Records Front

Pump ID: 10651

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1379.1 Minutes

Regulator ID: 05921

Sample Comments:

Galson ID:

Regulator-WR682
Canister-WL040

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:15:59 AM
Latitude:	41.747791
Longitude:	-87.941158

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	10	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-008

Personnel: Ben Chandler

Sample Location: Willowbrook PD - Detective

Pump ID: 155

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1377.1 Minutes

Regulator ID: 06074

Sample Comments:

Galson ID:

Regulator-WR705
Canister-WL153

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:19:42 AM
Latitude:	41.747740
Longitude:	-87.941321

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	12	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-009

Personnel: Ben Chandler

Sample Location: Willowbrook PD - Outdoors

Pump ID: 14104

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1470.3 Minutes

Regulator ID: 04358

Sample Comments:

Galson ID:

Regulator-WR571
Canister-WL254

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:27:33 AM
Latitude:	41.747899
Longitude:	-87.940724

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	10	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-012

Personnel: Ben Chandler

Sample Location: West Swim Club - Outdoors

Pump ID: 13965

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1366.11667 Minutes

Regulator ID: 04340

Sample Comments:

Galson ID:

Regulator-WR448
Canister-WL257

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:46:55 AM
Latitude:	41.751237
Longitude:	-87.941876

Flow Rate Calculations:

Initial Gauge Pressure	28	**In Hg**
Final Pressure	6	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-013

Personnel: Ben Chandler

Sample Location: West Swim Club - Indoors at Pool

Pump ID: 10664

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1447.73333 Minutes

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:51:06 AM
Latitude:	41.751081
Longitude:	-87.941964

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	18	**In Hg**
Sample Volume	0	**Liters**

Regulator ID: None

Sample Comments:

Galson ID:

Regulator-WR534
Canister-WL070

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-014

Personnel: DH

Sample Location: Grimsby residence indoors

Pump ID: 10660

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1421.06667 Minutes

Regulator ID: 06070

Sample Comments:

Galson ID

Can: WL063
Reg: WR700

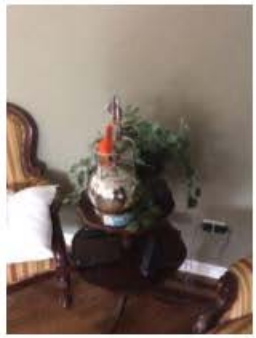
Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:58:10 AM
Latitude:	41.758640
Longitude:	-87.934482

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	8	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):



Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-016

Personnel: Ben Chandler

Sample Location: Public Works - Outdoors

Pump ID: 24018

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1445.05 Minutes

Regulator ID: 04590

Sample Comments:

Galson ID:

Regulator-WR654
Canister-WL276

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:59:44 AM
Latitude:	41.755344
Longitude:	-87.939498

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	17	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-015

Personnel: DH

Sample Location: Grimsby residence outdoors

Pump ID: 193

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1415.95 Minutes

Regulator ID: 10137

Sample Comments:

Galson IDs:

Can: WL192
Reg: WR837

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	9:02:08 AM
Latitude:	41.758545
Longitude:	-87.934690

Flow Rate Calculations:

Initial Gauge Pressure	29	**In Hg**
Final Pressure	7	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-004

Personnel: Ben Chandler

Sample Location: Willowbrook Hall - Outdoors

Pump ID: 179

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1439.38333 Minutes

Regulator ID: None

Sample Comments:

Galson ID:

Regulator-WR396
Canister-WL232

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	9:13:12 AM
Latitude:	41.748581
Longitude:	-87.941031

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	19	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-017

Personnel: Ben Chandler

Sample Location: Community Park - Outdoors

Pump ID: 10721

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1411.4 Minutes

Regulator ID: 10151

Sample Comments:

Galson ID:

Regulator-WR846
Canister-WL047

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	9:33:42 AM
Latitude:	41.748852
Longitude:	-87.949492

Flow Rate Calculations:

Initial Gauge Pressure	27	**In Hg**
Final Pressure	10	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-018

Personnel: Ben Chandler

Sample Location: Willow Pond - Outdoors

Pump ID: 24054

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1345.35 Minutes

Regulator ID: 04599

Sample Comments:

Galson ID:

Regulator-WR611
Canister-WL261

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	9:48:17 AM
Latitude:	41.763923
Longitude:	-87.939641

Flow Rate Calculations:

