

APPENDIX C
METEOROLOGICAL STATION DATA

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: July 28, 2010																														
Subject: Submittal of Lakeshore/Willis Ave Meteorological Data for: MAY 2010																															
Data: ☐ Preliminary ☒ Validated ☐ Adjusted (list parameters)	Attached/Enclosed: ☐ Preliminary Report ☐ AIRS Diskette ☒ Final Report ☐ Client Data Disk ☒ Data Summaries ☐ Other (as noted)																														
Program Operations/Data Collection Activities Summary: • No operational problems occurred at the Lakeshore monitoring site in May and monthly data recovery rates are 100 percent for all parameters.																															
Climatic Summary: MAY 2010 General Predominance for winds from: <u>due west through west-northwest</u> 10-meter level Primary Peak WD: <u>W</u> Secondary Peak WD: <u>W/NW</u> Max. Wind Speed : <u>21.9 mph</u> Min. Wind Speed : <u>0.7 mph</u> 2-meter level Max. Temperature: <u>90.1 °F</u> Min. Temperature: <u>31.0 °F</u> Max. Dew Point Temp. <u>66.5 °F</u> Min. Dew Point Temp. <u>22.3 °F</u> Max. Relative Humidity <u>98%</u> Min. Relative Humidity <u>23%</u>																															
Cumulative-to-date Data Recovery Rates 10-Meter Level <table style="width: 100%;"> <tr><td>10-Meter Vector Wind Speed:</td><td><u>99.3</u> %</td></tr> <tr><td>10-Meter Vector Wind Direction:</td><td><u>99.3</u> %</td></tr> <tr><td>10-Meter Scalar Wind Speed:</td><td><u>99.3</u> %</td></tr> <tr><td>10-Meter Scalar Wind Direction:</td><td><u>99.9</u> %</td></tr> <tr><td>10-Meter Sigma Theta:</td><td><u>99.9</u> %</td></tr> <tr><td>10-Meter Vertical Wind Speed:</td><td><u>100</u> %</td></tr> <tr><td>Sigma W:</td><td><u>100</u> %</td></tr> <tr><td>Sigma Phi:</td><td><u>99.3</u> %</td></tr> <tr><td>10-Meter Temperature:</td><td><u>91.7</u> %</td></tr> </table> 2-Meter Level <table style="width: 100%;"> <tr><td>2-Meter Temperature:</td><td><u>100.0</u> %</td></tr> <tr><td>Delta Temperature:</td><td><u>91.7</u> %</td></tr> <tr><td>Relative Humidity:</td><td><u>88.8</u> %</td></tr> <tr><td>Dew Point Temperature:</td><td><u>88.8</u> %</td></tr> <tr><td>Solar Radiation:</td><td><u>100</u> %</td></tr> <tr><td>Barometric Pressure:</td><td><u>100</u> %</td></tr> </table>		10-Meter Vector Wind Speed:	<u>99.3</u> %	10-Meter Vector Wind Direction:	<u>99.3</u> %	10-Meter Scalar Wind Speed:	<u>99.3</u> %	10-Meter Scalar Wind Direction:	<u>99.9</u> %	10-Meter Sigma Theta:	<u>99.9</u> %	10-Meter Vertical Wind Speed:	<u>100</u> %	Sigma W:	<u>100</u> %	Sigma Phi:	<u>99.3</u> %	10-Meter Temperature:	<u>91.7</u> %	2-Meter Temperature:	<u>100.0</u> %	Delta Temperature:	<u>91.7</u> %	Relative Humidity:	<u>88.8</u> %	Dew Point Temperature:	<u>88.8</u> %	Solar Radiation:	<u>100</u> %	Barometric Pressure:	<u>100</u> %
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Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons																														

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: MAY 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M SOLAR RADIATION	SOLAR RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: MAY 2010

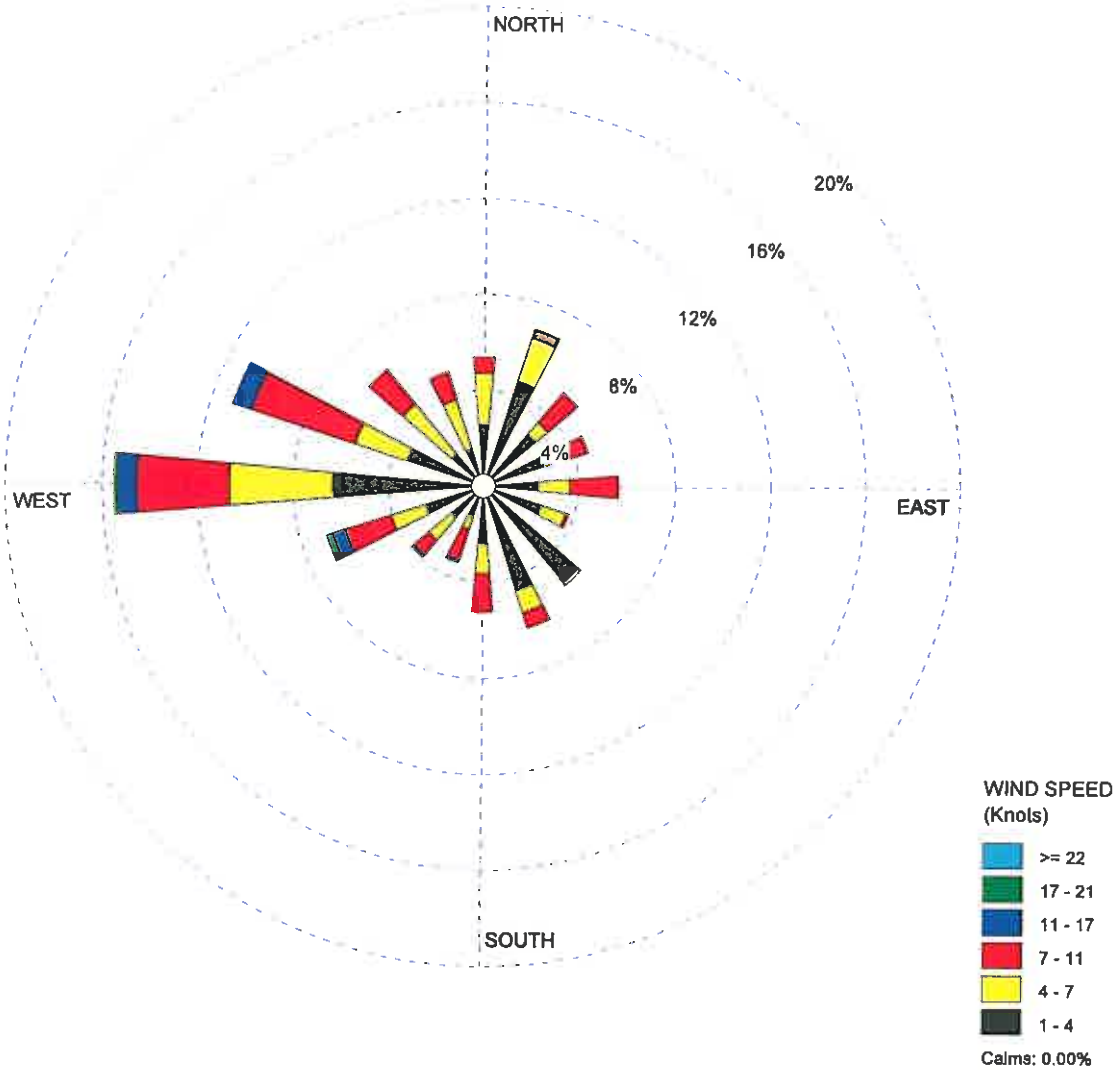
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%) BASED ON	
				OPERATING SCHEDULE	TOTAL HOURS
LAKESHORE/WILLIS AVE 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.1	21.1	5.3	100.0	100.0
Vector Wind Direction (deg)	1	360	196	100.0	100.0
Scalar Wind Speed (mph)	0.7	21.9	5.8	100.0	100.0
Scalar Wind Direction (deg.)	1	360	194	100.0	100.0
Sigma Theta (deg.)	6.3	74.1	25.5	100.0	100.0
Vertical Wind Speed (mph)	-0.21	0.78	0.11	100.0	100.0
Sigma W (mph)	0.07	2.91	0.88	100.0	100.0
Sigma Phi (deg)	2.83	19.6	8.8	100.0	100.0
Temperature (deg-F)	32.2	89.4	62.0	100.0	100.0
2-Meter Level					
Temperature (deg-F)	31.0	90.1	62.0	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.80	3.85	0.00	100.0	100.0
Relative Humidity (percent)	23.3	98.4	64.0	100.0	100.0
Dew Point Temperature (deg-F)	22.3	66.5	48.0	100.0	100.0
Solar Radiation (W/m ²)	0.0	1070.0	6340.5 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.13	30.17	29.71	100.0	100.0

