Chicago O'Hare Ambient Air Monitoring Project

SUMMARY

Background

- Air quality monitoring was initiated in response to community interest over air quality near O'Hare International Airport (O'Hare).
- The project was conducted by the Chicago Department of Aviation (CDA) with input provided by the Illinois Environmental Protection Agency (IEPA).
- IEPA selected the air monitoring sites; identified the equipment and a U.S. Environmental Protection Agency (USEPA)-certified lab to be used; established the methodologies and protocols to be followed; identified the pollutants to be sampled/analyzed; collected and sent the samples to the lab; and received the results.
- CDA identified possible monitoring sites (selected by IEPA); secured and installed the air monitoring equipment; and restored the sites upon completion. CDA was provided results from the IEPA. CDA prepared a results summary and performed limited interpretation of the results which were reviewed by the IEPA.

Monitoring Program

- Samples were collected between July 3, 2013, and February 10, 2014. This timeframe included the period of highest airport activity (July and August) and the latter part of the Illinois ozone season (April 1 to October 31).
- Two monitoring sites east of O'Hare (typically downwind of the airport) were selected by the IEPA as representative of potential airport-related sources: (1) a temporary IEPA monitor installed in Park Ridge about 2.5 miles from the east end of Runway 9L-27R and (2) an existing IEPA monitor in Schiller Park, one-half mile east of the end of Runway 10C-28C in between Mannheim Road and I-294 within 500 feet of the airport boundary.
- Each monitor measured 93 different compounds, including USEPA-designated Urban Air Toxics and other hazardous air pollutants (HAPs). These include volatile organic compounds (VOC), carbonyls, and polycyclic aromatic hydrocarbons (PAH).
- Typical VOC sources include: motor vehicles (cars, trucks), fuel dispensing operations, and nearby industry (auto repair, non-stick coatings manufacturing, electronics manufacturing, etc.).
- Typical PAH sources include: diesel on-road vehicles or construction equipment and diesel train engines.
- Typical carbonyl sources include: on-road vehicles (a result of fuel combustion), power plants, building material manufacturing, and photochemical formation in the atmosphere (ozone).

Data Evaluation

- Results were compared to (1) data collected during the same monitoring period at the existing IEPA Northbrook monitoring station, (2) data previously collected at the Schiller Park monitoring station, and (3) results from studies at communities surrounding other U.S. airports.
- A detailed comparison was conducted for 13 "target compounds" that could be associated with airport emissions, including aircraft and other airport vehicles (cars, trucks, equipment). However, airport emissions are not the only sources of these target compounds.

Conclusions

- The pollutant concentrations observed at Park Ridge and Schiller Park are representative/typical of urban air.
- Air quality in the vicinity of O'Hare is comparable to other U.S. urban areas.
- Air quality in the Chicago Metro Area is improving – most concentrations of target compounds detected at the Schiller Park site have decreased since 2000 (a national trend documented by USEPA).
- Motor vehicle exhaust and fuel additives (benzene, toluene, xylene (BTX), and methyl tert-butyl ether) influenced the results at both sites.
- Pollutant concentrations were often highest when wind was blowing east to west (towards the airport), suggesting that motor vehicles may have a greater impact on air quality than airport-related emissions.
- Concentrations of many target compounds at both Park Ridge and Schiller Park were similar to IEPA's existing HAPs monitor in the Chicago Metropolitan Area (Northbrook, IL).
- PAH concentrations were higher at Schiller Park than Park Ridge. Most of the VOC and carbonyl target compounds detected at both sites were approximately equal. Average concentrations for BTX fuel additives at Schiller Park and Park Ridge were consistently less than reported at other airport air monitoring studies.

Chicago O'Hare Ambient Air Monitoring Project

Park Ridge and Schiller Park, Illinois April 2015

In response to community interest over air quality near O'Hare International Airport (O'Hare), the Chicago Department of Aviation (CDA) undertook an evaluation of air quality near O'Hare. The study period was July 3, 2013, through February 10, 2014. During the study period, ambient air monitoring data was gathered from a temporary air monitoring station located at the southwest corner of Talcott Road and Hamlin Avenue in Park Ridge, and an existing Illinois Environmental Protection Agency (Illinois EPA) air monitoring station located at 4743 Mannheim Road in Schiller Park. The study covered the period of highest aircraft activity (July and August) and the latter part of the Illinois ozone season (April 1 through October 31). In total, 103 samples were collected at the Park Ridge site and 110 samples were collected at the Schiller Park site.

The monitoring sites were east of the airport (typically downwind of the airport as winds predominantly travel from west to east) and representative of potential airport-related sources. The temporary Park Ridge ambient air monitoring site was approximately 2.5 miles from the east end of Runway 9L-27R and underneath the flight path of aircraft approaching Runway 27R or departing Runway 9L. The existing Illinois EPA Schiller Park monitoring site is located within 500 feet of the eastern boundary of O'Hare and is the closest existing Illinois EPA air monitoring station.

Each monitor measured 93 different compounds, including U.S. Environmental Protection Agency (USEPA)-designated Urban Air Toxics and other hazardous air pollutants (HAPs) emitted by mobile sources (Attachment 1). These include volatile organic compounds (VOC), carbonyls, and polycyclic aromatic hydrocarbons (PAH). The compounds measured included 13 compounds that could be related to combustion engine exhaust ("target compounds").

Park Ridge and Schiller Park Ambient Air Monitoring Station Locations

Illinois EPA collected air samples at the Park Ridge and Schiller Park sites once every six days for a continuous 24-hour period. The Illinois EPA submitted the samples to the Eastern Research Group (ERG) laboratory, who independently determined all the air quality sample concentrations. The results indicated the following:

- The ambient air concentrations of many target compounds at both the Park Ridge and Schiller Park sites were similar to the other urban air monitoring site in the Chicago Metropolitan Area (in Northbrook, IL), as well as ambient air monitoring sites near other U.S. airports (see Tables 1 and 2).
- Average concentrations for toluene, ethyl benzene, m,p-xylene, and o-xylene measured at the Schiller Park and Park Ridge sites were consistently less than the concentrations reported in other airport air monitoring studies.
- Most concentrations of target compounds detected at the Schiller Park site have decreased since the previous Illinois EPA study conducted in 2000 and compared to the Annual Air Quality Report from 2012 (see Table 1).
- PAH concentrations were higher at the Schiller Park location than the Park Ridge location. The highest PAH concentrations were detected at Schiller Park when winds were traveling east to west (towards the airport); therefore, PAH concentrations are not likely attributable to aircraft or other airport emission sources.
- Average concentrations for most of the VOC and carbonyl target compounds detected at both sites were approximately equal.

The analytical results are included in Attachment 1 and results for target compounds, which include compounds known to be associated with aircraft, motor vehicles, and other combustion engine exhaust, are summarized in Tables 1 and 2. Since no applicable air quality standards exist for the monitored compounds, Tables 1 and 2 compare the air quality data collected near O'Hare during this study to results from Illinois EPA's monitoring site in Northbrook, to previous results from the Schiller Park site, and to similar airport-related air monitoring studies in other U.S. urban areas with airports. Additional details on project background, site selection, site location, site layout, methodology and schedule, and data evaluation are included following Tables 1 and 2.

TABLE 1
COMPARISON OF TARGET COMPOUND CONCENTRATIONS
COLLECTED AT ILLINOIS EPA AIR MONITORING SITES NEAR O'HARE

Average Parts per Billion by Volume (ppbV)					
Compound	**Schiller Park June 17 to December 26, 2000[a]**	**Schiller Park Illinois EPA 2012 Annual Air Quality Report[b]**	**Schiller Park July 3, 2013 to February 10, 2014[c]**	**Park Ridge July 3, 2013 to February 10, 2014[c]**	**Northbrook July 3, 2013 to February 10, 2014[d]**
Volatile Organic Compounds (VOC)					
1,3-Butadiene	0.11	0.062	0.057	0.045	0.029
Acrolein	ND	0.510	0.330	0.361	0.244
Benzene	0.50	0.297	0.204	0.191	0.144
Toluene	1.02	0.444	0.349	0.489	0.336
Ethyl benzene	0.15	NA	0.055	0.043	0.038
m,p-Xylene	NA	NA	0.137	0.103	0.087
o-Xylene	NA	NA	0.055	0.044	0.038
Methyl tert-Butyl Ether	NA	NA	0.025	0.384	0.014
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	0.001	NA	0.001	0.001	NA
Naphthalene	0.024	NA	0.022	0.013	NA
Phenanthrene	0.004	NA	0.002	0.002	NA
Carbonyls					
Acetaldehyde	0.88	1.51	1.35	1.47	1.48
Formaldehyde	3.54	2.50	2.60	2.06	1.29

Notes:

Chicago O'Hare Ambient Air Monitoring Project analytical results are shaded above.

[a] Illinois EPA, "Final Report Chicago O'Hare Airport, Air Toxic Monitoring Program – June-December 2000," Appendix IIIB, May 2002.

[b] Illinois EPA, Bureau of Air, "Illinois Annual Air Quality Report, 2012," Table B25, December 2013.

[c] See Schiller Park and Park Ridge results summary tables presented in Attachment 1.

[d] USEPA, "Air Data: Download Data Files," http://aqsdr1.epa.gov/aqsweb/aqstmp/airdata/download_files.html, updated June 13, 2014 (accessed September 5, 2014).

NA – Not available

ND – Not detected

TABLE 2
COMPARISON OF TARGET COMPOUND CONCENTRATIONS COLLECTED AT SCHILLER PARK AND PARK RIDGE WITH OTHER AIRPORT STUDIES

Average Parts per Billion by Volume (ppbV)					
Compound	**Schiller Park July 3, 2013 to February 10, 2014[a]**	**Park Ridge July 3, 2013 to February 10, 2014[a]**	**Logan Airport, MA September 2010 to September 2011[b]**	**T.F Green Airport, RI, April 2005 to August 2006[c]**	**Teterboro Airport, NJ, January 5 to December 3, 2006[d]**
Volatile Organic Compounds (VOC)					
1,3-Butadiene	0.057	0.045	0.029	0.04	NA
Acrolein	0.330	0.361	0.399	NA	NA
Benzene	0.204	0.191	0.192	0.27	0.42
Toluene	0.349	0.489	1.24	0.62	2.10
Ethyl benzene	0.055	0.043	0.679	0.10	0.19
m,p-Xylene	0.137	0.103	0.758	NA	0.68
o-Xylene	0.055	0.044	0.412	NA	0.20
Methyl tert-Butyl Ether	0.025	0.384	NA	0.39	NA
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	0.001	0.001	NA	NA	NA
Naphthalene	0.022	0.013	0.015	NA	NA
Phenanthrene	0.002	0.002	NA	NA	NA
Carbonyls					
Acetaldehyde	1.35	1.47	0.514	0.84	1.72
Formaldehyde	2.60	2.06	2.76	2.67	6.37

Notes:

Chicago O'Hare Ambient Air Monitoring Project analytical results are shaded above.

The Logan, Green, and Teterboro airport studies were conducted using ambient air monitoring sample collection and analytical methods, as well as sampling schedules (every 6 days) and durations (24 hours) similar to this study.

[a] See Schiller Park and Park Ridge results summary tables presented in Attachment 1.

[b] EA Engineering, Science, and Technology, Inc., "Phase II Air Quality Monitoring Study, Logan International Airport, Boston, Massachusetts," Table 11, May 2012.

[c] Rhode Island Department of Environmental Management, Office of Air Resources, "Characterization of Ambient Air Toxics in Neighborhoods Abutting T.F. Green Airport, Final Report," Table 3, April 2008.

[d] ENVIRON International Corporation, "Teterboro Airport, Teterboro, New Jersey, Detailed Air Quality Evaluation, Final Report," Table 5-1, February 11, 2008.

NA – Not available

Project Background

In response to community interest over air quality near O'Hare, air monitoring was conducted near O'Hare in Park Ridge and Schiller Park. A location for a temporary air monitoring site in Park Ridge was identified and an existing Illinois EPA monitoring site in Schiller Park was enhanced.

Each monitor measured 93 different compounds, including USEPA-designated Urban Air Toxics and other HAPs known to be emitted by mobile sources. Samples were collected for VOC analysis by USEPA Method TO-15; carbonyls analysis by USEPA Method TO-11A; and PAH analysis by USEPA Method TO-13A. These organic chemical classes include compounds known to be contained in fossil fuels and/or formed during fossil fuel combustion. The compounds measured included 13 compounds that could be related to combustion engine exhaust ("target compounds").

The ambient air monitoring results collected at the Schiller Park and Park Ridge locations were compared to results from Illinois EPA's established Ambient Air Monitoring Network site in Northbrook and to previous results from the Schiller Park site (see Table 1). The results were also compared to airport-related air monitoring studies in other U.S. urban areas with airports (see Table 2).

Site Selection

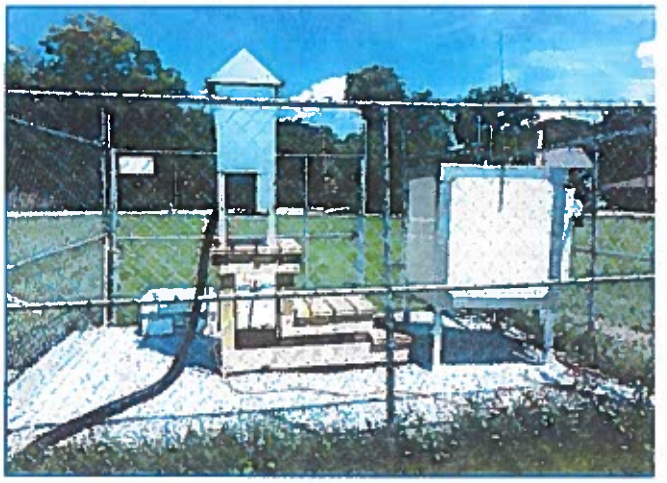
After screening potential monitoring locations within Park Ridge from a list of potential sites presented by the CDA, the monitoring site at the southwest corner of Talcott Road and Hamlin Avenue at Maine South High School was selected. This site was chosen based on the siting criteria presented in 40 CFR Part 58, including:

- Close proximity to flight paths
- Lack of nearby air pollution point sources
- Accessibility and security
- Power availability
- Site preparation requirements
- Distance from residents (to avoid noise impacts from the air monitoring equipment)
- Lack of obstructions such as buildings, trees, etc.
- Distance from roadways

Site Locations

The Park Ridge monitoring site was located within a vacant lot at the southwest corner of Talcott Road and Hamlin Avenue, which is 2.5 miles from the east end of Runway 9L-27R. The vacant lot is owned by the Maine Township School District but it is outside of the Maine South High School campus. The lot is bordered by Talcott Road to the north, Hamlin Avenue to the east, a ComEd substation to the south, and a school driveway to the west. The nearest residence is located about 200 feet east across Hamlin Avenue. The monitoring equipment was installed approximately 100 feet south of Talcott Road and 62 feet east of the school drive. The location of the Park Ridge monitoring equipment met the siting requirements specified in 40 CFR Part 58, Appendix E, based on the annual average daily traffic count of 11,200 vehicles for nearby Talcott Road.