Initial Gauge Pressure	28	**In Hg**
Final Pressure	7	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-001

Personnel: DH

Sample Location: Village hall floor 3

Pump ID: 10634

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1440.98333 Minutes

Regulator ID: N/A

Sample Comments:

Galson ID:

Can: WL075
Reg: WR498

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:08 AM
Latitude:	41.748593
Longitude:	-87.941442

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	12	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-003

Personnel: DH

Sample Location: Village Hall Lobby

Pump ID: 201

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1366.9 Minutes

Regulator ID: N/A

Sample Comments:

Galson ID:

Regulator-WR619
Canister-WL172

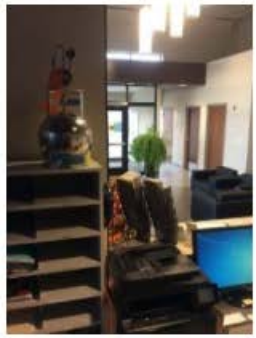
Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:20:53 AM
Latitude:	41.748291
Longitude:	-87.941467

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	19	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):



Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-011

Personnel: DH

Sample Location: Farber residence porch

Pump ID: 241

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1392.8 Minutes

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:42:11 AM
Latitude:	41.748838
Longitude:	-87.947462

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	9	**In Hg**
Sample Volume	0	**Liters**

Regulator ID: WR625

Sample Comments:

PSY501963
WL224

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-010

Personnel: DH

Sample Location: Farber residence hallway

Pump ID: 225

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1428.28333 Minutes

Regulator ID: 04348

Sample Comments:

Galson IDs:

Can: WL204
Reg: WR630

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	8:38:21 AM
Latitude:	41.749039
Longitude:	-87.947345

Flow Rate Calculations:

Initial Gauge Pressure	28	**In Hg**
Final Pressure	6	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-019

Personnel: Ben Chandler

Sample Location: Gower Elementary - Classroom

Pump ID: 24061

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1377.65 Minutes

Regulator ID: 10136

Sample Comments:

Galson ID:

Regulator-WR034
Canister-WL202

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:02:41 PM
Latitude:	41.748815
Longitude:	-87.954759

Flow Rate Calculations:

Initial Gauge Pressure	27	**In Hg**
Final Pressure	9	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-020

Personnel: Ben Chandler

Sample Location: Gower Elementary - North

Pump ID: 157

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1375.18333 Minutes

Regulator ID: 10158

Sample Comments:

Galson ID:

Regulator-WR850
Canister-WL158

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:08:42 PM
Latitude:	41.749623
Longitude:	-87.954887

Flow Rate Calculations:

Initial Gauge Pressure	25	**In Hg**
Final Pressure	5	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-021

Personnel: Ben Chandler

Sample Location: Gower Elementary - Gymnasium

Pump ID: 10498

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1378.15 Minutes

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:12:20 PM
Latitude:	41.749277
Longitude:	-87.955241

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	9	**In Hg**
Sample Volume	0	**Liters**

Regulator ID: None

Sample Comments:

Galson ID:

Regulator-WR369
Canister-WL128

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-022

Personnel: Ben Chandler

Sample Location: Gower Elementary - Learning

Pump ID: 10525

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1421.81667 Minutes

Regulator ID: 04575

Sample Comments:

Galson ID:

Regulator-WR500
Canister-WL148

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:18:22 PM
Latitude:	41.749426
Longitude:	-87.955351

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	21	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-023

Personnel: Ben Chandler

Sample Location: Gower Elementary - Outdoors

Pump ID: 10648

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1331.36667 Minutes

Regulator ID: 10142

Sample Comments:

Galson ID:

Regulator-WR845
Canister-WL034

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:26:30 PM
Latitude:	41.748558
Longitude:	-87.954885

Flow Rate Calculations:

Initial Gauge Pressure	27	**In Hg**
Final Pressure	8	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-024

Personnel: G. Wesley

Sample Location: Gower Middle School - #106

Pump ID: 10510

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1381 Minutes

Regulator ID: 04390

Sample Comments:

Galson ID:

Regulator-WR514
Canister-WL115

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:49:06 PM
Latitude:	41.744016
Longitude:	-87.934658

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	8	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-025

Personnel: G. Wesley

Sample Location: Gower Middle School - Library

Pump ID: 182

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1370.21667 Minutes

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:52:58 PM
Latitude:	41.743997
Longitude:	-87.933800