WIND ROSE PLOT

Honeywell Onondaga Lake - Meteorological Monitoring Program
Lakeshore/Willis Ave Monitoring Site - 10-Meter Tower - May 2010

DISPLAY

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
May 1 - May 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT

744 hrs.

AVG. WIND SPEED:

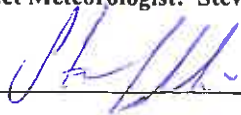
5.07 Knots

DATE:

7/27/2010

PROJECT NO.:

446092-04308

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: July 28, 2010
Subject: Submittal of Wasted 13 Meteorological Data for: MAY 2010	
Data: ☐ Preliminary ☒ Validated ☐ Adjusted (list parameters)	Attached/Enclosed: ☐ Preliminary Report ☐ AIRS Diskette ☒ Final Report ☐ Client Data Disk ☒ Data Summaries ☐ Other (as noted)
Program Operations/Data Collection Activities Summary: • Net radiation is reported as a non-scheduled outage ("N") from the beginning of the month through May 6 hour 13. This period of missing data was found to be caused by loose signal wiring within the junction box at the tower site. A local technician reset the wiring in place and net radiation data collection resumed on May 6 during hour 14. • Precipitation bucket is off-line due to a suspected failure of the unit's reed switch. A replacement switch has been ordered from the vendor and will be installed during the upcoming audit.	
Climatic Summary: MAY 2010 General Predominance for winds from: <u>southwest through due west to northwest</u> 10-meter level Primary Peak WD: <u>WNW</u> Max. Wind Speed: <u>22.3 mph</u> Secondary Peak WD: <u>SW</u> Min. Wind Speed: <u>1.0 mph</u> 2-meter level Max. Temperature: <u>90.3 °F</u> Max. Dew Point Temp. <u>68.4 °F</u> Max. Relative Humidity <u>100%</u> Min. Temperature: <u>29.4 °F</u> Min. Dew Point Temp. <u>23.1 °F</u> Min. Relative Humidity <u>22%</u>	
Cumulative-to-date Data Recovery Rates Period: January 1, 2010 through May 31, 2010	
10-Meter Level 10-Meter Vector Wind Speed: <u>99.4</u> % 10-Meter Vector Wind Direction: <u>99.4</u> % 10-Meter Scalar Wind Speed: <u>99.4</u> % 10-Meter Scalar Wind Direction: <u>99.6</u> % 10-Meter Sigma Theta: <u>99.6</u> % 10-Meter Vertical Wind Speed: <u>100</u> % Sigma W: <u>100</u> % Sigma Phi: <u>99.4</u> % 10-Meter Temperature: <u>100</u> %	2-Meter Level 2-Meter Temperature: <u>100</u> % Delta Temperature: <u>100</u> % Relative Humidity: <u>99.1</u> % Dew Point Temperature: <u>99.1</u> % Net Radiation: <u>89.4</u> % Barometric Pressure: <u>100</u> % Surface Precipitation (Rain): <u>60</u> %
Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: MAY 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M NET RADIATION	NET RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY
SFC PRECIPITATION (RAIN)	RAIN	INCHES OF WATER

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: MAY 2010

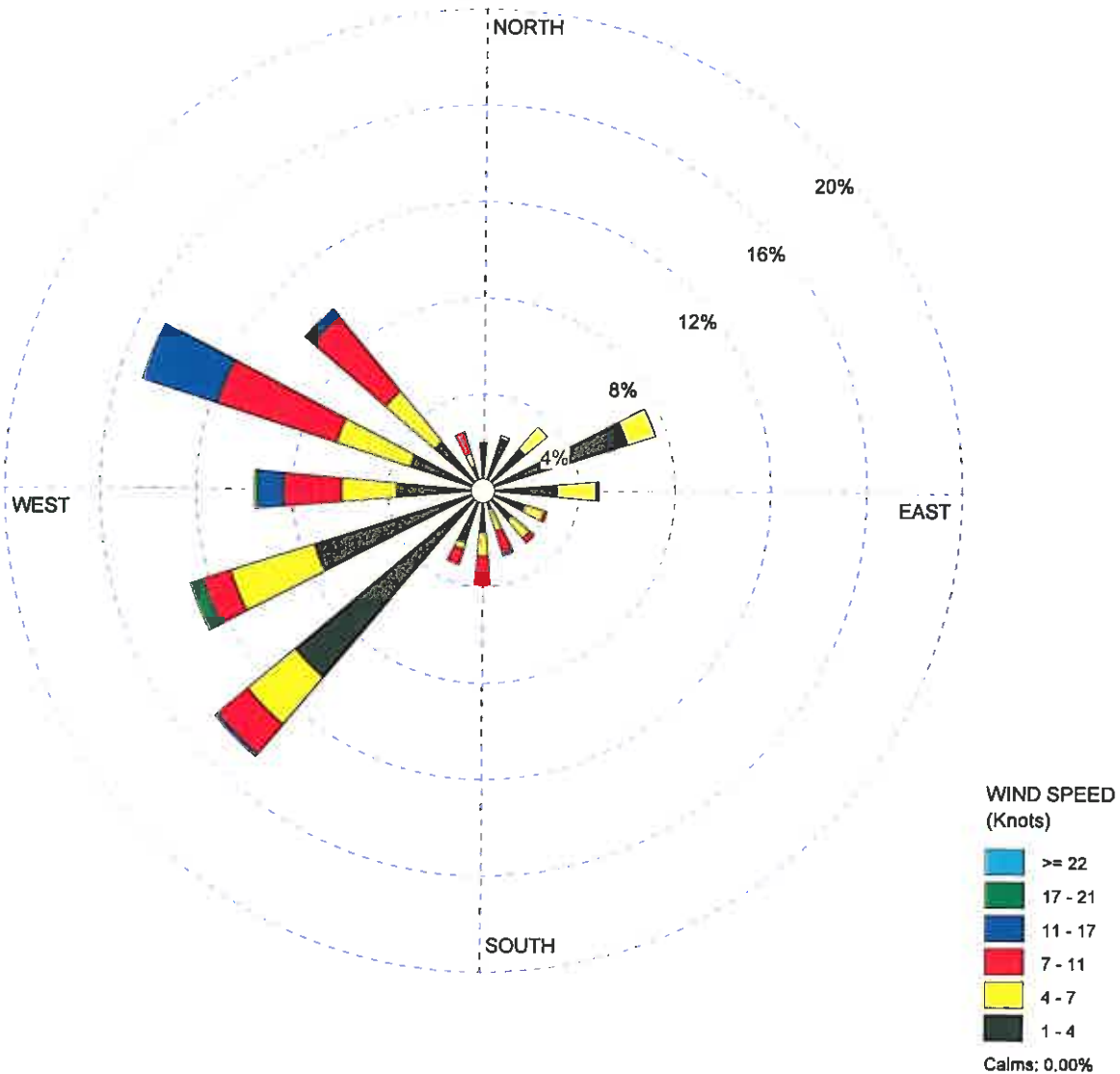
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%) BASED ON	
				OPERATING SCHEDULE	TOTAL HOURS
WASTEBED 13 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.2	21.7	5.3	100.0	100.0
Vector Wind Direction (deg)	2	360	213	100.0	100.0
Scalar Wind Speed (mph)	1.0	22.3	5.8	100.0	100.0
Scalar Wind Direction (deg.)	1	360	212	100.0	100.0
Sigma Theta (deg.)	7.0	78.3	24.4	100.0	100.0
Vertical Wind Speed (mph)	-0.23	1.10	0.22	100.0	100.0
Sigma W (mph)	0.11	2.43	0.85	100.0	100.0
Sigma Phi (deg)	3.31	24.7	8.5	100.0	100.0
Temperature (deg-F)	31.9	88.8	60.9	100.0	100.0
2-Meter Level					
Temperature (deg-F)	29.4	90.3	60.6	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.74	5.46	0.35	100.0	100.0
Relative Humidity (percent)	21.6	100.0	69.2	100.0	100.0
Dew Point Temperature (deg-F)	23.1	68.4	48.6	100.0	100.0
Net Radiation (W/m ²)	-86.0	621.2	1473.2 (Avg. Daily Total)	82.0	82.0
Barometric Pressure (in. Hg.)	29.02	30.05	29.60	100.0	100.0
Surface Level					
Precipitation (Rain in inches)	N	N	N (Total)	0.0	0.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Wastebed 13 Monitoring Site - 10-Meter Tower - May 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
May 1 - May 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