The existing Schiller Park monitoring site is one of the Illinois EPA's established National Air Monitoring Station Network sites and is located at 4743 Mannheim Road in Schiller Park. The site is one-half mile east of the end of Runway 10C-28C in between Mannheim Road and I-294 and within 500 feet of the eastern airport boundary. The Illinois EPA located the Schiller Park site east of O'Hare where predominant winds (west to east) provide the greatest frequency of potential impact from airport operations.



Temporary Air Monitoring Station
Southwest Corner of Talcott Road and Hamlin Avenue
Park Ridge, Illinois

Existing Illinois EPA Air Monitoring Station
4743 Mannheim Road, Schiller Park, Illinois

Site Layout

The following equipment was installed at the Park Ridge ambient air monitoring site:

- 6-foot-high chain link fence and locked access gate; approximate fenced area was 10 by 10 feet
- Temperature-controlled enclosure (approximate dimensions of 4 by 4 by 4 feet) for the carbonyl and VOC air monitoring equipment
- For carbonyl and VOC sampling, sample inlets attached to the temperature-controlled equipment enclosure that extended above the fence
- Raised wooden platform approximately 2 feet high for the PAH air monitoring equipment
- Tisch TE-1000 polyurethane foam (PUF) high-volume air sampler placed on the raised wooden platform
- Sample inlets within the breathing zone (at least 6 feet above the ground surface, as required by 40 CFR Part 58, Appendix E)

The Illinois EPA's existing ambient air monitoring program included testing for VOCs and carbonyls at the Schiller Park site. To match the detection capabilities of the Park Ridge site, temporary air monitoring equipment to detect PAHs was installed at the Schiller Park monitoring site.

TRC Companies, Inc. (TRC) provided and installed the Tisch TE-1000 PUF high-volume air samplers at both sites. ERG laboratory in Morrisville, North Carolina, provided the carbonyl and VOC sampling equipment and all sample media and canisters for both sites. ERG also conducted the Schiller Park PAH analysis and the Park Ridge PAH, VOC, and carbonyl analyses.

Sampling Methodology and Schedule

Illinois EPA personnel collected all air samples at the Park Ridge and Schiller Park sites; samples were collected continuously for a 24-hour period (midnight to midnight) once every six days in accordance with existing Illinois Ambient Air Monitoring Network procedures and the 2013 and 2014 monitoring schedules provided by the USEPA. The sampling timeframe included the period of highest aircraft activity (July and August) and the latter part of the Illinois ozone season stipulated as April 1 through October 31 in 40 *Code of Federal Regulations* (CFR) Part 58 Appendix D, Table D-3. Illinois EPA submitted all samples to the ERG laboratory in Morrisville, North Carolina, for analysis in accordance with 40 CFR 58. Samples were collected from July 3, 2013, to February 10, 2014.

Data Compilation

ERG determined all air quality sample concentrations and sent the results to Illinois EPA, who then forwarded the data to CDA representatives. The results are tabulated in Attachment 1, which includes the average, standard deviation, and maximum concentration for each contaminant.

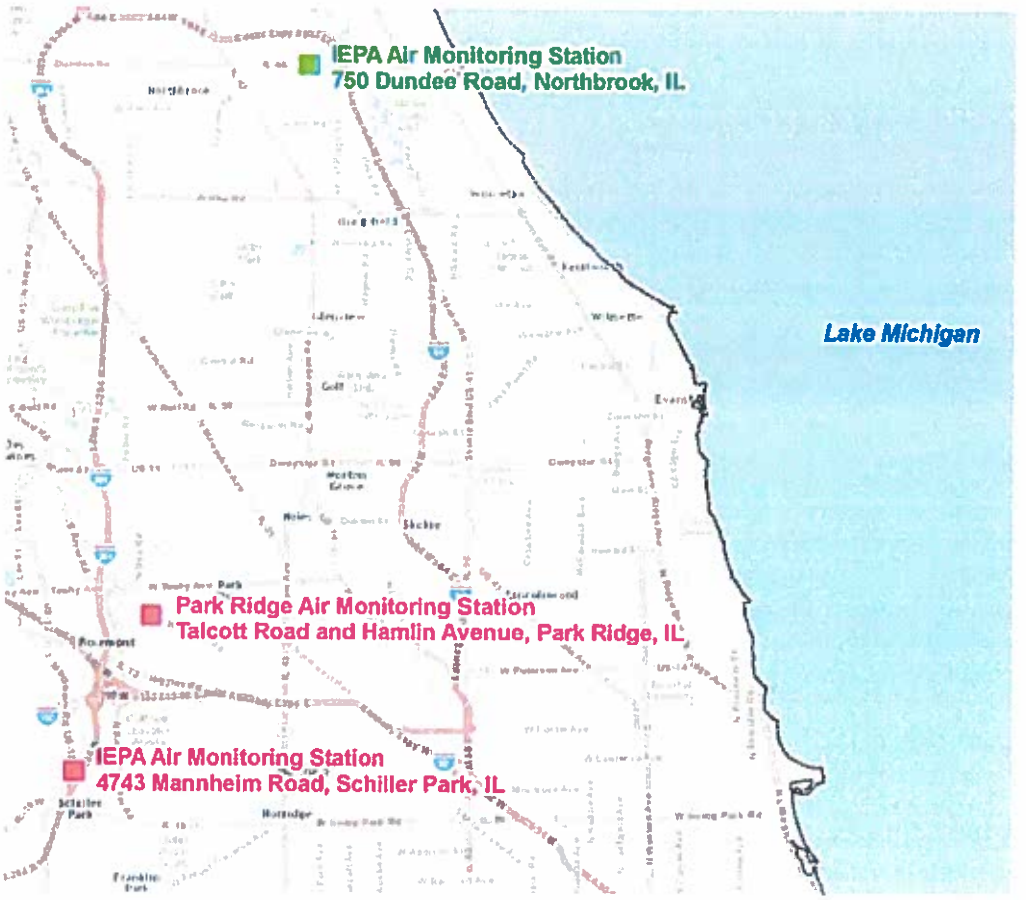
Comparative Data Analysis

Of the 93 different contaminants sampled and provided in Attachment 1, the study focused on comparative data analysis of 13 target compounds (Tables 1 and 2). The USEPA has linked these target compounds to combustion engine exhaust based on commercial aircraft and motor vehicle (car and truck) exhaust compound profiles in their Speciate database (http://cfpub.epa.gov/si/speciate/).

The Park Ridge and Schiller Park average concentrations of target compounds detected during this monitoring study were compared to Schiller Park monitoring data published in the 2000 Illinois EPA O'Hare Air Toxic Monitoring Program study and the 2012 Illinois EPA Annual Air Quality Report, and to similar data collected by Illinois EPA at the existing Northbrook ambient air monitoring site (see Table 1). The data was also compared to data collected at ambient air monitoring sites near other U.S. airports, as provided in Table 2. The results indicate:

- Most target compound concentrations detected at the Schiller Park site during this study were lower than those detected at the same site in 2000 and in 2012.
- Air quality in the vicinity of O'Hare is comparable to other U.S. urban areas with airports.
- Average concentrations for toluene, ethyl benzene, m,p-xylene, and o-xylene measured at the Schiller Park and Park Ridge sites are consistently less than the concentrations reported in other airport air monitoring studies.
- Average concentrations for most of the VOC and carbonyl target compounds detected at both sites were approximately equal.
- Concentrations of methyl-tert-butyl ether (MTBE) and toluene, which the USEPA identifies as common gasoline fuel additives, are highest at the Park Ridge location, suggesting motor vehicles may have an impact on Park Ridge air quality. The average Schiller Park MTBE concentration is significantly lower.

- Most VOC target compound concentrations at the Schiller Park location were comparable regardless of wind direction, indicating that VOC concentrations represent ambient background in the vicinity and are more likely impacted by motor vehicle exhaust.
- Several VOC target compound concentrations detected at the Park Ridge location, including ethyl benzene, xylene, toluene and MTBE, were detected at higher concentrations when the wind was blowing east to west (towards the airport). This suggests motor vehicles or fuel storage and dispensing operations may have a greater impact on air quality than airport-related emissions.
- PAH concentrations were higher at the Schiller Park site than the Park Ridge site. The highest PAH concentrations were detected at the Schiller Park site when the wind was blowing east to west (towards the airport); therefore, PAH concentrations are more likely attributable to non-airport emission sources.
- PAH concentrations at Schiller Park may have been impacted by on-going road construction activities along Mannheim Road during the monitoring period.



Chicago Metropolitan Area Ambient Air Monitoring Stations

Additional Information Sources

Illinois EPA Air Monitoring Network Plans for 2013 and 2014:
http://www.epa.state.il.us/air/monitoring/2013/air-monitoring-network-plan.pdf
http://www.epa.state.il.us/air/monitoring/2014/air-monitoring-network-plan.pdf

Ambient Air Monitoring Network monitoring schedule provided by USEPA:
http://www.epa.gov/ttnamti1/files/ambient/pm25/calendar_2013.pdf and
http://www.epa.gov/ttnamti1/files/ambient/pm25/calendar_2014.pdf

EPA's Air Data website:
http://aqsdr1.epa.gov/aqsweb/aqstmp/airdata/download_files.html

Illinois Environmental Protection Agency 2012 Annual Emissions Report:
http://www.epa.state.il.us/air/air-quality-report/2012/air-quality-report-2012.pdf

"Phase II Air Quality Monitoring Study, Logan International Airport, Boston, Massachusetts," May 2012, prepared by EA Engineering, Science, and Technology, Inc.:
https://www.massport.com/media/210245/FinalYear2YearEndReport.pdf

"Characterization of Ambient Air Toxics in Neighborhoods Abutting T.F. Green Airport, Final Report," April 2008, prepared by Rhode Island Department of Environmental Management, Office of Air Resources:
http://www.dem.ri.gov/programs/benviron/air/pdf/tfgfinrp.pdf

"Teterboro Airport, Teterboro, New Jersey, Detailed Air Quality Evaluation, Final Report," February 11, 2008, prepared by ENVIRON International Corporation:
http://www.state.nj.us/dep/dsr/teterboro/environ-teterborofinalrep021108.pdf

"Airport Air Quality Manual," 2011, prepared by International Civil Aviation Organization:
http://www.icao.int/environmental-protection/Documents/Publications/FINAL.Doc%209889.1st%20Edition.alltext.en.pdf

"O'Hare Modernization Final Environmental Impact Statement," July 2005:
http://www.faa.gov/airports/airport_development/omp/eis/feis/

U.S. Environmental Protection Agency Speciate Database:
http://cfpub.epa.gov/si/speciate/

"Final Report Chicago O'Hare Airport, Air Toxic Monitoring Program – June-December 2000," prepared by Illinois Environmental Protection Agency, May 2002:
http://www.epa.state.il.us/air/ohare/ohare-toxic-report.pdf

Contact

David Robbins
Chicago Department of Aviation
O'Hare Modernization Program Office
10510 West Zemke Road
Chicago, IL 60666
David.Robbins@cityofchicago.org

ATTACHMENT 1

ANALYTICAL RESULTS SUMMARY TABLES
(20 Pages)

Table A-1
Chicago O'Hare International Airport Air Monitoring Project
PAH Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date	7/3/2013		7/9/2013		7/15/2013		7/21/2013		8/2/2013		8/8/2013		8/14/2013		8/20/2013		8/26/2013		9/1/2013		9/7/2013		9/13/2013		9/25/2013	
ANALYTE	Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)	
9-Fluorenone	1.62		3.59		4.03		2.67		3.5		1.01		1.44		4.72		2.95		2.45		3.8		0.512		1.18	
Acenaphthene	4.92		9.35		7.29		6.14		13.9		4.99		8.09		11.3		8.2		12		12.6		3.08		13.5	
Acenaphthylene	0.498		ND		ND		ND		ND		ND		0.38		ND		ND		ND		ND		0.304		0.883	
Anthracene	0.431	B	ND		ND		ND		0.738	B	0.314	B	0.375		ND		0.164		0.393		ND		0.338		0.347	
Benzo (a) anthracene	0.0637	U	0.0514	U	0.0595	U	0.0436	U	0.0455	U	0.0349	U	0.0625	U	0.0562	U	0.0393	U	0.0449	U	0.0573	U	0.0332	U	0.0556	U
Benzo (a) pyrene	0.0792		0.0601	U	0.0922		0.0678		0.0485	U	0.0538	U	0.0897		0.0812		0.0665		0.0596		0.0761		0.0524	U	0.0927	
Benzo (b) fluoranthene	0.171		0.119		0.203		0.129		0.12		0.0909		0.193		0.191		0.123		0.103		0.152		0.108		0.225	
Benzo (e) pyrene	0.0869		0.0609		0.0998		0.062		0.0678		0.0405	U	0.104		0.0945		0.0529		0.0486	U	0.0726		0.05	U	0.111	
Benzo (g,h,i) perylene	0.0913		0.0609		0.102		0.0539		0.075		0.0444	U	0.132		0.196		0.0597		0.0556		0.071		0.044	U	0.117	
Benzo (k) fluoranthene	0.0549	U	0.0419	U	0.0622	U	0.0378	U	0.0322	U	ND		0.054	U	0.0441	U	0.0401	U	0.0324	U	0.0416	U	0.0295	U	0.0518	U
Chrysene	0.168		0.157		0.236		0.13		0.15		0.108		0.132		0.189		0.148		0.106		0.195		0.0893		0.168	
Coronene	0.0317	U	ND		0.0354	U	ND		0.039	U	ND		0.0558	U	0.129		ND		0.0243	U	0.0279	U	ND		0.0329	U
Cyclopenta[cd]pyrene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	U
Dibenz (a,h) anthracene	ND		ND		ND		ND		ND		ND		0.0232	U	ND		ND		0.0225	U	ND		ND		ND	U
Fluoranthene	3.12		7.17		7.2		4.66		6.72		2.82		2.56		5.53		5.62		5.42		5.73		1.32		1.68	
Fluorene	5.83		14.1		12.8		9.36		16.2		6.48		7.66		17.1		11.5		14		16.3		3.12		8.29	
Indeno(1,2,3-cd)pyrene	0.102		0.0881		0.109		0.0609		0.0622		ND		0.122		0.103		0.0669		0.0618		0.0891		0.05		0.0923	
Naphthalene	81	B	75.3	B	95.1	B	52.8	B	134	B	40	B	74.1	B	147	B	67.8	B	72		119		32.5		178	B
Perylene	ND		ND		ND		ND		ND		ND		0.0259	U	ND		ND		ND		ND		ND		ND	
Phenanthrene	13.6	B	34.5		34.4		23.5	B	35.2	B	13.7	B	14	B	29.4	B	22.8	B	26.9		28.2		5.99		11	
Pyrene	1.17		2.56		2.41		1.56		2.68		1.04		1.1		3.11		2.19		1.98		2.28		0.595		0.816	
Retene	0.0523	U	0.081	U	0.068	U	0.048	U	0.12	U	ND	U	0.0884	U	0.0961	U	0.0842	U	0.132		0.124		0.044	U	0.0408	U