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	7	**In Hg**
Sample Volume	0	**Liters**

Regulator ID: 06075

Sample Comments:

Galson ID:

Regulator-WR707
Canister-WL182

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-026

Personnel: G. Wesley

Sample Location: Gower Middle School - #123

Pump ID: 24051

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1398.18333 Minutes

Regulator ID: 04182

Sample Comments:

Galson ID:

Regulator-WR861
Canister-WL285

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	1:56:48 PM
Latitude:	41.744116
Longitude:	-87.933289

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	27	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-027

Personnel: DH

Sample Location: Gower middle school north

Pump ID: 10618

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1345.01667 Minutes

Regulator ID: 06398

Sample Comments:

Galson IDs:

Can: WL087
Reg: WR018

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	2:06:17 PM
Latitude:	41.743739
Longitude:	-87.933388

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	17	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-028

Personnel: Ben Chandler

Sample Location: Gower Middle School - Outdoors

Pump ID: 10484

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1391.81667 Minutes

Regulator ID: 06727

Sample Comments:

Galson ID:

Regulator-WR784
Canister-WL135

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	2:09:43 PM
Latitude:	41.743627
Longitude:	-87.932279

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	12	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-029

Personnel: DH

Sample Location: Hinsdale South High School

Pump ID: 10522

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1387.3 Minutes

Regulator ID: 04525

Sample Comments:

Galson

Can: WL112
Reg: RR207

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	3:35:48 PM
Latitude:	41.753689
Longitude:	-87.953230

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	22	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-030

Personnel: DH

Sample Location: Hinsdale South High School 2nd

Pump ID: 168

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1382.75 Minutes

Regulator ID: 04294

Sample Comments:

Galson

Can: WL185
Reg: WR440

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	3:46:51 PM
Latitude:	41.753018
Longitude:	-87.952903

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	24	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-031

Personnel: DH

Sample Location: Hinsdale South High School

Pump ID: 10487

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1384.15 Minutes

Regulator ID: N/A

Sample Comments:

Galson:

Can: WL102
Reg: WR062

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	3:50:22 PM
Latitude:	41.753136
Longitude:	-87.953601

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	17	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-032

Personnel: DH

Sample Location: Hinsdale South High School

Pump ID: 233

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1386.56667 Minutes

Regulator ID: 04380

Sample Comments:

Galson
Can: WL222
Reg: WR508

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	3:54:52 PM
Latitude:	41.753104
Longitude:	-87.953734

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	9	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-033

Personnel: DH

Sample Location: Hinsdale South High School 3rd

Pump ID: 10696

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1388.88333 Minutes

Regulator ID: N/A

Sample Comments:

Galson
Can: WL050
Reg: WR635

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	3:58:04 PM
Latitude:	41.754143
Longitude:	-87.953221

Flow Rate Calculations:

Initial Gauge Pressure	30	**In Hg**
Final Pressure	9i	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/16/2018-034

Personnel: DH

Sample Location: Hinsdale South High School

Pump ID: 10529

Sample Start Time: 11/16/2018

Sample Stop Time: 11/17/2018

Sample Period: 1347.21667 Minutes

Regulator ID: 06818

Sample Comments:

Galson
Can: WL141
Reg: WR786

Auto-Entered Information:

Sample Date:	11/16/2018
Sample Time:	4:08:34 PM
Latitude:	41.754423
Longitude:	-87.951082

Flow Rate Calculations:

Initial Gauge Pressure	28	**In Hg**
Final Pressure	6	**In Hg**
Sample Volume	0	**Liters**

Sample Photo (Optional):

Village of Willowbrook, IL Ethylene Oxide Assessment Integrated Air Samples

Ethylene Oxide Risk

11183332

New Sample | Previous Sample | Next Sample

Sample ID: Air-11183332-11/17/2018-035

Personnel: G. Wesley

Sample Location: Blank

Pump ID: 223

Sample Start Time:

Sample Stop Time:

Sample Period: Minutes

Regulator ID:

Sample Comments:

Galson
Can: WL208
Reg: N/A

Auto-Entered Information:

Sample Date:	11/17/2018
Sample Time:	8:44:45 AM
Latitude:	41.748092
Longitude:	-87.941612

Flow Rate Calculations:

Initial Gauge Pressure		**In Hg**
Final Pressure		**In Hg**
Sample Volume		**Liters**

Sample Photo (Optional):