744 hrs.

AVG WIND SPEED:

5.08 Knots

DATE:

7/27/2010

PROJECT NO.:

446092-04308

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: July 28, 2010
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Subject: Submittal of Lakeshore/Willis Ave Meteorological Data for:	JUNE 2010
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Data: _____ Preliminary ☒ Validated _____ Adjusted (list parameters)	Attached/Enclosed: _____ Preliminary Report ☒ Final Report ☒ Data Summaries	_____ AIRS Diskette _____ Client Data Disk _____ Other (as noted)
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Program Operations/Data Collection Activities Summary:

- No operational problems occurred at the Lakeshore monitoring site in June and monthly data recovery rates are 100 percent for all parameters.

Climatic Summary: JUNE 2010

General Predominance for winds from: west-southwest to west-northwest

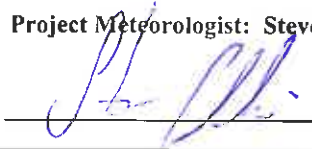
10-meter level

Primary Peak WD:	<u>W</u>	Max. Wind Speed :	<u>16.1 mph</u>
Secondary Peak WD:	<u>WNW</u>	Min. Wind Speed :	<u>0.6 mph</u>

2-meter level

Max. Temperature:	<u>86.4 °F</u>	Max. Dew Point Temp.	<u>71.8 °F</u>	Max. Relative Humidity	<u>97%</u>
Min. Temperature:	<u>48.5 °F</u>	Min. Dew Point Temp.	<u>35.9 °F</u>	Min. Relative Humidity	<u>25%</u>

Cumulative-to-date Data Recovery Rates	Period: January 1, 2010 through	June 30, 2010
10-Meter Level	2-Meter Level	
10-Meter Vector Wind Speed: <u>99.4</u> % 10-Meter Vector Wind Direction: <u>99.4</u> % 10-Meter Scalar Wind Speed: <u>99.4</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>100</u> % Sigma W: <u>100</u> % Sigma Phi: <u>99.4</u> % 10-Meter Temperature: <u>93.1</u> %	2-Meter Temperature: <u>100.0</u> % Delta Temperature: <u>93.1</u> % Relative Humidity: <u>90.6</u> % Dew Point Temperature: <u>90.6</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> %	

Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons
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HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: JUNE 2010

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10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M SOLAR RADIATION	SOLAR RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY

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HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: JUNE 2010

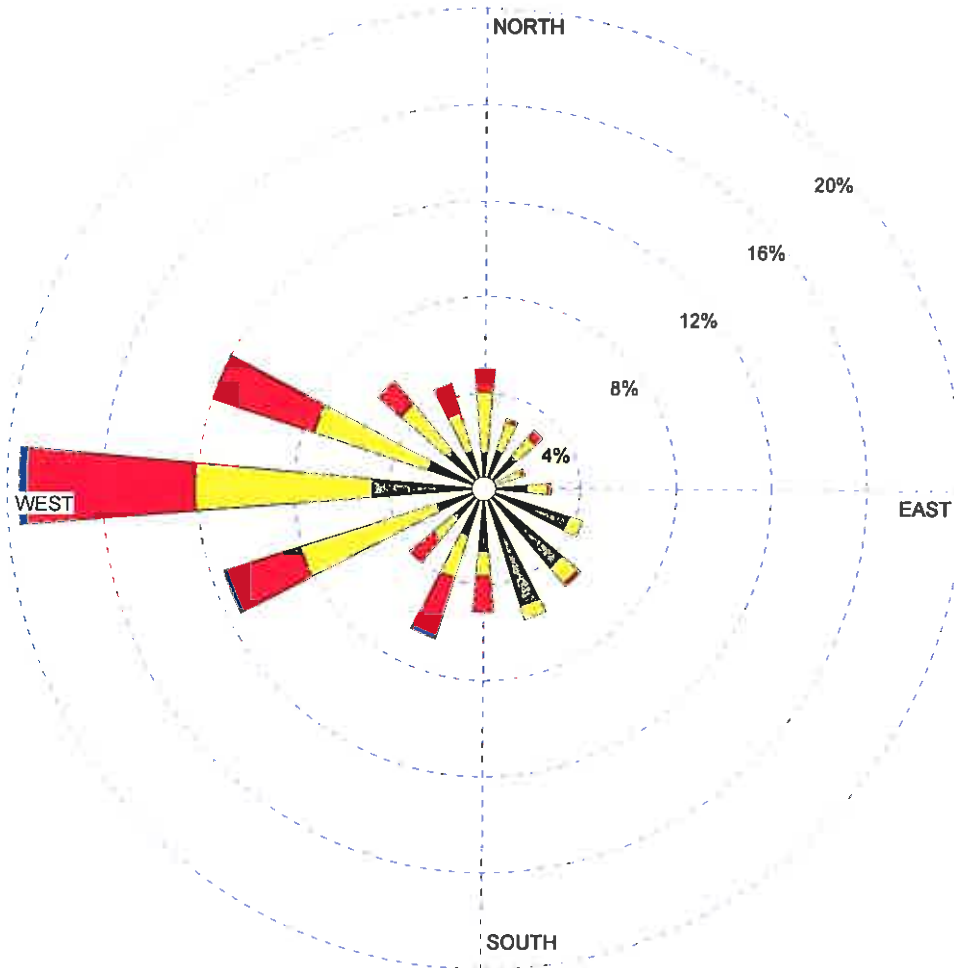
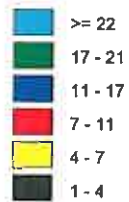
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%) BASED ON	
				OPERATING SCHEDULE	TOTAL HOURS
LAKESHORE/WILLIS AVE 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.1	15.4	5.3	100.0	100.0
Vector Wind Direction (deg)	1	360	216	100.0	100.0
Scalar Wind Speed (mph)	0.6	16.1	5.9	100.0	100.0
Scalar Wind Direction (deg.)	1	360	218	100.0	100.0
Sigma Theta (deg.)	6.9	75.2	24.3	100.0	100.0
Vertical Wind Speed (mph)	-0.25	0.62	0.12	100.0	100.0
Sigma W (mph)	0.10	2.58	0.91	100.0	100.0
Sigma Phi (deg)	2.90	21.2	9.1	100.0	100.0
Temperature (deg-F)	48.7	86.0	67.5	100.0	100.0
2-Meter Level					
Temperature (deg-F)	48.5	86.4	67.5	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.25	3.14	-0.09	100.0	100.0
Relative Humidity (percent)	24.9	96.8	72.2	100.0	100.0
Dew Point Temperature (deg-F)	35.9	71.8	57.4	100.0	100.0
Solar Radiation (W/m ²)	0.0	1094.0	5782.9 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.02	29.88	29.61	100.0	100.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Lakeshore/Willis Ave Monitoring Site - 10-Meter Tower - June 2010