Sample Date	10/1/2013		10/7/2013		10/13/2013		10/19/2013		10/25/2013		10/31/2013		11/6/2013		11/12/2013		11/18/2013		11/24/2013		11/30/2013		12/6/2013		12/12/2013	
ANALYTE	Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)		Conc (ng/m3)	
9-Fluorenone	2.25		0.929		1.07		0.642		0.646		1.09		0.574		0.553		0.331		0.53		1.67		0.450		0.83	
Acenaphthene	6.43		4.430		8.21		3.44		2.11		5.22		2.34		0.934		0.821		0.977		2.94		1.010		1.67	
Acenaphthylene	ND		1.270		1.36		0.373		0.37		0.276		0.37		0.57		0.311		0.443		0.86		1.010		2.56	
Anthracene	ND		0.386	B	0.346	B	0.256	B	0.276	B	0.426	B	0.201	B	0.138	B	0.172	B	0.132	B	0.23	B	0.165		0.324	
Benzo (a) anthracene	0.0461	U	0.122		0.0502	U	0.0716		0.0957	U	0.0477	U	0.0363	U	0.0803	U	0.046	U	0.0691	U	0.1180		0.046	U	0.0673	U
Benzo (a) pyrene	0.069		0.113		0.101		0.0779		0.162		0.0254	U	0.0502	U	0.133		0.0488	U	0.0706		0.124		0.073		0.108	
Benzo (b) fluoranthene	0.142		0.239		0.265		0.163		0.32		0.0681		0.1		0.281		0.133		0.23		0.413		0.254		0.331	
Benzo (e) pyrene	0.074		0.114		0.131		0.0845		0.173		0.038	U	0.0521	U	0.144		0.0708	U	0.109		0.187		0.117		0.153	
Benzo (g,h,i) perylene	0.073		0.144		0.164		0.104		0.188		0.0566		0.0689		0.162		0.0638		0.116		0.165		0.105		0.158	
Benzo (k) fluoranthene	0.0472	U	0.065		0.0651		0.0665		0.127		ND		0.0334	U	0.0898		0.0417	U	0.0784		0.1060		0.075		0.1180	
Chrysene	0.138		0.243		0.14		0.179		0.279	B	0.147		0.108		0.221		0.0919	B	0.185		0.289		0.201		0.29	
Coronene	0.0324	U	0.0505	U	0.0731		0.043		ND		ND		ND		0.0576		ND		0.0461	U	0.0674		0.0356	U	0.0667	U
Cyclopenta[cd]pyrene	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Dibenz (a,h) anthracene	ND		ND		0.0199	U	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Fluoranthene	3.82		1.95		1.32	B	1.47		1.24	B	3.39		1.46		0.91		0.546	B	0.64		1.46		0.83		1.21	
Fluorene	6.74		3.94		6.29		2.84		2.21		4.7		2.4		1.19		0.692		0.946		3.52		ND		2.36	
Indeno(1,2,3-cd)pyrene	0.0702		0.104		0.138		0.0797		0.183		0.033	U	0.0455		0.142		0.0633		0.104		0.1660		0.094		0.166	
Naphthalene	55.9	B	80.1	QB	123	B	38.1	B	45.9	B	57.5	B	34.8	B	29.8	B	23.2	B	32.8	B	61.2	B	39.6	B	67	B
Perylene	ND		0.020	U	ND		ND		ND		ND		ND		0.0198	U	ND		ND		0.03	U	ND		ND	
Phenanthrene	15.60	B	7.51		9.17	B	5.14	B	4.27	B	13.9	B	5.01	B	2.26		1.7	B	1.78	B	4.68		2.25		3.74	
Pyrene	1.61		1.09		0.654		0.894		0.87	B	1.69		0.829		0.713		0.35	B	0.459		0.90		0.54		0.922	
Retene	0.06	U	0.173		0.542		0.105		0.0649	U	0.123		0.0612	U	0.0661	U	0.0403	U	0.119		0.14		0.086	U	0.070	U

Table A-1
Chicago O'Hare International Airport Air Monitoring Project
PAH Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date / ANALYTE	12/18/2013 Conc (ng/m3)	12/24/2013 Conc (ng/m3)	12/30/2013 Conc (ng/m3)	1/5/2014 Conc (ng/m3)	1/11/2014 Conc (ng/m3)	1/23/2014 Conc (ng/m3)	1/29/2014 Conc (ng/m3)	2/4/2014 Conc (ng/m3)	2/10/2014 Conc (ng/m3)	N	Mean Conc (ng/m3)	Standard Deviation (ng/m3)
9-Fluorenone	**1.160**	**1.710**	**0.97**	**0.788**	**0.574**	**0.923**	**1.25**	**1.84**	**0.761**	35	1.572	1.264
Acenaphthene	**1.69**	**1.76**	**1.37**	**1.02**	**1.91**	**1.28**	**2.02**	**2.38**	**1.140**	35	4.870	2.949
Acenaphthylene	**0.736**	**2.37**	**1.310**	**0.811**	**0.215**	**0.839**	**1.56**	**1.34**	**0.903**	25	0.877	0.621
Anthracene	**0.312**	**0.436**	**0.275**	**0.191**	**0.194**	**0.222**	**0.355** QB	**0.37**	**0.178**	29	0.300	0.127
Benzo (a) anthracene	**0.1160**	**0.1870**	**0.1790**	**0.0649**	**0.029**	**0.208**	**0.179**	**0.1330**	**0.145**	12	0.1294	0.054
Benzo (a) pyrene	**0.1440**	**0.233**	**0.2770**	**0.0891** B	**0.0496**	**0.213**	**0.192**	**0.164**	**0.186**	30	0.117	0.058
Benzo (b) fluoranthene	**0.435**	**0.81**	**0.8670**	**0.245** B	**0.0945**	**0.491**	**0.559**	**0.520**	**0.527**	35	0.269	0.041
Benzo (e) pyrene	**0.1920**	**0.320**	**0.365**	**0.111** B	**0.046**	**0.239**	**0.277**	**0.256**	**0.253**	29	0.144	0.084
Benzo (g,h,i) perylene	**0.201**	**0.304**	**0.3250**	**0.14** B	**0.0797**	**0.231**	**0.331**	**0.284**	**0.213**	33	0.098	0.047
Benzo (k) fluoranthene	**0.1300**	ND	**0.2940**	**0.0617**	**0.0266** U	**0.149**	**0.17**	**0.1440**	**0.120**	16	0.1163	0.058
Chrysene	**0.329**	**0.644**	**0.689**	**0.213**	**0.0637**	**0.431**	**0.463**	**0.408**	**0.402**	35	0.232	0.038
Coronene	**0.063** U	**0.1090**	**0.0858**	**0.139** B	**0.127** B	**0.0914**	**0.139**	**0.1080**	**0.0804**	13	0.0961	0.032
Cyclopenta[cd]pyrene	ND	ND	ND	**0.0283** U	ND	ND	ND	ND	ND	0	ND	N/A
Dibenz (a,h) anthracene	**0.0249** U	ND	ND	**0.0594** B	**0.0659**	**0.0475**	**0.048** J	ND	**0.033** U	4	0.0552	0.009
Fluoranthene	**1.69**	**2.22**	**2.24**	**0.988**	**1.19**	**1.67**	**1.81**	**2.18**	**1.30**	35	2.717	1.854
Fluorene	ND	ND	**1.9**	**1.97**	**2.54**	**1.68**	**2.43**	ND	**1.55**	31	6.215	5.170
Indeno(1,2,3-cd)pyrene	**0.1980**	**0.396**	**0.415**	**0.182** B	**0.101**	**0.275**	**0.333**	**0.3320**	**0.272**	35	0.144	0.023
Naphthalene	**45.4** B	**70.3** B	**62.9** B	**55.1**	**37.1**	**54.6** B	**77.3** B	**98.9**	**44.9**	35	68.686	35.237
Perylene	ND	**0.0418** U	**0.0680**	ND	ND	**0.0542**	**0.0323** U	**0.04** U	**0.029** U	2	0.0611	0.010
Phenanthrene	**5.19**	**5.89**	**4.3** B	**4.09**	**6.92**	**3.53**	**5.19**	**6.97**	**3.11**	35	11.867	9.261
Pyrene	**1.160**	**1.51**	**1.50**	**0.555**	**0.631**	**1.24**	**1.56**	**1.53**	**0.77**	35	1.299	0.776
Retene	**0.065** U	**0.4870**	**0.092** U	**0.123**	**0.0478**	**0.202**	**0.171**	**0.23**	**0.106**	15	0.1883	0.140

Notes:
Values in BOLD indicate measured concentrations above detection limit
Mean concentrations and standard deviations calculated using detected values only
N - Number of samples with detected concentrations (total number of samples = 35)
U - The analyte concentration is below the detection limit
ND - The analyte was not detected at or above the Method Detection Limit (MDL)
B - The analyte was also detected in the associated method or field blank at a concentration below 5 x MDL
J - Reported value is considered estimated based on spike recovery values
QB - The analyte was also detected in the associated method blank at a concentration greater than 5 x MDL, however it did not adversely impact sample data
N/A - Not applicable
ng/m^3 - Nanograms per cubic meter

Table A-2
Chicago O'Hare International Airport Air Monitoring Project
PAH Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

ANALYTE / Sample Date	7/3/2013 Conc (ng/m3)	7/9/2013 Conc (ng/m3)	7/15/2013 Conc (ng/m3)	7/21/2013 Conc (ng/m3)	8/2/2013 Conc (ng/m3)	8/8/2013 Conc (ng/m3)	8/14/2013 Conc (ng/m3)	8/20/2013 Conc (ng/m3)	8/26/2013 Conc (ng/m3)	9/1/2013 Conc (ng/m3)	9/7/2013 Conc (ng/m3)	9/25/2013 Conc (ng/m3)	10/1/2013 Conc (ng/m3)
9-Fluorenone	3.23	5.3	8.09	3.81	4.84	1.99	2.67	7.64	4.35	3.82	1.34	2.82	3.31
Acenaphthene	10.1	13.6	20.3	11.6	14.7	9.94	13.7	18.9	15.7	13.8	7.3	13.9	15.1
Acenaphthylene	1.34	ND	ND	ND	ND	0.345	0.808	ND	ND	ND	0.609	1.41	0.48
Anthracene	0.918 B	0.664 B	0.519 B	0.7	1.07 B	0.897 B	0.904 B	0.778	0.37	0.337	0.747	1.09	ND
Benzo (a) anthracene	0.146	0.105 U	0.145	0.066 U	0.133	0.0576 U	0.121	0.531	0.102	0.18	0.103	0.139	0.116
Benzo (a) pyrene	0.182	0.114	0.182	0.0823	0.15	0.0626 U	0.165	0.555	0.156	0.192	0.143	0.191	0.15
Benzo (b) fluoranthene	0.398	0.28	0.421	0.186	0.357	0.155	0.385	0.9	0.317	0.39	0.388	0.463	0.328
Benzo (e) pyrene	0.211	0.14	0.22	0.085	0.192	0.0722	0.214	0.419	0.169	0.181	0.212	0.243	0.162
Benzo (g,h,i) perylene	0.225	0.139	0.224	0.0928	0.228	0.0894	0.253	0.42	0.184	0.18	0.224	0.26	0.174
Benzo (k) fluoranthene	0.121	0.0731 U	0.126	0.0555 U	0.0956	0.0313 U	0.0979	0.306	0.0966	0.109	0.119	0.116	0.0954
Chrysene	0.373	0.343	0.525	0.269	0.399	0.209	0.357	0.811	0.339	0.387	0.3	0.406	0.304
Coronene	0.0959	0.0605 U	0.0895	0.0345 U	0.0976	ND	0.104	0.14	0.0801	0.069	0.0698	0.0842	0.0662
Cyclopenta(cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0383 U	ND U
Dibenz (a,h) anthracene	ND	ND	ND	ND	0.0268 U	ND	ND	0.0802	ND	0.0302 U	ND	ND U	0.0293 U
Fluoranthene	6.49	10.1	14	9.1	9.27	6.78	5.59	10	7.82	7.75	3.65	5.16	5.43
Fluorene	10.2	16.7	22.5	13.8	15.8	10.4	11.8	22.6	16	15.7	6.01	13.2	10.8
Indeno(1,2,3-cd)pyrene	0.22	0.133	0.249	0.0905	0.189	0.0767	0.187	0.467	0.191	0.204	0.186	0.248	0.167
Naphthalene	157 B	132 B	189 B	73.1 B	171 B	72.8 B	165 B	203 B	116 B	110	80.6	178 B	93.5 B
Perylene	0.0384 U	0.0197 U	0.0381 U	ND	0.0292 U	ND	ND	0.11	0.0268 U	0.0392 U	0.024 U	0.0253 U	0.0285 U
Phenanthrene	24.1 B	43.5	56.9	36.8 B	40.3 B	24.8 B	24.1 B	44.3 B	30.7 B	30.7	12.9	23.2	22.2 B
Pyrene	3	4.23	5.74	3.51	4.47	2.93	2.83	4.71	3.44	3.36	2	2.57	2.63
Retene	0.104 U	0.0862 U	0.0777 U	0.047 U	0.176	0.0744 U	0.109 U	0.121	0.0845 U	0.114 U	0.0812 U	0.0861 U	0.0798 U