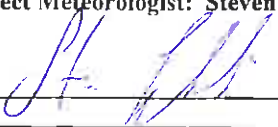
DISPLAY:

Wind Speed
Direction (blowing from)

WIND SPEED
(Knots)

Calms: 0.00%

COMMENTS	DATA PERIOD:	COMPANY NAME:	
	2010 Jun 1 - Jun 30 00:00 - 23:00	PARSONS	
	CALM WINDS:	MODELER:	
	0.00%	TOTAL COUNT:	
		720 hrs.	
	AVG. WIND SPEED:	DATE:	PROJECT NO.:
	5.09 Knots	7/27/2010	446092-04308

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: July 28, 2010																						
Subject: Submittal of Wastebed 13 Meteorological Data for: JUNE 2010																							
Data: ☐ Preliminary ☒ Validated ☐ Adjusted (list parameters)	Attached/Enclosed: ☐ Preliminary Report ☐ AIRS Diskette ☒ Final Report ☐ Client Data Disk ☒ Data Summaries ☐ Other (as noted)																						
Program Operations/Data Collection Activities Summary: • The vertical wind speed sensor at Wastebed 13 failed on June 4. As a result, vertical wind speed, sigma W, and sigma phi data are reported as missing ("N") from June 4 hour 7 through the end of the month. The mid-July audit revealed possible excess moisture intruded into the sensor. The sensor will be sent back to the vendor for inspection and repairs. • Precipitation bucket is off-line for the month. The mid-July systems audit found that the signal wire between the tower and the bucket assembly had been cut and exposed. The signal cable was rewired and precipitation data collection resumes in July.																							
Climatic Summary: JUNE 2010 General Predominance for winds from: <u>southwest through due west to northwest</u> 10-meter level Primary Peak WD: <u>WNW</u> Max. Wind Speed : <u>16.4 mph</u> Secondary Peak WD: <u>WSW</u> Min. Wind Speed : <u>0.8 mph</u> 2-meter level Max. Temperature: <u>85.3 °F</u> Max. Dew Point Temp. <u>72.6 °F</u> Max. Relative Humidity <u>100%</u> Min. Temperature: <u>44.2 °F</u> Min. Dew Point Temp. <u>36.2 °F</u> Min. Relative Humidity <u>27%</u>																							
Cumulative-to-date Data Recovery Rates Period: January 1, 2010 through June 30, 2010 <table style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><u>10-Meter Level</u></th> <th style="text-align: left;"><u>2-Meter Level</u></th> </tr> </thead> <tbody> <tr> <td>10-Meter Vector Wind Speed: <u>99.5</u> %</td> <td>2-Meter Temperature: <u>100</u> %</td> </tr> <tr> <td>10-Meter Vector Wind Direction: <u>99.5</u> %</td> <td>Delta Temperature: <u>100</u> %</td> </tr> <tr> <td>10-Meter Scalar Wind Speed: <u>99.5</u> %</td> <td>Relative Humidity: <u>99.2</u> %</td> </tr> <tr> <td>10-Meter Scalar Wind Direction: <u>99.7</u> %</td> <td>Dew Point Temperature: <u>99.2</u> %</td> </tr> <tr> <td>10-Meter Sigma Theta: <u>99.7</u> %</td> <td>Net Radiation: <u>91.1</u> %</td> </tr> <tr> <td></td> <td>Barometric Pressure: <u>100</u> %</td> </tr> <tr> <td>10-Meter Vertical Wind Speed: <u>85.2</u> %</td> <td></td> </tr> <tr> <td>Sigma W: <u>85.2</u> %</td> <td>Surface</td> </tr> <tr> <td>Sigma Phi: <u>84.8</u> %</td> <td></td> </tr> <tr> <td>10-Meter Temperature: <u>100</u> %</td> <td>Precipitation (Rain): <u>50</u> %</td> </tr> </tbody> </table>		<u>10-Meter Level</u>	<u>2-Meter Level</u>	10-Meter Vector Wind Speed: <u>99.5</u> %	2-Meter Temperature: <u>100</u> %	10-Meter Vector Wind Direction: <u>99.5</u> %	Delta Temperature: <u>100</u> %	10-Meter Scalar Wind Speed: <u>99.5</u> %	Relative Humidity: <u>99.2</u> %	10-Meter Scalar Wind Direction: <u>99.7</u> %	Dew Point Temperature: <u>99.2</u> %	10-Meter Sigma Theta: <u>99.7</u> %	Net Radiation: <u>91.1</u> %		Barometric Pressure: <u>100</u> %	10-Meter Vertical Wind Speed: <u>85.2</u> %		Sigma W: <u>85.2</u> %	Surface	Sigma Phi: <u>84.8</u> %		10-Meter Temperature: <u>100</u> %	Precipitation (Rain): <u>50</u> %
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Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons																						

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: JUNE 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M NET RADIATION	NET RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY
SFC PRECIPITATION (RAIN)	RAIN	INCHES OF WATER

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: JUNE 2010

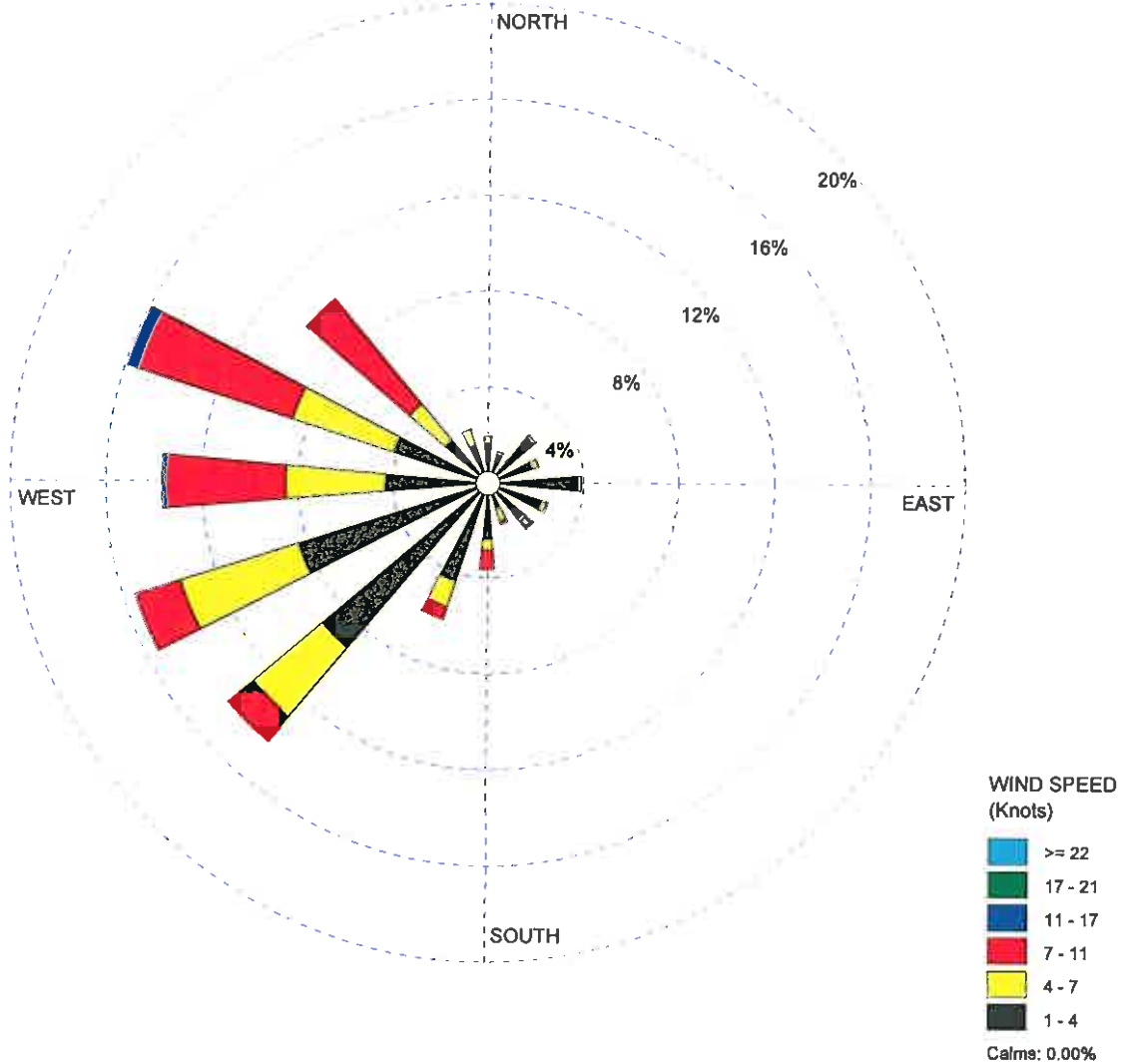
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%)	
				BASED ON OPERATING SCHEDULE	TOTAL HOURS
<u>WASTEBED 13 10-METER TOWER</u>					
<u>10-Meter Level</u>					
Vector Wind Speed (mph)	0.1	15.8	5.0	100.0	100.0
Vector Wind Direction (deg)	1	359	232	100.0	100.0
Scalar Wind Speed (mph)	0.8	16.4	5.5	100.0	100.0
Scalar Wind Direction (deg.)	6	359	232	100.0	100.0
Sigma Theta (deg.)	6.9	70.4	22.5	100.0	100.0
Vertical Wind Speed (mph)	-1.80	0.50	-0.07	11.0	11.0
Sigma W (mph)	0.13	1.77	0.74	11.0	11.0
Sigma Phi (deg)	3.31	16.0	7.8	11.0	11.0
Temperature (deg-F)	47.3	84.8	66.5	100.0	100.0
<u>2-Meter Level</u>					
Temperature (deg-F)	44.2	85.3	66.3	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.23	6.39	0.27	100.0	100.0
Relative Humidity (percent)	27.3	99.7	77.5	100.0	100.0
Dew Point Temperature (deg-F)	36.2	72.6	58.1	100.0	100.0
Net Radiation (W/m ²)	-173.8	687.9	2647.2 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	28.92	29.77	29.50	100.0	100.0
<u>Surface Level</u>					
Precipitation (Rain in inches)	N	N	N (Total)	0.0	0.0

WIND ROSE PLOT

Honeywell Onondaga Lake - Meteorological Monitoring Program
Wastebed 13 Monitoring Site - 10-Meter Tower - June 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Jun 1 - Jun 30
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

720 hrs.

AVG. WIND SPEED:

4.77 Knots

DATE:

7/27/2010

PROJECT NO:

446092-04308

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: August 30, 2010
--	---

Subject: Submittal of Lakeshore/Willis Ave Meteorological Data for:	JULY 2010
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Data: _____ Preliminary ☒ Validated _____ Adjusted (list parameters)	Attached/Enclosed: _____ Preliminary Report ☒ Final Report ☒ Data Summaries	_____ AIRS Diskette _____ Client Data Disk _____ Other (as noted)
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Program Operations/Data Collection Activities Summary:

- A performance audit was conducted at the Lakeshore/Willis Ave monitoring site on July 20. Minor periods of data are reported as scheduled down "S" on this day.
- No operational problems occurred at the Lakeshore monitoring site in July and monthly data recovery rates range from 99.7 percent to 100 percent.

Climatic Summary: JULY 2010

General Predominance for winds from: due west

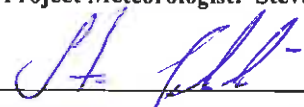
10-meter level

Primary Peak WD:	<u>W</u>	Max. Wind Speed :	<u>12.8 mph</u>
Secondary Peak WD:	<u>WSW</u>	Min. Wind Speed :	<u>0.4 mph</u>

2-meter level

Max. Temperature:	<u>93.3 °F</u>	Max. Dew Point Temp.	<u>75.1 °F</u>	Max. Relative Humidity	<u>97%</u>
Min. Temperature:	<u>51.3 °F</u>	Min. Dew Point Temp.	<u>43.7 °F</u>	Min. Relative Humidity	<u>30%</u>

Cumulative-to-date Data Recovery Rates	Period: January 1, 2010 through	July 31, 2010
10-Meter Level	2-Meter Level	
10-Meter Vector Wind Speed: <u>99.5</u> %	2-Meter Temperature: <u>99.9</u> %	
10-Meter Vector Wind Direction: <u>99.5</u> %	Delta Temperature: <u>94.1</u> %	
10-Meter Scalar Wind Speed: <u>99.5</u> %	Relative Humidity: <u>92.0</u> %	
10-Meter Scalar Wind Direction: <u>99.9</u> %	Dew Point Temperature: <u>92.0</u> %	
10-Meter Sigma Theta: <u>99.9</u> %	Solar Radiation: <u>100</u> %	
	Barometric Pressure: <u>100</u> %	
10-Meter Vertical Wind Speed: <u>99.9</u> %		
Sigma W: <u>99.9</u> %		
Sigma Phi: <u>99.5</u> %		
10-Meter Temperature: <u>94.1</u> %		

Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons
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HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: JULY 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M SOLAR RADIATION	SOLAR RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

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THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