ANALYTE / Sample Date	10/7/2013 Conc (ng/m3)	10/13/2013 Conc (ng/m3)	10/19/2013 Conc (ng/m3)	10/25/2013 Conc (ng/m3)	10/31/2013 Conc (ng/m3)	11/6/2013 Conc (ng/m3)	11/12/2013 Conc (ng/m3)	11/18/2013 Conc (ng/m3)	11/24/2013 Conc (ng/m3)	11/30/2013 Conc (ng/m3)	12/6/2013 Conc (ng/m3)	12/12/2013 Conc (ng/m3)	12/18/2013 Conc (ng/m3)
9-Fluorenone	1.67	2.14	1.28	1.36	1.56	1.15	1.23	0.999	1.17	2.46	2.01	2.77	1.79
Acenaphthene	7.99	12	7.68	4.66	6.82	3.83	1.35	ND	1.6	4.80	3	4.00	2.24
Acenaphthylene	1.92	1.16	0.805	0.493	0.578	1.12	1.83	1.73	0.92	1.46	4.39	3.290	0.863
Anthracene	0.836 B	0.756 B	0.54 B	0.641 B	0.72 B	0.602 B	0.508 B	0.425 B	0.3260 B	0.467 B	0.947	1.06	0.588
Benzo (a) anthracene	0.153	1.22	0.17	0.247	0.151	0.194	0.234	0.114	0.148	0.222	0.47	0.27	0.225
Benzo (a) pyrene	0.204	1.09	0.196	0.385	0.0528 U	0.178	0.316	0.162	0.19	0.296	0.60	0.310	0.256
Benzo (b) fluoranthene	0.398	1.73	0.493	0.877	0.138	0.37	0.703	0.347	0.545	0.835	1.57	0.986	0.719
Benzo (e) pyrene	0.214	0.766	0.27	0.474	0.071	0.225	0.374	0.178	0.274	0.385	0.845	0.50	0.328
Benzo (g,h,i) perylene	0.232	0.637	0.277	0.528	0.0827	0.236	0.401	0.229	0.277	0.327	0.843	0.544	0.351
Benzo (k) fluoranthene	0.123	0.554	0.18	0.272	ND	0.137	0.232	0.11	0.1530	0.230	0.495	0.33	0.216
Chrysene	0.342	1.43	0.449	0.688 B	0.322	0.412	0.567	0.249 B	0.390	0.596	1.25	0.868	0.556
Coronene	0.08	0.214	0.112	0.192	ND	0.0676	0.146	0.081	0.1120	0.12	0.280	0.221	0.112
Cyclopenta(cd)pyrene	ND	0.09	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz (a,h) anthracene	ND	0.149	0.0329 U	0.0646	ND	ND	ND	ND	0.0304 U	0.0420	0.099	0.0404 U	0.0331 U
Fluoranthene	2.54	4.47 B	2.84	2.41 B	4.57	2.78	1.8	1.07 B	1.30	2.51	3.54	3.70	2.52
Fluorene	5.97	8.56	5.47	4.24	5.82	3.71	ND	2.37	1.6	4.70	4.23	5.29	3.26
Indeno(1,2,3-cd)pyrene	0.201	0.819	0.266	0.527	0.0488	0.183	0.392	0.177	0.257	0.340	0.800	0.533	0.368
Naphthalene	114 B	152 QB	74.8 B	88.3 B	77.1 B	76.1 B	66.7 B	89.5 B	55.8 B	91 B	146 B	211.0 B	64.9 B
Perylene	0.0348 U	0.249	0.0317 U	0.079	ND	0.0374 U	0.0598	0.0281 U	0.0414 U	0.0537	0.144	0.0845	0.039 U
Phenanthrene	11.3	12.8 B	9.87 B	7.69 B	16.6 B	7.66 B	4.25	3.47 B	3.5 B	7.9	8.9	12.70	8.05
Pyrene	1.73	3.22	1.92	2.06 B	2.67	2.14	1.8	1.15 B	1.13	1.75	3.32	3.19	2.12
Retene	0.0961 U	0.233	0.212	0.11 U	0.271	0.0921 U	0.142 U	0.045 U	0.1610	0.2310	0.166 U	0.219	0.10 U

Table A-2
Chicago O'Hare International Airport Air Monitoring Project
PAH Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date / ANALYTE	12/24/2013 Conc (ng/m3)	12/30/2013 Conc (ng/m3)	1/10/2014 Conc (ng/m3)	1/11/2014 Conc (ng/m3)	1/23/2014 Conc (ng/m3)	1/29/2014 Conc (ng/m3)	2/4/2014 Conc (ng/m3)	2/10/2014 Conc (ng/m3)	N	Mean Conc (ng/m3)	Standard Deviation (ng/m3)
9-Fluorenone	1.71	1.73	1.59	0.949	0.923	1.25	3.37	1.89	34	2.594	1.766
Acenaphthene	2.22	2.28	2.33	2.52	1.28	2.0	3.76	3	33	7.810	5.723
Acenaphthylene	2.030	2.97	2.31	0.83	0.839	1.56	1.73	3.59	27	1.534	1.025
Anthracene	0.47	0.643	0.635	0.481	0.222	0.3550 QB	0.851	0.604	33	0.657	0.230
Benzo (a) anthracene	0.267	0.264	0.178	0.0492	0.208	0.179	0.471	0.33	31	0.241	0.213
Benzo (a) pyrene	0.3150	0.323	0.193 B	0.0586	0.213	0.19	0.540	0.37	32	0.270	0.198
Benzo (b) fluoranthene	0.999	1.05	0.416 B	0.127	0.491	0.559	1.470	1.00	34	0.612	0.407
Benzo (e) pyrene	0.428	0.472	0.24 B	0.0672	0.239	0.277	0.715	0.516	34	0.305	0.194
Benzo (g,h,i) perylene	0.4190	0.472	0.355 B	0.11	0.231	0.331	0.811	0.557	34	0.322	0.190
Benzo (k) fluoranthene	0.3190	0.374	0.141	0.0462	0.149	0.1700	0.418	0.304	30	0.208	0.128
Chrysene	0.797	0.828	0.379	0.119	0.431	0.463	1.110	0.83	34	0.532	0.301
Coronene	0.1300	0.133	0.295 B	0.128 B	0.0914	0.1390	0.31	0.200	30	0.135	0.069
Cyclopenta[cd]pyrene	ND	ND	0.0533	ND	ND	ND	ND	ND	2	0.072	0.026
Dibenz (a,h) anthracene	0.0439 U	ND	0.129 B	0.0633	0.0475	0.0480 J	0.1060	0.072	11	0.082	0.035
Fluoranthene	2.59	2.85	2.02	1.69	1.67	1.81	4.65	2.75	34	4.624	3.117
Fluorene	3.00	ND	4.01	3.65	1.68	2.4	5.42	ND	31	8.416	6.024
Indeno(1,2,3-cd)pyrene	0.5050	0.529	0.326 B	0.126	0.275	0.333	0.927	0.645	34	0.329	0.220
Naphthalene	79.2 B	98.3 B	129	72.5	54.6 B	77.3 B	173	129	34	113.568	45.593
Perylene	0.0710	0.0732	0.056	ND	0.0542	0.0323 U	0.1060	0.068	13	0.093	0.054
Phenanthrene	6.2	6.87 B	8.9	8.88	3.53	5.2	12.9	7.8	34	17.337	13.940
Pyrene	1.90	2.28	1.62	1.24	1.24	1.56	3.92	2.71	34	2.650	1.102
Retene	0.362	0.15	0.28	0.0684	0.202	0.1710	0.3750	0.180	16	0.213	0.081

Notes:
Values in BOLD indicate measured concentrations above detection limit
Mean concentrations and standard deviations calculated using detected values only
N - Number of samples with detected concentrations (total number of samples = 34)
U - The analyte concentration is below the detection limit
ND - The analyte was not detected at or above the Method Detection Limit (MDL)
B - The analyte was also detected in the associated method or field blank at a concentration below 5 x MDL
QB - The analyte was also detected in the associated method blank at a concentration greater than 5 x MDL, however it did not adversely impact sample data
J - Reported value is considered estimated based on spike recovery values
N/A - Not applicable
ng/m^3 - Nanograms per cubic meter

Table A-3
Chicago O'Hare International Airport Air Monitoring Project
VOC Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

ANALYTE / Sample Date	7/3/2013 Conc (ppb)	8/2/2013 Conc (ppb)	8/8/2013 Conc (ppb)	8/14/2013 Conc (ppb)	8/20/2013 Conc (ppb)	8/26/2013 Conc (ppb)	9/1/2013 Conc (ppb)	9/7/2013 Conc (ppb)	9/13/2013 Conc (ppb)	9/19/2013 Conc (ppb)	9/25/2013 Conc (ppb)	10/1/2013 Conc (ppb)	10/7/2013 Conc (ppb)	10/13/2013 Conc (ppb)	10/19/2013 Conc (ppb)	10/25/2013 Conc (ppb)
1,1,1-Trichloroethane	0.009 U	0.012 U	0.009 U	ND	0.007 U	0.01 U	0.01 U	0.007 U	0.011 U	0.01 U	0.012 U	0.011 U	0.009 U	0.012 U	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.007 U	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.127	0.093	0.046	0.069	0.072	0.066	0.065	0.087	0.031	0.063	0.128	0.049	0.068	0.09	0.024	0.054
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND
1,2-Dichloroethane	0.022	0.021	0.018	0.014 U	0.013 U	0.017	0.015 U	0.015 U	0.018	0.021	0.023	0.022	0.018	0.021	ND	0.015 U
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.15	0.053	0.041	0.037	0.031	0.045	0.037	0.038	0.02	0.025	0.048	0.021	0.025	0.031	ND	0.018 U
1,3-Butadiene	0.045	0.043	0.02	0.036	0.037	0.044	0.035	0.058	0.026	0.042	0.074	0.045	0.051	0.063	0.032	0.041
Acetonitrile	0.568	0.674	3.05	0.5	0.416	0.555	1.05	0.523	0.312	0.422	0.418	0.347	0.319	0.221	0.087	0.121
Acetylene	0.663	0.529	0.23	0.49	0.692	0.392	0.338	0.712	0.234	0.529	0.853	0.444	0.624	0.828	0.498	0.934
Acrolein	ND INT	ND INT	ND INT	0.26	0.874	0.388	0.325	0.372	0.23	0.585	0.611	ND INT	ND INT	0.303	0.27	0.226
Acrylonitrile	ND	0.099	0.1	0.081	0.142	ND	0.073	ND	0.058	ND	0.1	0.172	ND	ND	0.044	ND
Benzene	0.315	0.219	0.138	0.153	0.204	0.188	0.187	0.294	0.118	0.232	0.257	0.169	0.182	0.237	0.11	0.127
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	0.008 U	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.007 U	ND	ND	ND	ND	ND
Bromomethane	0.023	0.016	0.023	0.01 U	0.01 U	0.015	0.013	0.013	0.014	0.018	0.015	0.032	0.013	0.014	ND	ND
Carbon Disulfide	2.63	1.1	1.43	1.26	1.11	1.44	1.25	1.34	1.33	1.18	1.35	1.44	1.14	1.23	0.531	1.09
Carbon Tetrachloride	0.106	0.11	0.11	0.085	0.105	0.108	0.106	0.103	0.096	0.111	0.104	0.109	0.098	0.101	0.095	0.09
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	0.024	0.029	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.028	0.032	0.029	0.034	0.029	0.024	0.029	0.031	0.025	0.029	0.045	0.031	0.028	0.098	0.021	0.018
Chloromethane	0.632	0.611	0.67	0.497	0.486	0.548	0.517	0.587	0.488	0.627	0.508	0.754	0.548	0.567	0.518	0.582
Chloroprene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND
Dibromochloromethane	ND	0.006 U	0.004 U	ND	ND	0.005 U	0.004 U	ND	0.008 U	0.005 U	0.007 U	0.008 U	0.006 U	0.007 U	ND	ND
Dichlorodifluoromethane	0.464	0.448	0.509	0.476	0.415	0.426	0.421	0.519	0.473	0.528	0.527	0.554	0.506	0.524	0.502	0.558
Dichloromethane	ND CE	ND CE	ND CE	ND CE	ND CE	0.418	0.79	1.19	ND CE	0.471	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE
Dichlorotetrafluoroethane	0.016	0.018	0.018	0.016	0.013	0.016	0.016	0.016	0.02	0.019	0.02	0.022	0.019	0.019	0.015	0.017
Ethyl Acrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether	0.025	ND	ND	0.074	0.169	ND	ND	ND	0.057	ND	ND	0.045	0.051	0.034	0.022	0.028
Ethylbenzene	0.081	0.054	0.026	0.04	0.065	0.052	0.048	0.065	0.025	0.057	0.087	0.036	0.066	0.065	0.022	0.035
Hexachloro-1,3-butadiene	ND	0.008 U	ND	ND	ND	ND	ND	ND	ND	0.006 U	0.006 U	ND	ND	ND	ND	ND
m,p-Xylene	0.2	0.139	0.067	0.105	0.173	0.11	0.1	0.151	0.056	0.145	0.22	0.09	0.178	0.171	0.065	0.095
m-Dichlorobenzene	0.096	0.026	0.02 U	0.015 U	0.012 U	0.016 U	0.013 U	0.01 U	0.015 U	0.01 U	0.013 U	0.014 U	0.012 U	0.012 U	ND	ND
Methyl Isobutyl Ketone	0.068	0.097	0.033	0.037	0.152	0.051	0.033	0.042	0.033	0.036	0.051	0.063	0.035	0.033	0.02	0.028
Methyl Methacrylate	0.057	ND	0.011 U	ND	ND	0.013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether	3.59	1.27	0.937	0.65	0.606	0.716	0.555	0.472	0.356	0.362	0.366	0.296	0.211	0.246	0.104	0.174
n-Octane	0.098	0.063	0.075	0.046	0.062	0.084	0.066	0.067	0.03	0.057	0.057	0.043	0.048	0.042	0.022	0.047
o-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	0.102	0.06	0.03	0.047	0.07	0.052	0.047	0.067	0.025	0.058	0.091	0.038	0.066	0.071	0.023	0.036
p-Dichlorobenzene	ND	0.015 U	ND	ND U	0.009 U	0.013 U	0.013 U	0.017 U	0.011 U	0.012 U	0.016 U	0.018 U	0.01 U	0.019 U	ND	ND
Propylene	0.461	0.457	0.24	0.264	0.424	0.305	0.22	0.431	0.193	0.418	0.575	0.331	0.42	0.464	0.281	0.352
Styrene	0.093	0.032	0.02	0.02	0.022	0.04	0.032	0.031	0.017 U	0.024	0.032	0.022	0.023	0.027	ND	0.023
tert-Amyl Methyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	0.044	0.026	0.017	0.019	0.022	0.027	0.018	0.029	0.015	0.042	0.038	0.024	0.034	0.038	ND	0.033
Toluene	1.51	0.882	0.558	0.703	0.722	0.601	0.55	0.714	0.404	0.645	0.832	0.486	0.543	0.665	0.218	0.357
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	0.03	0.035	ND	ND	0.022	0.017	ND	0.017	ND	0.034	0.011 U	0.019	0.025	0.016	ND	0.021
Trichlorofluoromethane	0.234	0.235	0.259	0.246	0.217	0.221	0.222	0.271	0.252	0.282	0.274	0.262	0.24	0.244	0.234	0.259
Trichlorotrifluoroethane	0.075	0.083	0.088	0.079	0.074	0.076	0.081	0.088	0.082	0.091	0.09	0.093	0.083	0.084	0.08	0.084
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND U