PREPARED BY: **PARSONS**

BOSTON, MASS.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: JULY 2010

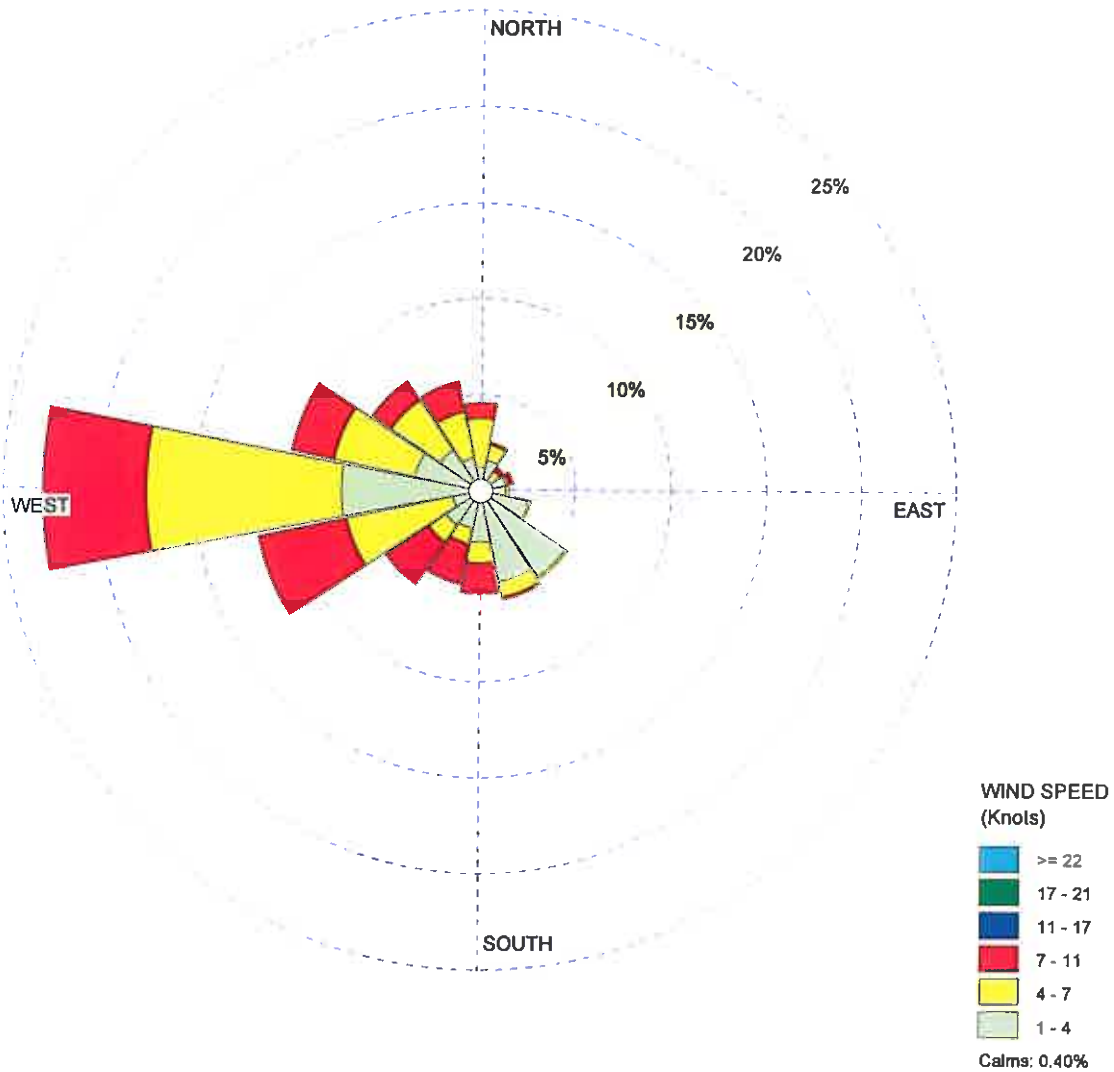
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%) BASED ON	
				OPERATING SCHEDULE	TOTAL HOURS
LAKESHORE/WILLIS AVE 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.3	12.2	5.0	100.0	99.9
Vector Wind Direction (deg)	1	360	225	100.0	99.9
Scalar Wind Speed (mph)	0.4	12.8	5.5	100.0	99.9
Scalar Wind Direction (deg.)	2	360	226	100.0	99.9
Sigma Theta (deg.)	8.1	64.9	24.9	100.0	99.9
Vertical Wind Speed (mph)	-0.23	0.64	0.12	100.0	99.9
Sigma W (mph)	0.09	2.16	0.85	100.0	99.9
Sigma Phi (deg)	3.16	25.2	9.1	100.0	99.9
Temperature (deg-F)	53.1	92.3	74.8	100.0	99.7
2-Meter Level					
Temperature (deg-F)	51.3	93.3	74.7	100.0	99.7
10-m - 2-m Delta Temp (F-deg)	-2.12	3.17	0.03	100.0	99.7
Relative Humidity (percent)	30.0	96.6	67.3	100.0	100.0
Dew Point Temperature (deg-F)	43.7	75.1	62.2	100.0	99.7
Solar Radiation (W/m ²)	0.0	1073.0	7069.1 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.47	30.03	29.67	100.0	100.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Lakeshore/Willis Ave Monitoring Site - 10-Meter Tower - July 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Jul 1 - Jul 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.40%

TOTAL COUNT:

743 hrs.

AVG. WIND SPEED:

4.80 Knots

DATE:

8/30/2010

PROJECT NO.:

445162-04300

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: August 30, 2010																																							
Subject: Submittal of Wastebed 13 Meteorological Data for: JULY 2010																																								
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Program Operations/Data Collection Activities Summary: - A performance audit was conducted at the Wastebed 13 site on July 21. Minor periods of data are reported as scheduled down ("S") on this day to reflect audit activities. - Vertical wind speed, sigma W, and sigma phi data are reported as a non-scheduled outage ("N") from the beginning of the month through hour 9 on July 21. This missing data results from the failure of the vertical wind speed sensor (during the previous month). The sensor was exchanged during the July 21 performance audit and valid data collection resumed during hour 10 on this day. - Precipitation bucket is off-line for much of the month. The July 21 systems audit found that the signal wire between the tower and assembly had been cut and exposed. The signal cable was rewired and the precipitation system was audited with excellent results. However, collected data reveals that the precipitation system captured the short rain event on July 21 and then no subsequent rain events (the next event was a substantial rainfall on July 23). The system will be investigated further to determine the current problem.																																								
Climatic Summary: JULY 2010 General Predominance for winds from: <u>southwest through due west to northwest</u> 10-meter level <table style="width: 100%;"> <tr> <td>Primary Peak WD:</td> <td><u>SW</u></td> <td>Max. Wind Speed :</td> <td><u>12.7 mph</u></td> </tr> <tr> <td>Secondary Peak WD:</td> <td><u>WSW</u></td> <td>Min. Wind Speed :</td> <td><u>0.8 mph</u></td> </tr> </table> 2-meter level <table style="width: 100%;"> <tr> <td>Max. Temperature:</td> <td><u>93.4 °F</u></td> <td>Max. Dew Point Temp.</td> <td><u>76.2 °F</u></td> <td>Max. Relative Humidity</td> <td><u>100%</u></td> </tr> <tr> <td>Min. Temperature:</td> <td><u>49.4 °F</u></td> <td>Min. Dew Point Temp.</td> <td><u>44.9 °F</u></td> <td>Min. Relative Humidity</td> <td><u>33%</u></td> </tr> </table>		Primary Peak WD:	<u>SW</u>	Max. Wind Speed :	<u>12.7 mph</u>	Secondary Peak WD:	<u>WSW</u>	Min. Wind Speed :	<u>0.8 mph</u>	Max. Temperature:	<u>93.4 °F</u>	Max. Dew Point Temp.	<u>76.2 °F</u>	Max. Relative Humidity	<u>100%</u>	Min. Temperature:	<u>49.4 °F</u>	Min. Dew Point Temp.	<u>44.9 °F</u>	Min. Relative Humidity	<u>33%</u>																			
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HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: JULY 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M NET RADIATION	NET RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY
SFC PRECIPITATION (RAIN)	RAIN	INCHES OF WATER

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: JULY 2010

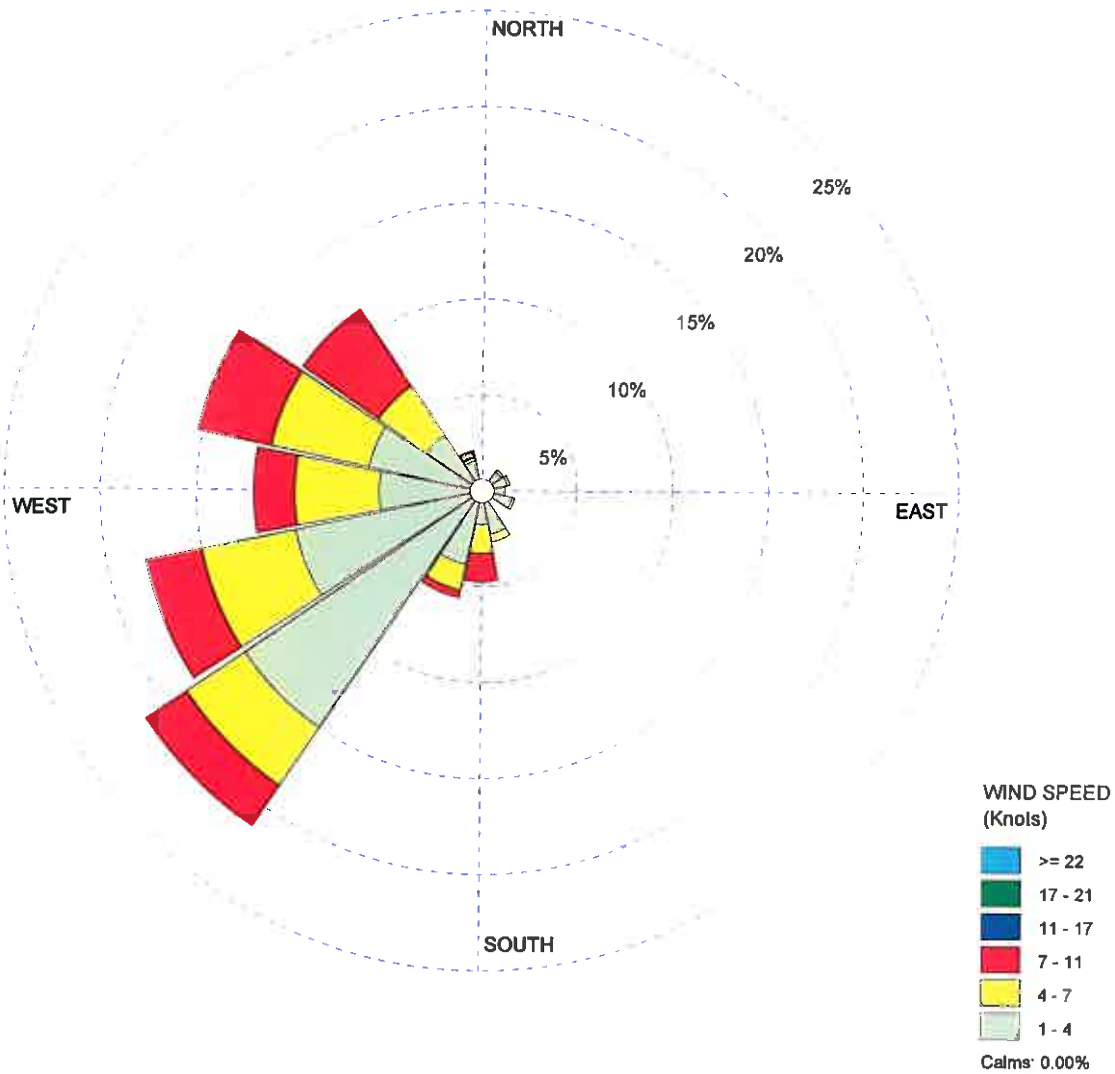
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%) BASED ON	
				OPERATING SCHEDULE	TOTAL HOURS
<u>WASTEBED 13 10-METER TOWER</u>					
<u>10-Meter Level</u>					
Vector Wind Speed (mph)	0.1	12.2	4.7	100.0	99.9
Vector Wind Direction (deg)	6	355	244	100.0	99.9
Scalar Wind Speed (mph)	0.8	12.7	5.1	100.0	99.9
Scalar Wind Direction (deg.)	7	355	243	100.0	99.9
Sigma Theta (deg.)	7.0	68.7	21.5	100.0	99.9
Vertical Wind Speed (mph)	-0.17	0.70	0.10	34.4	34.3
Sigma W (mph)	0.08	1.65	0.78	34.4	34.3
Sigma Phi (deg)	2.64	18.8	7.7	34.4	34.3
Temperature (deg-F)	52.6	91.4	73.4	100.0	99.7
<u>2-Meter Level</u>					
Temperature (deg-F)	49.4	93.4	73.1	100.0	99.9
10-m - 2-m Delta Temp (F-deg)	-2.61	5.33	0.32	100.0	99.7
Relative Humidity (percent)	33.1	99.6	73.8	100.0	99.7
Dew Point Temperature (deg-F)	44.9	76.2	63.0	100.0	99.7
Net Radiation (W/m ²)	-70.9	687.8	3559.8 (Avg Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.37	29.93	29.57	100.0	100.0
<u>Surface Level</u>					
Precipitation (Rain in inches)	0.00	0.02	0.02 (Total)	5.2	5.2

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Wastebed 13 Monitoring Site - 10-Meter Tower - July 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Jul 1 - Jul 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

743 hrs.

AVG. WIND SPEED:

4.48 Knots

DATE:

8/20/2010

PROJECT NO.:

445162-04300

Honeywell - Onondaga Lake
Quarterly, Annual, and Full Program Data Recovery Rates for the
Lakeshore/Willis Avenue Meteorological Monitoring Site

Lakeshore/Willis Ave. Monitoring Site

Calendar Quarter	Vector Wind Speed	Vector Wind Direction	Scalar Wind Speed	Scalar Wind Direction	Sigma Theta	Vertical Wind Speed	Sigma W	Sigma Phi	10-m Temperature	2-m Temperature	Delta- Temperature	Relative Humidity	Dew-Point Temperature	Solar Radiation	Barometric Pressure
Jan 2007 - Mar 2007	94.4	94.4	94.4	100.0	100.0	100.0	100.0	94.4	96.9	96.9	96.9	100.0	96.7	100.0	100.0
Apr 2007 - Jun 2007	99.9	99.9	99.9	100.0	99.9	99.9	99.9	99.9	68.9	68.9	68.9	100.0	68.9	100.0	100.0
Jul 2007 - Sep 2007	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.9	100.0	100.0	100.0	100.0
Oct 2007 - Dec 2007	98.0	98.0	98.1	100.0	100.0	100.0	100.0	98.1	99.9	100.0	99.9	100.0	100.0	100.0	100.0
Jan 2008 - Mar 2008	93.7	93.7	93.7	100.0	100.0	99.4	99.4	93.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr 2008 - Jun 2008	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.9	100.0	99.9	100.0	100.0
Jul 2008 - Sep 2008	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.9	100.0	100.0	100.0	100.0
Oct 2008 - Dec 2008	97.6	97.6	97.6	99.9	99.9	99.9	99.9	97.6	74.7	74.7	74.7	100.0	74.7	100.0	100.0
Jan 2009 - Mar 2009	99.6	99.6	99.6	100.0	100.0	99.6	99.6	99.3	80.3	80.3	80.3	100.0	80.3	100.0	100.0
Apr 2009 - Jun 2009	76.7	76.7	76.7	76.7	76.7	76.7	76.7	76.7	68.7	68.7	68.7	76.8	68.7	76.8	76.8
Jul 2009 - Sep 2009	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	99.9	100.0	100.0
Oct 2009 - Dec 2009	99.8	99.8	99.8	99.9	99.9	99.8	99.8	99.8	99.9	99.9	99.9	100.0	99.9	100.0	100.0
Jan 2010 - Mar 2010	98.8	98.8	98.8	99.8	99.8	100.0	100.0	98.8	86.1	100.0	86.1	81.2	81.2	100.0	100.0
Apr 2010 - Jun 2010	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jul 2010 - Sep 2010	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	100.0