Table A-3
Chicago O'Hare International Airport Air Monitoring Project
VOC Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date / ANALYTE	10/31/2013 Conc (ppb)	11/6/2013 Conc (ppb)	11/12/2013 Conc (ppb)	11/18/2013 Conc (ppb)	11/24/2013 Conc (ppb)	11/30/2013 Conc (ppb)	12/6/2013 Conc (ppb)	12/12/2013 Conc (ppb)	12/18/2013 Conc (ppb)	12/24/2013 Conc (ppb)	12/30/2013 Conc (ppb)	1/5/2014 Conc (ppb)	1/11/2014 Conc (ppb)
1,1,1-Trichloroethane	0.006 U	0.008 U	ND	0.005 U	0.009 U	0.006 U	0.011 U	ND	0.006 U	ND	0.008	0.007 U	0.011 U
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.007 U	ND	0.007 U	ND	ND	ND	ND U	ND	0.007 U
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	0.008 U	ND	ND	ND	ND U	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.012 U
1,2,4-Trimethylbenzene	0.074	0.034	0.024	0.038	0.029	0.042	0.022	0.04	0.041	0.036	0.056	0.077	0.05
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.018	0.02	ND	0.018	0.019	0.021	0.022	0.018	0.023	0.02	0.026	0.022	0.02
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.036	0.014 U	0.009 U	0.019	0.014 U	0.013 U	0.013 U	0.012 U	0.013 U	0.01 U	0.029	0.028	0.02
1,3-Butadiene	0.052	ND	0.021	0.03	0.036	0.056	0.042	0.065	0.054	0.051	0.056	0.07	0.032
Acetonitrile	0.302	0.153	0.075	0.188	0.206	0.205	0.173	0.203	0.154	0.485	0.213	0.351	0.231
Acetylene	0.56	0.467	0.415	0.481	0.549	0.897	0.452	0.992	0.926	0.847	0.924	0.781	0.607
Acrolein	0.341	0.243	0.351	0.345	0.319	0.385	0.632	0.211	0.284	0.336	ND INT	ND INT	0.454
Acrylonitrile	ND	ND	0.061	ND	0.059	0.076	0.18	ND	ND	ND	ND	0.132	ND
Benzene	0.172	0.121	0.102	0.135	0.134	0.23	0.154	0.186	0.173	0.225	0.241	0.275	0.175
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011
Bromoform	ND	ND	ND	ND	ND	ND	0.007 U	ND	ND	ND	ND	ND	0.008 U
Bromomethane	0.012	0.015	ND	0.01 U	0.016	0.011	0.016	0.013	0.013	ND	0.013	0.017	0.014
Carbon Disulfide	0.98	0.934	0.88	0.94	0.946	0.983	0.954	0.768	1.05	0.78	0.786	3.22	1.45
Carbon Tetrachloride	0.103	0.098	0.088	0.094	0.08	0.077	0.088	0.066	0.076	0.092	0.096	0.095	0.09
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.021	0.026	ND
Chloroform	0.019	0.024	0.018	0.019	0.021	0.022	0.022	0.04	0.022	0.019	0.026	0.021	0.028
Chloromethane	0.663	0.536	0.498	0.565	0.635	0.598	0.522	0.536	0.638	0.555	0.571	0.614	0.56
Chloroprene	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.002 U	0.005 U	ND	ND	0.005 U	ND	0.008 U	ND	0.002 U	ND	ND	0.004 U	0.008 U
Dichlorodifluoromethane	0.515	0.561	0.567	0.535	0.554	0.556	0.491	0.545	0.627	0.553	0.554	0.531	0.445
Dichloromethane	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE	ND CE
Dichlorotetrafluoroethane	0.016	0.02	0.017	0.016	0.02	0.016	0.021	0.016	0.02	0.017	0.02	0.018	0.018
Ethyl Acrylate	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether	ND	0.036	0.132	0.213	0.041	0.051	0.093	0.031	0.078	0.018	0.089	0.095	0.015 U
Ethylbenzene	0.058	0.027	0.017	0.028	0.025	0.032	0.025	0.032	0.031	0.03	0.051	0.053	0.037
Hexachloro-1,3-butadiene	0.004 U	ND	ND	ND	0.006 U	ND	0.01 U	ND	ND	ND	ND	0.005 U	0.008 U
m,p-Xylene	0.153	0.073	0.039	0.059	0.059	0.082	0.054	0.074	0.076	0.067	0.106	0.108	0.076
m-Dichlorobenzene	0.008 U	0.011 U	ND	ND	0.009 U	0.005 U	0.01 U	ND	0.006 U	ND	0.007 U	0.009 U	0.009 U
Methyl Isobutyl Ketone	0.032	0.025	0.019	0.022	0.019	0.021	0.037	0.025	0.024	0.014 U	0.036	0.052	0.034
Methyl Methacrylate	ND	ND	ND	ND	0.008 U	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether	0.189	0.156	0.112	0.121	0.146	0.121	0.111	0.079	0.106	0.065	0.077	0.35	0.08
n-Octane	0.063	0.027	0.017	0.039	0.041	0.031	0.035	0.024	0.032	0.025	0.044	0.091	0.05
o-Dichlorobenzene	ND	ND	ND	ND	ND	ND	0.007 U	ND	ND	ND	ND	ND	0.008 U
o-Xylene	0.059	0.027	0.017	0.026	0.022	0.032	0.022	0.031	0.032	0.03	0.049	0.054	0.037
p-Dichlorobenzene	0.01 U	0.01 U	ND	ND	0.008 U	0.006 U	0.008 U	ND	0.007 U	ND	0.006 U	0.006 U	0.009 U
Propylene	0.382	0.224	0.249	0.253	0.298	0.424	0.36	0.446	0.445	0.384	0.4	0.505	0.346
Styrene	0.037	0.015 U	ND	0.016 U	0.016 U	0.015 U	0.013 U	0.069	0.021	0.014 U	0.027	0.025	0.02
tert-Amyl Methyl Ether	ND	ND U	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND
Tetrachloroethylene	0.022	0.022	0.012 U	0.008 U	0.01 U	0.014	0.017	0.018	0.021	0.011 U	0.036	0.007 U	0.02
Toluene	0.452	0.28	0.445	0.245	0.222	0.382	0.274	0.298	0.325	0.283	0.382	0.831	0.33
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	0.05	0.016	ND	ND	ND	0.023	0.01 U	0.015 U	0.049	ND	0.03	ND	0.01 U
Trichlorofluoromethane	0.243	0.272	0.267	0.245	0.252	0.258	0.232	0.265	0.295	0.271	0.26	0.245	0.5
Trichlorotrifluoroethane	0.085	0.094	0.086	0.083	0.083	0.084	0.078	0.078	0.094	0.082	0.083	0.079	0.073
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U

Table A-3
Chicago O'Hare International Airport Air Monitoring Project
VOC Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date / ANALYTE	1/17/2014 Conc (ppb)	1/23/2014 Conc (ppb)	1/29/2014 Conc (ppb)	2/4/2014 Conc (ppb)	2/10/2014 Conc (ppb)	N	Mean Conc (ppb)	Standard Deviation (ppb)
1,1,1-Trichloroethane	0.006 U	ND	ND	0.009 U	0.006 U	0	ND	N/A
1,1,2,2-Tetrachloroethane	ND U	ND	ND	ND	ND	0	ND	N/A
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0	ND	N/A
1,1-Dichloroethane	ND	ND	ND	ND	ND	0	ND	N/A
1,1-Dichloroethene	ND	ND	ND	ND	ND	0	ND	N/A
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0	ND	N/A
1,2,4-Trimethylbenzene	0.029	0.029	0.041	0.084	0.042	34	0.056	0.027
1,2-Dibromoethane	ND	ND	ND	ND	ND	0	ND	N/A
1,2-Dichloroethane	0.019	0.018	0.017	0.025	0.02	27	0.020	0.002
1,2-Dichloropropane	ND	ND	ND	ND	ND	0	ND	N/A
1,3,5-Trimethylbenzene	0.011 U	0.009 U	0.012 U	0.03	0.014 U	20	0.038	0.028
1,3-Butadiene	0.032	0.022	0.052	0.072	0.035	33	0.045	0.015
Acetonitrile	0.165	0.16	0.14	0.579	0.136	34	0.403	0.511
Acetylene	0.665	0.694	1.1	1.74	0.905	34	0.676	0.291
Acrolein	0.233	0.158	0.266	0.56	0.178	27	0.361	0.164
Acrylonitrile	ND	ND	ND	ND	ND	14	0.098	0.043
Benzene	0.148	0.165	0.189	0.327	0.226	34	0.191	0.058
Bromochloromethane	ND	ND	ND	ND	ND	0	ND	N/A
Bromodichloromethane	ND	ND	ND	ND	ND	0	ND	N/A
Bromoform	ND	ND	ND	ND	0.005 U	0	ND	N/A
Bromomethane	0.012	ND	ND	0.016	0.012	25	0.016	0.005
Carbon Disulfide	1.08	0.539	0.893	0.851	0.751	34	1.166	0.515
Carbon Tetrachloride	0.075	0.073	0.082	0.076	0.068	34	0.093	0.013
Chlorobenzene	ND	ND	ND	ND	ND	0	ND	N/A
Chloroethane	ND	ND	ND	0.02	ND	3	ND	N/A
Chloroform	0.017	0.018	0.017	0.025	0.019	34	0.027	0.014
Chloromethane	0.527	0.567	0.628	0.649	0.553	34	0.575	0.061
Chloroprene	ND	ND	ND	ND	ND	0	ND	N/A
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	0	ND	N/A
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0	ND	N/A
Dibromochloromethane	0.004 U	ND	ND	ND	0.004 U	0	ND	N/A
Dichlorodifluoromethane	0.464	0.51	0.517	0.533	0.451	34	0.511	0.049
Dichloromethane	ND CE	ND CE	ND CE	ND CE	ND CE	4	0.717	0.355
Dichlorotetrafluoroethane	0.017	0.016	0.016	0.02	0.017	34	0.018	0.002
Ethyl Acrylate	ND	ND	ND	ND	ND	0	ND	N/A
Ethyl tert-Butyl Ether	0.304	0.066	0.071	0.13	0.041	25	0.080	0.067
Ethylbenzene	0.024	0.024	0.03	0.069	0.039	34	0.043	0.019
Hexachloro-1,3-butadiene	0.006 U	0.007 U	ND	0.005 U	0.005 U	0	ND	N/A
m,p-Xylene	0.045	0.05	0.068	0.157	0.081	34	0.103	0.048
m-Dichlorobenzene	0.007 U	ND	ND	0.007 U	0.005 U	2	0.061	0.049
Methyl Isobutyl Ketone	0.019	0.013 U	0.015 U	0.032	0.018 U	30	0.040	0.027
Methyl Methacrylate	ND	ND	ND	ND	ND	2	0.035	0.031
Methyl tert-Butyl Ether	0.099	0.06	0.089	0.094	0.082	34	0.384	0.631
n-Octane	0.035	0.029	0.031	0.058	0.036	34	0.048	0.020
o-Dichlorobenzene	ND	ND	ND	ND	ND	0	ND	N/A
o-Xylene	0.02	0.021	0.03	0.066	0.037	34	0.044	0.021
p-Dichlorobenzene	ND	ND	ND	0.01 U	0.006 U	0	ND	N/A
Propylene	0.266	0.258	0.435	0.602	0.339	34	0.366	0.102
Styrene	0.011 U	ND	0.024	0.047	0.013 U	22	0.032	0.018
tert-Amyl Methyl Ether	ND	ND	ND	ND	ND	0	ND	N/A
Tetrachloroethylene	0.018	0.012 U	0.008 U	0.048	0.016	26	0.026	0.010
Toluene	0.232	0.204	0.239	0.515	0.286	34	0.489	0.269
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	0	ND	N/A
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0	ND	N/A
Trichloroethylene	0.009 U	ND	0.027	0.031	0.008 U	17	0.027	0.010
Trichlorofluoromethane	0.218	0.243	0.232	0.241	0.202	34	0.256	0.048
Trichlorotrifluoroethane	0.072	0.082	0.078	0.08	0.069	34	0.082	0.006
Vinyl chloride	ND U	ND	ND	ND	ND	0	ND	N/A

Notes:
Values in BOLD indicate measured concentrations above detection limit
Mean concentrations and standard deviations calculated using detected values only
N - Number of samples with detected concentrations (total number of samples = 34)
U - The analyte concentration is below the detection limit
ND - The analyte was not detected at or above the Method Detection Limit (MDL)
B - The analyte was also detected in the associated method or field blank at a concentration below 5 x MDL
CE - Not reportable due to a co-eluting compound
E - The concentration indicated for this analyte is an estimated value above the calibration range of the instrument
J - The concentration indicated for this analyte is an estimated value based on labortory duplicate analysis
INT - Not reportable due to interference
N/A - Not applicable
ppb - Parts per billion by volume

Table A-4
Chicago O'Hare International Airport Monitoring Project
VOC Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date / ANALYTE	7/3/2013 Conc (ppb)	7/9/2013 Conc (ppb)	7/15/2013 Conc (ppb)	7/17/2013 Conc (ppb)	7/21/2013 Conc (ppb)	7/27/2013 Conc (ppb)	8/2/2013 Conc (ppb)	8/8/2013 Conc (ppb)	8/14/2013 Conc (ppb)	8/20/2013 Conc (ppb)	8/26/2013 Conc (ppb)	9/1/2013 Conc (ppb)	9/7/2013 Conc (ppb)	9/13/2013 Conc (ppb)	9/19/2013 Conc (ppb)
1,1,1-Trichloroethane	0.009 U	0.012 U	ND	0.007 U	ND	ND	0.011 U	ND	ND	0.007 U	0.009 U	0.01 U	0.007 U	0.012 U	0.008 U
1,1,2,2-Tetrachloroethane	ND	0.005 U	ND	ND	ND	ND	0.006 U	ND	ND	ND	ND	ND	ND	0.008 U	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	0.004 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.057	0.084	0.071	0.073	0.023	0.036	0.077	0.039	0.075	0.062	0.056	0.061	0.075	0.049	0.06
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.018	0.023	0.022	0.011 U	0.015 U	0.016	0.023	0.011 U	0.015 U	0.013 U	0.018	0.016	0.017	0.019	0.019
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.019	0.038	0.023	0.024	ND	0.013 U	0.026	0.013 U	0.024	0.019	0.032	0.032	0.033	0.02	0.019
1,3-Butadiene	0.049	0.054	0.056	0.051	0.017	0.046	0.059	0.021	0.048	0.042	0.048	0.06	0.059	0.043	0.044
Acetonitrile	0.122	0.201	57.4 E	52.9 E	0.261	0.122	0.185	0.113	0.118	0.172	0.201	0.14	0.183	0.084	0.157
Acetylene	0.72	0.644	1.23	0.528	0.338	0.519	0.688	0.26	0.483	0.536	0.349	0.383	0.818	0.364	0.587
Acrolein	0.898	0.512	0.456	ND INT	0.273	0.784	0.28	0.239	0.224	0.394	0.738	0.314	0.484	0.188	0.426
Acrylonitrile	ND	0.084	ND	ND	ND	ND	ND	0.056	ND	ND	ND	ND	ND	ND	ND
Benzene	0.267	0.279	0.292	0.168	0.139	0.14	0.244	0.104	0.183	0.235	0.194	0.207	0.25	0.141	0.233
Bromochloromethane	ND	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01 U	ND
Bromoform	ND	0.005 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	0.012	0.015	ND	0.008 U	ND	0.01	0.017	0.008 U	ND	0.009 U	0.012	0.012	0.012	0.015	0.014
Carbon Disulfide	0.024	0.044	0.081	0.088	0.026	0.022	0.025	0.025	0.024	0.03	0.033	0.027	0.035	0.027	0.051
Carbon Tetrachloride	0.1	0.129	0.109	0.105	0.089	0.1	0.106	0.101	0.093	0.109	0.119	0.112	0.11	0.108	0.104
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.027	0.03	0.044	0.027	0.026	0.02	0.034	0.02	0.031	0.027	0.023	ND	0.033	0.027	0.028
Chloromethane	0.508	0.638	0.679	0.57	0.499	0.485	0.53	0.48	0.499	0.501	0.505	0.488	0.596	0.472	0.594
Chloroprene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	0.004 U	ND	ND	ND	ND	0.006 U	ND	ND	ND	0.004 U	0.005 U	ND	0.009 U	ND
Dichlorodifluoromethane	0.414	0.482	0.554	0.434	0.452	0.464	0.461	0.451	0.479	0.431	0.416	0.417	0.51	0.488	0.524
Dichloromethane	2.75	0.412	9.58	4.42	0.204	ND CE	0.326	ND CE	0.146	0.403	0.269	0.207	0.196	ND CE	0.249
Dichlorotetrafluoroethane	0.014	0.017	0.017	0.013	0.014	0.016	0.018	0.014	0.016	0.014	0.015	0.016	0.015	0.02	0.016
Ethyl Acrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether	ND	ND	ND	ND	0.015	0.019	ND	ND	ND	0.013 U	ND	ND	ND	0.036	ND
Ethylbenzene	0.075	0.078	0.084	0.073	0.025	0.031	0.065	0.028	0.057	0.051	0.058	0.059	0.073	0.044	0.064
Hexachloro-1,3-butadiene	ND	0.006 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	0.169	0.179	0.188	0.169	0.056	0.072	0.166	0.069	0.142	0.133	0.123	0.128	0.172	0.105	0.173
m-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	0.041	0.123	0.082	0.411	0.017 U	0.021	0.051	0.018	0.03	0.072	0.058	0.029	0.049	0.022	0.037
Methyl Methacrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	0.016	ND	ND	ND	0.021	0.028	ND
n-Octane	0.036	0.054	0.044	0.043	0.016	0.027	0.041	0.014	0.03	0.034	0.056	0.054	0.048	0.027	0.032
o-Dichlorobenzene	ND	ND	ND	ND	ND	ND	0.006	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	0.069	0.075	0.078	0.068	0.023	0.029	0.066	0.029	0.06	0.054	0.054	0.054	0.075	0.043	0.066
p-Dichlorobenzene	ND	0.009 U	ND	0.008 U	ND	ND	0.013	ND	ND	ND	ND	0.01 U	0.007 U	0.012 U	0.012 U
Propylene	0.47	0.445	0.618	0.499	0.18	0.333	0.479	0.205	0.386	0.406	0.304	0.322	0.48	0.298	0.454
Styrene	0.018	0.038	0.087	0.046	ND	ND	0.024	ND	0.019	0.017 U	0.034	0.033	0.032	0.018	0.024
tert-Amyl Methyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND U	ND
Tetrachloroethylene	0.049	0.064	0.274	0.334	0.016	0.016	0.032	0.011	0.022	0.033	0.04	0.02	0.025	0.017	0.04
Toluene	0.577	0.55	0.678	0.659	0.21	0.233	0.503	0.217	0.417	0.466	0.36	0.31	0.522	0.233	0.546
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	0.036	0.03	0.075	0.05	0.023	ND	0.066	ND	0.051	0.016	0.023	ND	0.015 U	ND	0.374
Trichlorofluoromethane	0.221	0.25	0.362	0.304	0.232	0.235	0.241	0.225	0.251	0.222	0.218	0.227	0.267	0.319	0.296
Trichlorotrifluoroethane	0.066	0.086	0.084	0.076	0.072	0.076	0.084	0.076	0.079	0.084	0.079	0.08	0.085	0.086	0.089
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-4
Chicago O'Hare International Airport Monitoring Project
VOC Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date / ANALYTE	9/25/2013 Conc (ppb)	10/1/2013 Conc (ppb)	10/7/2013 Conc (ppb)	10/13/2013 Conc (ppb)	10/19/2013 Conc (ppb)	10/25/2013 Conc (ppb)	10/31/2013 Conc (ppb)	11/6/2013 Conc (ppb)	11/12/2013 Conc (ppb)	11/18/2013 Conc (ppb)	11/24/2013 Conc (ppb)	11/30/2013 Conc (ppb)	12/6/2013 Conc (ppb)	12/18/2013 Conc (ppb)	12/24/2013 Conc (ppb)	12/30/2013 Conc (ppb)
1,1,1-Trichloroethane	0.013 U	0.01 U	0.01 U	0.01 U	ND	ND	0.012 U	0.006 U	ND	0.006 U	0.009 U	ND	0.012 U	0.008 U	0.005 U	0.008 U
1,1,2,2-Tetrachloroethane	0.006 U	0.005 U	0.005 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.007 U	0.005 U	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.009 U	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.102	0.06	0.082	0.069	0.032	0.047	0.052	0.041	0.041	0.043	0.028	0.033	0.048	0.048	0.044	0.07
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.021	0.023	0.021	0.021	ND	0.014 U	0.028	0.015 U	ND	0.018	0.019	0.018	0.024	0.026	0.019	0.027
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.044	0.03	0.036	0.023	0.01 U	0.014 U	0.036	0.014 U	0.013 U	0.02	0.012 U	0.01 U	0.02	0.016 U	0.012 U	0.034
1,3-Butadiene	0.082	0.05	0.073	0.088	0.034	0.055	0.061	0.069	0.056	0.095	0.042	0.038	0.076	0.05	0.044	0.084
Acetonitrile	0.125	0.12	0.083	0.076	0.046	0.052	0.14	0.088	ND	0.104	0.077	0.099	ND	0.073	0.091	0.07
Acetylene	0.694	0.457	0.709	0.864	0.514	0.748	0.65	0.808	0.62	0.927	0.585	0.694	0.893	0.838	0.944	1.6
Acrolein	0.22	0.222	0.22	0.287	0.436 J	ND INT	0.293	0.21	0.215	ND INT	0.174	0.159	0.335 J	0.196	0.202	0.297
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.205
Benzene	0.262	0.167	0.194	0.244	0.143	0.136	0.182	0.176	0.149	0.183	0.135	0.226	0.205	0.198	0.23	0.294
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	0.007 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01 U	ND	ND	ND
Bromomethane	0.015	0.017	0.011	0.014	ND	0.016	0.011	0.01 U	ND	0.012	0.011	ND	0.014	0.012	0.008 U	0.014
Carbon Disulfide	0.03	0.033	0.025	0.029	0.014	0.025	0.023	0.025	0.021	0.025	0.018	0.047	0.023	0.028	0.045	0.028
Carbon Tetrachloride	0.111	0.115	0.107	0.097	0.103	0.09	0.083	0.1	0.091	0.102	0.096	0.097	0.091	0.103	0.042	0.093
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.04	0.028	0.028	0.03	0.02	0.019	0.022	0.017	0.017	0.017	0.02	0.019	0.024	0.023	0.02	0.028
Chloromethane	0.493	0.595	0.493	0.497	0.509	0.498	0.574	0.534	0.477	0.587	0.498	0.482	0.522	0.544	0.507	0.548
Chloroprene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.007 U	0.005 U	0.004 U	0.006 U	ND	ND	ND	ND	ND	ND	0.005 U	ND	0.009 U	0.004 U	ND	ND
Dichlorodifluoromethane	0.528	0.563	0.567	0.495	0.529	0.571	0.695	0.527	0.577	0.544	0.518	0.493	0.541	0.554	0.526	0.58
Dichloromethane	0.213	0.478	0.285	0.18	ND CE	ND CE	0.634	0.274	0.509	0.49	0.183	ND CE	ND CE	1.15	0.277	0.222
Dichlorotetrafluoroethane	0.02	0.02	0.018	0.018	0.015	0.016	0.016	0.016	0.017	0.016	0.019	0.016	0.022	0.019	0.016	0.019
Ethyl Acrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether	ND	ND	ND	0.019	ND	ND	ND	0.02	0.011 U	ND	ND	ND	0.017	ND	ND	0.014
Ethylbenzene	0.086	0.055	0.074	0.063	0.031	0.037	0.056	0.034	0.032	0.036	0.028	0.037	0.044	0.04	0.039	0.062
Hexachloro-1,3-butadiene	0.006 U	0.006 U	0.005 U	ND	ND	ND	0.006 U	ND	ND	ND	0.005 U	ND	0.01 U	0.006 U	ND	ND
m,p-Xylene	0.214	0.126	0.199	0.156	0.08	0.093	0.13	0.083	0.076	0.077	0.061	0.082	0.1	0.093	0.09	0.137
m-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.008 U	ND	ND	ND
Methyl Isobutyl Ketone	0.026	0.025	0.025	0.05	0.017 U	0.017 U	0.029	0.024	0.021	0.012 U	0.01 U	0.023	0.038	0.023	ND	ND
Methyl Methacrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether	0.03	ND	ND	0.016	0.086	ND	0.023	ND	0.017	ND	ND	0.012	0.022	ND	ND	0.019
n-Octane	0.049	0.034	0.037	0.042	0.02	0.017	0.047	0.028	0.016	0.03	0.024	0.02	0.047	0.023	0.021	0.037
o-Dichlorobenzene	0.006 U	0.004 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.009 U	ND	ND	ND
o-Xylene	0.086	0.055	0.08	0.065	0.032	0.039	0.065	0.034	0.031	0.032	0.025	0.033	0.044	0.038	0.038	0.06
p-Dichlorobenzene	0.017 U	0.008 U	0.009 U	0.013 U	ND	ND	0.009 U	ND	ND	ND	0.006 U	ND	0.009 U	0.006 U	ND	ND
Propylene	0.519	0.342	0.47	0.593	0.345	0.454	0.403	0.458	0.421	0.534	0.303	0.352	0.562	0.393	0.389	0.457
Styrene	0.034	0.028	0.031	0.026	0.017 U	0.017 U	0.082	0.016 U	0.013 U	0.023	0.012 U	ND	0.017 U	0.023	0.012 U	0.029
tert-Amyl Methyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.008 U	ND	ND	ND
Tetrachloroethylene	0.045	0.021	0.046	0.026	0.031	0.036	0.019	0.031	0.061	0.069	0.011 U	0.013 U	0.02	0.061	0.018	0.044
Toluene	0.528	0.28	0.407	0.403	0.224	0.289	0.258	0.209	0.24	0.151	0.139	0.276	0.252	0.257	0.232	0.315
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	0.086	0.067	0.16	0.029	ND	0.024	0.016	0.008 U	ND	ND	ND	ND	0.018	0.024	0.011 U	0.036
Trichlorofluoromethane	0.587	0.294	0.32	0.306	0.258	0.377	0.811	0.242	0.307	0.248	0.24	0.232	0.248	0.256	0.247	0.285
Trichlorotrifluoroethane	0.094	0.098	0.094	0.083	0.084	0.085	0.084	0.084	0.088	0.083	0.079	0.076	0.084	0.084	0.08	0.088
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND

Table A-4
Chicago O'Hare International Airport Monitoring Project
VOC Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date / ANALYTE	1/5/2014 Conc (ppb)	1/11/2014 Conc (ppb)	1/17/2014 Conc (ppb)	1/23/2014 Conc (ppb)	1/29/2014 Conc (ppb)	2/4/2014 Conc (ppb)	2/10/2014 Conc (ppb)	N	Mean Conc (ppb)	Standard Deviation (ppb)
1,1,1-Trichloroethane	0.007 U	0.011 U	0.007 U	ND	ND	0.008 U	0.008 U	0	ND	N/A
1,1,2,2-Tetrachloroethane	ND	0.008 U	ND	ND	ND	ND	ND	0	ND	N/A
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
1,1-Dichloroethane	ND	0.009 U	ND	ND	ND	0.007 U	ND	0	ND	N/A
1,1-Dichloroethene	ND	0.007 U	ND	ND	ND	ND	ND	0	ND	N/A
1,2,4-Trichlorobenzene	ND	0.011 U	ND	ND	ND	ND	ND	0	ND	N/A
1,2,4-Trimethylbenzene	0.075	0.074	0.043	ND	0.042	0.078	0.055	37	0.057	0.018
1,2-Dibromoethane	ND	0.008 U	ND	ND	ND	ND	ND	0	ND	N/A
1,2-Dichloroethane	0.027	0.024	0.022	0.012 U	0.016	0.025	0.021	27	0.021	0.004
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
1,3,5-Trimethylbenzene	0.032	0.028	0.015 U	ND	0.014 U	0.028	0.019	24	0.027	0.007
1,3-Butadiene	0.106	0.046	0.057	ND	0.039	0.085	0.087	37	0.057	0.020
Acetonitrile	0.086	0.058	0.076	0.035 U	0.043 U	0.124	0.053	33	3.353	13.156
Acetylene	1.04	0.824	0.806	0.524 J	1.05	1.84	1.27	38	0.746	0.332
Acrolein	0.28	0.217	0.37	ND	0.136	0.298	0.257	34	0.330	0.179
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	3	0.115	0.079
Benzene	0.254	0.165	0.194	0.117 J	0.212	0.308	0.317	38	0.204	0.056
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Bromodichloromethane	ND	0.009 U	ND	ND	ND	ND	ND	0	ND	N/A
Bromoform	ND	0.008 U	ND	ND	ND	ND	0.007 U	0	ND	N/A
Bromomethane	0.012	0.014	0.011 U	ND	ND	0.012	0.011 U	23	0.013	0.002
Carbon Disulfide	0.029	0.028	0.025	0.083	0.024	0.029	0.026	38	0.033	0.017
Carbon Tetrachloride	0.071	0.092	0.089	0.036	0.099	0.103	0.09	38	0.097	0.017
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Chloroethane	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Chloroform	0.023	0.022	0.02	0.022	0.016	0.023	0.022	36	0.025	0.006
Chloromethane	0.538	0.521	0.518	0.474	0.526	0.6	0.569	38	0.530	0.049
Chloroprene	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Dibromochloromethane	ND	0.007 U	0.003 U	0.004 U	ND	ND	0.004 U	0	ND	N/A
Dichlorodifluoromethane	0.552	0.457	0.488	0.458	0.482	0.539	0.478	38	0.506	0.058
Dichloromethane	1.21	ND CE	ND CE	0.09	ND CE	0.646	ND CE	27	0.963	1.954
Dichlorotetrafluoroethane	0.018	0.019	0.018	0.014	0.015	0.02	0.018	38	0.017	0.002
Ethyl Acrylate	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Ethyl tert-Butyl Ether	ND	0.02	0.028	0.014 U	ND	0.01 U	0.022	10	0.021	0.010
Ethylbenzene	0.236	0.042	0.033	0.009 U	0.039	0.066	0.053	37	0.055	0.035
Hexachloro-1,3-butadiene	0.005 U	0.01 U	0.006 U	ND	ND	0.006 U	ND	0	ND	N/A
m,p-Xylene	0.693	0.09	0.071	0.017 U	0.085	0.16	0.118	37	0.137	0.104
m-Dichlorobenzene	ND	0.007 U	ND	ND	ND	ND	ND	0	ND	N/A
Methyl Isobutyl Ketone	0.018 U	0.023	0.022	ND	0.025	0.027	0.021	29	0.050	0.073
Methyl Methacrylate	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Methyl tert-Butyl Ether	0.022	0.022	0.018	0.017 U	0.02	ND	0.024	16	0.025	0.017
n-Octane	0.052	0.067	0.026	ND	0.025	0.042	0.034	37	0.035	0.013
o-Dichlorobenzene	ND	0.008 U	ND	ND	ND	ND	ND	0	ND	N/A
o-Xylene	0.199	0.042	0.032	0.007 U	0.035	0.063	0.048	37	0.055	0.030
p-Dichlorobenzene	0.005 U	0.01 U	ND	ND	ND	0.009 U	ND	0	ND	N/A
Propylene	0.485	0.307	0.406	0.202	0.406	0.611	0.569	38	0.417	0.109
Styrene	0.07	0.016	0.016	ND	0.022	0.038	0.018	25	0.033	0.019
tert-Amyl Methyl Ether	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Tetrachloroethylene	0.011 U	0.057	0.11	0.014	0.017	0.036	0.059	35	0.052	0.067
Toluene	0.902	0.168	0.182	0.092 J	0.249	0.409	0.322	38	0.349	0.176
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Trichloroethylene	ND	0.013 U	ND	ND	0.013 U	0.044	0.018	21	0.060	0.079
Trichlorofluoromethane	0.262	0.209	0.228	0.21	0.225	0.259	0.217	38	0.283	0.111
Trichlorotrifluoroethane	0.084	0.079	0.083	0.071	0.076	0.084	0.074	38	0.082	0.006
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A

Notes:
Values in BOLD indicate measured concentrations above detection limit
Mean concentrations and standard deviations calculated using detected values only
N - Number of samples with detected concentrations (total number of samples = 37)
U - The analyte concentration is below the detection limit
ND - The analyte was not detected at or above the Method Detection Limit (MDL)
B - The analyte was also detected in the associated method or field blank at a concentration below 5 x MDL
CE - Not reportable due to a co-eluting compound
E - The concentration indicated for this analyte is an estimated value above the calibration range of the instrument
J - The concentration indicated for this analyte is an estimated value based on labortory duplicate analysis
INT - Not reportable due to interference
N/A - Not applicable
ppb - Parts per billion by volume

Table A-5
Chicago O'Hare International Airport Air Monitoring Project
Carbonyl Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date / ANALYTE	7/3/2013 Conc (ppb)	8/2/2013 Conc (ppb)	8/8/2013 Conc (ppb)	8/14/2013 Conc (ppb)	8/20/2013 Conc (ppb)	8/26/2013 Conc (ppb)	9/1/2013 Conc (ppb)	9/7/2013 Conc (ppb)	9/13/2013 Conc (ppb)	9/19/2013 Conc (ppb)	9/25/2013 Conc (ppb)	10/1/2013 Conc (ppb)	10/7/2013 Conc (ppb)	10/13/2013 Conc (ppb)	10/19/2013 Conc (ppb)
2,5-Dimethylbenzaldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	0.117	0.1	0.055	0.106	0.117	0.082	0.059	0.129	0.096	0.081	0.145	0.107	0.164	0.149	0.127
Acetaldehyde	0.977	1.17	0.673	0.864	1.54	1.24	0.723	2.01	0.823	1.45	1.41	1.32	0.818	0.99	1.07
Acetone	0.788	0.738	0.745	1.01	0.847	0.603	0.55	0.909	1.09	0.701	1.16	0.74	1.36	1.31	1.33
Benzaldehyde	0.05	0.031	0.014	0.026	0.043	0.032	0.021	0.037	0.013	0.035	0.019	0.024	0.02	0.02	0.017
Butyraldehyde	0.135	0.143	0.099	0.177	0.198	0.156	0.1	0.194	0.135	0.119	0.183	0.122	0.144	0.136	0.097
Crotonaldehyde	0.175	0.187	0.077	0.073	0.178	0.336	0.14	0.304	0.048	0.199	0.051	0.135	0.027	0.028	0.03
Formaldehyde	2.34	2.45	1.43	1.65	3.42	4.86	2.21	3.74	1.18	3.04	1.54	2.31	1.45	1.22	1.65
Hexaldehyde	0.055	0.028	0.02	0.027	0.037	0.037	0.033	0.03	0.017	0.032	0.019	0.017	0.033	0.017	0.014
Isovaleraldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propionaldehyde	0.166	0.211	0.129	0.155	0.24	0.199	0.121	0.298	0.154	0.215	0.186	0.184	0.121	0.141	0.138
Tolualdehydes	ND	0.02	0.018	0.023	0.025	0.017	0.011	0.026	ND	0.018	ND	0.016	0.015	0.006	0.007
Valeraldehyde	0.049	0.045	0.037	0.047	0.06	0.036	0.028	0.06	0.042	0.055	0.047	0.039	0.035	0.037	0.032

Sample Date / ANALYTE	10/25/2013 Conc (ppb)	10/31/2013 Conc (ppb)	11/6/2013 Conc (ppb)	11/12/2013 Conc (ppb)	11/18/2013 Conc (ppb)	11/24/2013 Conc (ppb)	11/30/2013 Conc (ppb)	12/6/2013 Conc (ppb)	12/12/2013 Conc (ppb)	12/18/2013 Conc (ppb)	12/24/2013 Conc (ppb)	12/30/2013 Conc (ppb)	1/5/2014 Conc (ppb)	1/11/2014 Conc (ppb)	1/17/2014 Conc (ppb)
2,5-Dimethylbenzaldehyde	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
2-Butanone	0.339	0.135	0.133	0.08	0.096	0.071	0.247	0.103	0.211	0.231	0.166	0.203	0.115	0.217	0.145
Acetaldehyde	1.74	0.959	0.908	1.12	1.02	1.79	2.85	1.39	2.77	2.01	2.53	1.69	1.53 B	1.24 B	1.51 B
Acetone	1.37	0.855	0.986	0.821	0.802	0.765	1.69	0.883	1.28	1.25	1.47	1.5	0.817 B	1.27 B	1.01 B
Benzaldehyde	0.017	0.021	0.018	0.01	0.01	0.007	0.021	0.009	0.02	0.018	0.021	0.014	0.01	0.01	0.009
Butyraldehyde	0.153	0.093	0.086	0.06	0.055	0.051	0.122	0.059	0.109	0.114	0.11	0.096	0.065	0.084	0.061
Crotonaldehyde	0.03	0.026	0.024	0.015	0.013	0.016	0.034	0.018	0.039	0.029	0.039	0.024	0.019	0.018	0.016
Formaldehyde	1.82	0.921	0.925	1.25	0.919	1.2	2.62	1.1	2.9	2.79	2.99	1.89	1.54 B	1.03 B	1.36 B
Hexaldehyde	0.012	0.018	0.013	0.008	0.007	0.006	0.012	0.009	0.012	0.012	0.011	0.007	0.008	0.009	0.005
Isovaleraldehyde	ND	ND	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND	ND	ND
Propionaldehyde	0.163	0.103	0.099	0.083	0.073	0.07	0.149	0.084	0.251	0.179	0.157	0.129	0.089	0.114	0.08
Tolualdehydes	0.006	ND	0.005	ND U	ND U	ND U	0.016	0.004	0.016	0.02	0.014	0.01	0.009	ND	0.003
Valeraldehyde	0.03	0.027	0.026	0.015	0.017	0.011	0.019	0.014	0.021	0.02	0.015	ND CE	0.018	0.015	ND CE

Table A-5
Chicago O'Hare International Airport Air Monitoring Project
Carbonyl Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

ANALYTE / Sample Date	1/23/2014 Conc (ppb)		1/29/2014 Conc (ppb)		2/4/2014 Conc (ppb)		2/10/2014 Conc (ppb)	N	Mean Conc (ppb)	Standard Deviation (ppb)
2,5-Dimethylbenzaldehyde	ND		ND		ND		ND	0	ND	N/A
2-Butanone	**0.103**		**0.158**		**0.359**		**0.101**	34	0.143	0.071
Acetaldehyde	**0.948**	B	**2.9**	B	**3.05**		**0.968**	34	1.471	0.669
Acetone	**0.644**	B	**1.23**	B	**1.81**		**0.661**	34	1.029	0.326
Benzaldehyde	**0.008**		**0.017**		**0.029**		**0.01**	34	0.020	0.010
Butyraldehyde	**0.051**		**0.097**		**0.156**		**0.069**	34	0.113	0.042
Crotonaldehyde	**0.016**		**0.029**		**0.033**		**0.02**	34	0.072	0.084
Formaldehyde	**1.7**	B	**3.97**	B	**3.55**		**1.06**	34	2.060	1.018
Hexaldehyde	**0.005**		**0.01**		**0.01**		**0.032**	34	0.018	0.012
Isovaleraldehyde	ND		ND		ND		ND	0	ND	N/A
Propionaldehyde	**0.062**		**0.198**		**0.204**		**0.077**	34	0.148	0.058
Tolualdehydes	**0.005**		**0.01**		**0.019**		**0.011**	26	0.013	0.007
Valeraldehyde	**0.008**		ND	CE	ND	CE	**0.039**	30	0.031	0.015

Notes:
Values in **BOLD** indicate measured concentrations above detection limit
Mean concentrations and standard deviations calculated using detected values only
N - Number of samples with detected concentrations (total number of samples = 34)
ND - The analyte was not detected at or above the Method Detection Limit (MDL)
B - The analyte was also detected in the associated method or field blank at a concentration below 5 x MDL
CE - Not reportable due to a co-eluting compound
ppb - Parts per billion by volume

Table A-6
Chicago O'Hare International Airport Air Monitoring Project
Carbonyl Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date / ANALYTE	7/3/2013 Conc (ppb)	7/9/2013 Conc (ppb)	7/17/2013 Conc (ppb)	7/21/2013 Conc (ppb)	7/27/2013 Conc (ppb)	8/2/2013 Conc (ppb)	8/8/2013 Conc (ppb)	8/14/2013 Conc (ppb)	8/20/2013 Conc (ppb)	8/26/2013 Conc (ppb)	9/1/2013 Conc (ppb)	9/7/2013 Conc (ppb)	9/13/2013 Conc (ppb)	9/19/2013 Conc (ppb)
2,5-Dimethylbenzaldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	0.163	0.116	0.1	0.058	0.082	0.088	0.053	0.134	0.124	0.083	0.062	0.113	0.072	0.09
Acetaldehyde	0.916	0.979	0.828	0.701	0.443	0.752	0.394	0.513	0.952	0.822	0.598	1.08	0.401	1.06
Acetone	0.935	0.324	0.445	0.449	0.69	0.655	0.622	1.1	0.754	0.572	0.519	0.78	0.865	0.594
Benzaldehyde	0.043	0.038	0.041	0.019	0.023	0.03	0.02	0.025	0.033	0.024	0.023	0.033	0.021	0.029
Butyraldehyde	0.078	0.073	0.068	0.056	0.042	0.061	0.04	0.062	0.076	0.056	0.049	0.082	0.041	0.073
Crotonaldehyde	0.159	0.329	0.229	0.173	0.084	0.169	0.076	0.07	0.154	0.303	0.125	0.271	0.046	0.208
Formaldehyde	2.39	4.44	3.62	2.61	1.48	2.59	1.55	1.77	3.1	3.76	2.29	3.99	1.31	3.04
Hexaldehyde	0.035	0.035	0.046	0.028	0.018	0.031	0.023	0.028	0.047	0.034	0.026	0.048	0.022	0.035
Isovaleraldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propionaldehyde	0.134	0.159	0.136	0.11	0.073	0.121	0.061	0.074	0.143	0.139	0.099	0.176	0.061	0.151
Tolualdehydes	0.03	0.035	0.048	0.039	0.02	0.032	0.029	0.027	0.04	0.034	0.023	0.037	0.02	0.029
Valeraldehyde	0.022	0.024	0.029	0.025	0.012	0.022	0.015	0.019	0.029	0.021	0.018	0.033	0.014	0.025

Sample Date / ANALYTE	9/25/2013 Conc (ppb)	10/1/2013 Conc (ppb)	10/7/2013 Conc (ppb)	10/13/2013 Conc (ppb)	10/19/2013 Conc (ppb)	10/25/2013 Conc (ppb)	10/31/2013 Conc (ppb)	11/6/2014 Conc (ppb)	11/12/2014 Conc (ppb)	11/18/2014 Conc (ppb)	11/24/2014 Conc (ppb)	11/30/2014 Conc (ppb)	12/6/2014 Conc (ppb)	12/12/2014 Conc (ppb)
2,5-Dimethylbenzaldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	0.139	0.184	0.146	0.177	0.103	0.126	0.109	0.143	0.101	0.109	0.076	0.216	0.141	0.401
Acetaldehyde	0.752	0.732	0.633	0.746	0.527	0.823	0.671	0.645	1.97	0.726	0.787	1.14	0.967	3.39
Acetone	0.881	0.767	1.3	1.15	0.969	1.11	0.709	0.925	0.739	0.734	0.673	1.48	0.853	2.15
Benzaldehyde	0.029	0.022	0.023	0.032	0.019	0.027	0.019	0.022	0.023	0.024	0.018	0.026	0.028	0.048
Butyraldehyde	0.075	0.076	0.087	0.093	0.05	0.063	0.045	0.059	0.053	0.046	0.049	0.093	0.072	0.155
Crotonaldehyde	0.06	0.127	0.03	0.049	0.027	0.035	0.042	0.044	0.038	0.042	0.031	0.035	0.056	0.068
Formaldehyde	2.02	2.18	1.49	1.97	1.06	1.71	1.13	1.4	2.51	1.7	1.52	1.97	1.84	4.43
Hexaldehyde	0.036	0.028	0.028	0.028	0.023	0.022	0.017	0.019	0.017	0.014	0.013	0.026	0.017	0.026
Isovaleraldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propionaldehyde	0.1	0.104	0.087	0.112	0.073	0.108	0.066	0.072	0.097	0.096	0.065	0.116	0.096	0.415
Tolualdehydes	0.03	0.027	0.028	0.027	0.022	0.02	0.015	0.018	0.019	0.021	0.013	0.025	0.018	0.046
Valeraldehyde	0.025	0.019	0.019	0.019	0.013	0.018	0.011	0.014	ND CE	ND CE	0.009	0.016	0.016	0.031

Table A-6
Chicago O'Hare International Airport Air Monitoring Project
Carbonyl Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date / ANALYTE	12/18/2014 Conc (ppb)	12/24/2014 Conc (ppb)	12/30/2014 Conc (ppb)	1/5/2014 Conc (ppb)	1/11/2014 Conc (ppb)	1/17/2014 Conc (ppb)	1/23/2014 Conc (ppb)	1/29/2014 Conc (ppb)	2/4/2014 Conc (ppb)	2/10/2014 Conc (ppb)	N	Mean Conc (ppb)	Standard Deviation (ppb)
2,5-Dimethylbenzaldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
2-Butanone	**0.148**	**0.113**	**0.125**	**0.128**	**0.169**	**0.095**	**0.174**	**0.173**	**0.267**	**0.216**	38	0.135	0.065
Acetaldehyde	**1.63**	**1.84**	**2.28**	**1.24**	**1.19**	**4.45**	**4.92**	**2.33**	**2.32**	**3.98**	38	1.345	1.130
Acetone	**0.922**	**0.978**	**0.767**	**0.751**	**1.03**	**0.624**	**1.01**	**0.876**	**1.6**	**1.09**	38	0.879	0.343
Benzaldehyde	**0.023**	**0.023**	**0.024**	**0.024**	**0.017**	**0.022**	**0.033**	**0.024**	**0.037**	**0.03**	38	0.027	0.007
Butyraldehyde	**0.066**	**0.064**	**0.066**	**0.07**	**0.068**	**0.048**	**0.078**	**0.069**	**0.108**	**0.087**	38	0.068	0.022
Crotonaldehyde	**0.035**	**0.032**	**0.044**	**0.05**	**0.029**	**0.028**	**0.071**	**0.038**	**0.045**	**0.054**	38	0.092	0.082
Formaldehyde	**2.56**	**2.25**	**2.91**	**2.19**	**1.84**	**4.6**	**5.81**	**3.53**	**3.43**	**4.92**	38	2.603	1.167
Hexaldehyde	**0.018**	**0.014**	**0.011**	**0.012**	**0.02**	**0.012**	**0.011**	**0.011**	**0.02**	**0.014**	38	0.024	0.010
Isovaleraldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	ND	N/A
Propionaldehyde	**0.242**	**0.188**	**0.172**	**0.116**	**0.177**	**0.124**	**0.192**	**0.084**	**0.245**	**0.198**	38	0.131	0.068
Tolualdehydes	**0.018**	**0.019**	**0.015**	**0.015**	**0.022**	**0.035**	**0.022**	**0.015**	**0.031**	**0.025**	38	0.026	0.009
Valeraldehyde	**0.013**	**0.014**	ND CE	**0.015**	**0.018**	ND CE	ND CE	ND CE	ND CE	ND CE	30	0.019	0.006

Notes:
Values in BOLD indicate measured concentrations above detection limit
Mean concentrations and standard deviations calculated using detected values only
N - Number of samples with detected concentrations (total number of samples = 38)
ND - The analyte was not detected at or above the Method Detection Limit (MDL)
CE - Not reportable due to a co-eluting compound
N/A - Not applicable
ppb - Parts per billion by volume

Table A-7
Chicago O'Hare International Airport Air Monitoring Project
PAHs Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date ANALYTE	N	Mean Conc (ng/m3)	Standard Deviation (ng/m3)	Max Concentration ng/m3	Sample Date
9-Fluorenone	35	1.572	1.264	4.72	8/20/2013
Acenaphthene	35	4.870	2.949	13.9	8/2/2013
Acenaphthylene	25	0.877	0.621	2.56	12/12/2013
Anthracene	29	0.300	0.127	0.738	8/2/2013
Benzo (a) anthracene	12	0.1294	0.054	0.208	1/23/2014
Benzo (a) pyrene	30	0.117	0.058	0.277	12/30/2013
Benzo (b) fluoranthene	35	0.269	0.041	0.867	12/30/2013
Benzo (e) pyrene	29	0.144	0.084	0.365	12/30/2013
Benzo (g,h,i) perylene	33	0.098	0.047	0.331	1/29/2014
Benzo (k) fluoranthene	16	0.1163	0.058	0.294	12/30/2013
Chrysene	35	0.232	0.038	0.689	12/30/2013
Coronene	13	0.0961	0.032	0.139	1/5/2014
Fluoranthene	35	2.717	1.854	7.2	7/15/2013
Fluorene	31	6.215	5.170	17.1	8/20/2013
Indeno(1,2,3-cd)pyrene	35	0.144	0.023	0.415	12/30/2013
Naphthalene	35	68.686	35.237	178	9/25/2013
Phenanthrene	35	11.867	9.261	35.2	8/2/2013
Pyrene	35	1.299	0.776	3.11	8/20/2013
Retene	15	0.1883	0.140	0.542	10/13/2013

Notes:

Mean concentrations and standard deviations calculated using detected values only

Cyclopenta[cd]pyrene, dibenz (a,h) anthracene, and perylene are not included in this table since these PAHs were not detected at or above the Method Detection Limit (MDL) for the majority of samples.

N - Number of samples with detected concentrations (total number of samples = 35)

ng/m^3 - Nanograms per cubic meter

PAH - Polycyclic aromatic hydrocarbons

Table A-8
Chicago O'Hare International Airport Air Monitoring Project
PAHs Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date ANALYTE	N	Mean Conc (ng/m3)	Standard Deviation (ng/m3)	Max Concentration ng/m3	Sample Date
9-Fluorenone	34	2.594	1.766	8.09	7/15/2013
Acenaphthene	33	7.810	5.723	20.3	7/15/2013
Acenaphthylene	27	1.534	1.025	4.39	12/6/2013
Anthracene	33	0.657	0.230	1.09	9/25/2013
Benzo (a) anthracene	31	0.241	0.213	1.22	10/13/2013
Benzo (a) pyrene	32	0.270	0.198	1.09	10/13/2013
Benzo (b) fluoranthene	34	0.612	0.407	1.73	10/13/2013
Benzo (e) pyrene	34	0.305	0.194	0.845	12/6/2013
Benzo (g,h,i) perylene	34	0.322	0.190	0.843	12/6/2013
Benzo (k) fluoranthene	30	0.208	0.128	0.554	10/13/2013
Chrysene	34	0.532	0.301	1.43	10/13/2013
Coronene	30	0.135	0.069	0.309	2/4/2014
Fluoranthene	34	4.624	3.117	14	7/15/2013
Fluorene	31	8.416	6.024	22.6	8/20/2013
Indeno(1,2,3-cd)pyrene	34	0.329	0.220	0.927	2/4/2014
Naphthalene	34	113.568	45.593	211	12/12/2013
Phenanthrene	34	17.337	13.940	56.9	7/15/2013
Pyrene	34	2.650	1.102	5.74	7/15/2013
Retene	16	0.213	0.081	0.375	2/4/2014

Notes:

Mean concentrations and standard deviations calculated using detected values only

Cyclopenta[cd]pyrene, dibenz (a,h) anthracene, and perylene are not included in this table since these PAHs were not detected at or above the Method Detection Limit (MDL) for the majority of samples.

N - Number of samples with detected concentrations (total number of samples = 34)

ng/m^3 - Nanograms per cubic meter

PAH - Polycyclic aromatic hydrocarbons

Table A-9
Chicago O'Hare International Airport Air Monitoring Project
VOCs Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date ANALYTE	N	Mean Conc (ppb)	Standard Deviation (ppb)	Max Concentration (ppb)	Sample Date
1,2,4-Trimethylbenzene	34	0.056	0.027	0.128	9/25/2013
1,2-Dichloroethane	27	0.020	0.002	0.026	12/30/2013
1,3,5-Trimethylbenzene	20	0.038	0.028	0.15	7/3/2013
1,3-Butadiene	33	0.045	0.015	0.074	9/25/2013
Acetonitrile	34	0.403	0.511	3.05	8/8/2013
Acetylene	34	0.676	0.291	1.74	2/4/2014
Acrolein	27	0.361	0.164	0.874	8/20/2013
Benzene	34	0.191	0.058	0.327	2/4/2014
Bromomethane	25	0.016	0.005	0.032	10/1/2013
Carbon Disulfide	34	1.166	0.515	3.22	1/5/2014
Carbon Tetrachloride	34	0.093	0.013	0.111	9/19/2013
Chloroform	34	0.027	0.014	0.098	10/13/2013
Chloromethane	34	0.575	0.061	0.754	10/1/2013
Dichlorodifluoromethane	34	0.511	0.049	0.627	12/18/2013
Dichloromethane	4	0.717	0.355	1.19	9/7/2013
Dichlorotetrafluoroethane	34	0.018	0.002	0.022	10/1/2013
Ethyl tert-Butyl Ether	25	0.080	0.067	0.304	1/17/2014
Ethylbenzene	34	0.043	0.019	0.087	9/25/2013
m,p-Xylene	34	0.103	0.048	0.22	9/25/2013
Methyl Isobutyl Ketone	30	0.040	0.027	0.152	8/20/2013
Methyl tert-Butyl Ether	34	0.384	0.631	3.59	7/3/2013
n-Octane	34	0.048	0.020	0.098	7/3/2013
o-Xylene	34	0.044	0.021	0.102	7/3/2013
Propylene	34	0.366	0.102	0.602	2/4/2014
Styrene	22	0.032	0.018	0.093	7/3/2013
Tetrachloroethylene	26	0.026	0.010	0.048	2/4/2014
Toluene	34	0.489	0.269	1.51	7/3/2013
Trichloroethylene	17	0.027	0.010	0.05	10/31/2013
Trichlorofluoromethane	34	0.256	0.048	0.5	1/11/2014
Trichlorotrifluoroethane	34	0.082	0.006	0.094	11/6/2013

Notes:

Mean concentrations and standard deviations calculated using detected values only

Many (28) VOCs were not detected at or above the Method Detection Limit (MDL) for the majority of samples and are therefore not included in this table.

N - Number of samples with detected concentrations (total number of samples = 34)

ppb - Parts per billion by volume

VOC - Volatile organic compound

Table A-10
Chicago O'Hare International Airport Air Monitoring Project
VOCs Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date ANALYTE	N	Mean Conc (ppb)	Standard Deviation (ppb)	Max Concentration (ppb)	Sample Date
1,2,4-Trimethylbenzene	37	0.057	0.018	0.102	9/25/2013
1,2-Dichloroethane	27	0.021	0.004	0.028	10/31/2013
1,3,5-Trimethylbenzene	24	0.027	0.007	0.044	9/25/2013
1,3-Butadiene	37	0.057	0.020	0.106	1/23/2014
Acetonitrile	33	3.353	13.156	57.4	7/15/2013
Acetylene	38	0.746	0.332	1.84	2/4/2014
Acrolein	34	0.330	0.179	0.898	7/3/2013
Benzene	38	0.204	0.056	0.317	2/10/2014
Bromomethane	23	0.013	0.002	0.017	8/2/2013
Carbon Disulfide	38	0.033	0.017	0.088	7/17/2013
Carbon Tetrachloride	38	0.097	0.017	0.129	7/9/2013
Chloroform	36	0.025	0.006	0.044	7/15/2013
Chloromethane	38	0.530	0.049	0.679	7/15/2013
Dichlorodifluoromethane	38	0.506	0.058	0.695	10/31/2013
Dichloromethane	27	0.963	1.954	9.58	7/15/2013
Dichlorotetrafluoroethane	38	0.017	0.002	0.022	12/6/2013
Ethyl tert-Butyl Ether	10	0.021	0.007	0.036	9/13/2013
Ethylbenzene	37	0.055	0.035	0.236	1/5/2014
m,p-Xylene	37	0.137	0.104	0.693	1/5/2014
Methyl Isobutyl Ketone	29	0.050	0.073	0.411	7/17/2013
Methyl tert-Butyl Ether	16	0.025	0.017	0.086	10/19/2013
n-Octane	37	0.035	0.013	0.067	1/11/2014
o-Xylene	37	0.055	0.030	0.199	1/5/2014
Propylene	38	0.417	0.109	0.618	1/23/2014
Styrene	25	0.033	0.019	0.087	7/15/2013
Tetrachloroethylene	35	0.052	0.067	0.334	7/17/2013
Toluene	38	0.349	0.176	0.902	1/5/2014
Trichloroethylene	21	0.060	0.079	0.374	9/19/2013
Trichlorofluoromethane	38	0.283	0.111	0.811	10/31/2013
Trichlorotrifluoroethane	38	0.082	0.006	0.098	10/1/2013

Notes:

Mean concentrations and standard deviations calculated using detected values only

Many (28) VOCs were not detected at or above the Method Detection Limit (MDL) for the majority of samples and are therefore not included in this table.

N - Number of samples with detected concentrations (total number of samples = 38)

ppb - Parts per billion by volume

VOC - Volatile organic compound

Table A-11
Chicago O'Hare International Airport Air Monitoring Project
Carbonyls Results: July 3, 2013 - February 10, 2014
Park Ridge Site Location

Sample Date ANALYTE	N	Mean Conc (ppb)	Standard Deviation (ppb)	Max Concentration (ppb)	Sample Date
2-Butanone	34	0.143	0.071	0.359	2/4/2014
Acetaldehyde	34	1.471	0.669	3.05	2/4/2014
Acetone	34	1.029	0.326	1.81	2/4/2014
Benzaldehyde	34	0.020	0.010	0.05	7/3/2013
Butyraldehyde	34	0.113	0.042	0.198	8/20/2013
Crotonaldehyde	34	0.072	0.084	0.336	8/26/2013
Formaldehyde	34	2.060	1.018	4.86	8/26/2013
Hexaldehyde	34	0.018	0.012	0.055	7/3/2013
Propionaldehyde	34	0.148	0.058	0.298	9/7/2013
Tolualdehydes	26	0.013	0.007	0.026	9/7/2013
Valeraldehyde	30	0.031	0.015	0.06	8/20/2013

Notes:

Mean concentrations and standard deviations calculated using detected values only

2,5-Dimethylbenzaldehyde and isovaleraldehyde are not included in this table since these carbonyls were not detected at or above the Method Detection Limit (MDL) during any sampling events.

N - Number of samples with detected concentrations (total number of samples = 34)

ppb - Parts per billion by volume

Table A-12
Chicago O'Hare International Airport Air Monitoring Project
Carbonyls Results: July 3, 2013 - February 10, 2014
Schiller Park Site Location

Sample Date ANALYTE	N	Mean Conc (ppb)	Standard Deviation (ppb)	Max Concentration (ppb)	Sample Date
2-Butanone	38	0.135	0.065	0.401	12/12/2013
Acetaldehyde	38	1.345	1.130	4.92	1/23/2014
Acetone	38	0.879	0.343	2.15	12/12/2013
Benzaldehyde	38	0.027	0.007	0.048	12/12/2013
Butyraldehyde	38	0.068	0.022	0.155	12/12/2013
Crotonaldehyde	38	0.092	0.082	0.303	8/26/2013
Formaldehyde	38	2.603	1.167	5.81	1/23/2014
Hexaldehyde	38	0.024	0.010	0.048	9/7/2013
Propionaldehyde	38	0.131	0.068	0.415	12/12/2013
Tolualdehydes	38	0.026	0.009	0.046	12/12/2013
Valeraldehyde	30	0.019	0.006	0.033	9/7/2013

Notes:

Mean concentrations and standard deviations calculated using detected values only

2,5-Dimethylbenzaldehyde and isovaleraldehyde are not included in this table since these carbonyls were not detected at or above the Method Detection Limit (MDL) during any sampling events.

N - Number of samples with detected concentrations (total number of samples = 38)

ppb - Parts per billion by volume