Honeywell - Onondaga Lake
Quarterly, Annual, and Full Program Data Recovery Rates for the
Lakeshore/Willis Avenue Meteorological Monitoring Site

Lakeshore/Willis Ave. Monitoring Site

<u>Period</u>	Vector Wind Speed	Vector Wind Direction	Scalar Wind Speed	Scalar Wind Direction	Sigma Theta	Vertical Wind Speed	Sigma W	Sigma Phi	10-m Temperature	2-m Temperature	Delta- Temperature	Relative Humidity	Dew-Point Temperature	Solar Radiation	Barometric Pressure
Jan 2007 - Dec 2007 (Annual)	98.1	98.1	98.1	100.0	99.9	99.9	99.9	98.1	91.4	91.4	91.4	100.0	91.4	100.0	100.0
Jan 2008 - Dec 2008 (Annual)	97.8	97.8	97.8	99.9	99.9	99.8	99.8	97.7	93.6	93.6	93.6	100.0	93.6	100.0	100.0
Jan 2009 - Dec 2009 (Annual)	94.0	94.0	94.0	94.2	94.2	94.0	94.0	93.9	87.3	87.3	87.3	94.2	87.3	94.2	94.2
Dec 2006 - Sep 2010 (Full Program)	97.2	97.2	97.2	98.5	98.4	98.4	98.4	97.2	91.9	92.8	91.9	97.3	91.6	98.5	98.5

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: September 30, 2010									
Subject: Submittal of Wastedbed 13 Meteorological Data for: AUGUST 2010										
Data: _____ Preliminary <u> X </u> Validated _____ Adjusted (list parameters)	Attached/Enclosed: _____ Preliminary Report _____ AIRS Diskette <u> X </u> Final Report _____ Client Data Disk <u> X </u> Data Summaries _____ Other (as noted)									
Program Operations/Data Collection Activities Summary: - Precipitation bucket is off-line for the month. Precipitation amount comparisons to Syracuse Hancock Airport reveal amounts collected at Wastedbed 13 are either significantly lower or non-existent. The precipitation system will be investigated for any malfunction. - No other operational problems occurred in August and monthly data recovery rates for all remaining parameters are 100 percent.										
Climatic Summary: AUGUST 2010 General Predominance for winds from: <u>southwest through west-southwest</u> 10-meter level Primary Peak WD: <u>SW</u> Max. Wind Speed : <u>17.3 mph</u> Secondary Peak WD: <u>WSW</u> Min. Wind Speed : <u>1.0 mph</u> 2-meter level Max. Temperature: <u>88.6 °F</u> Max. Dew Point Temp. <u>74.5 °F</u> Max. Relative Humidity <u>99%</u> Min. Temperature: <u>50.6 °F</u> Min. Dew Point Temp. <u>44.5 °F</u> Min. Relative Humidity <u>36%</u>										
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Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons									

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: AUGUST 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M NET RADIATION	NET RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY
SFC PRECIPITATION (RAIN)	RAIN	INCHES OF WATER

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: AUGUST 2010

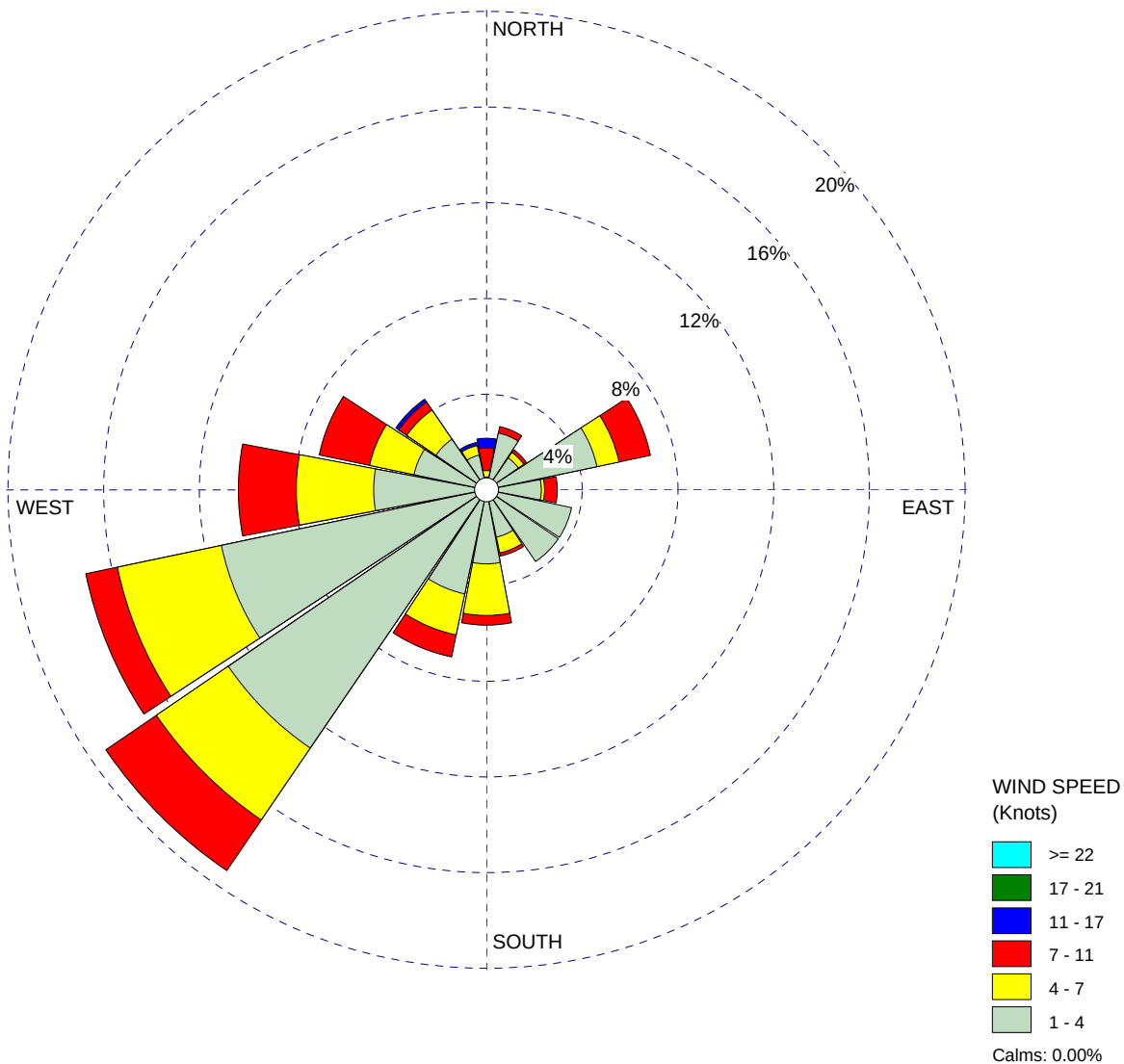
SITE / PARAMETER	MONTHLY	MONTHLY	MONTHLY	MONTHLY DATA RECOVERY RATES (%)	
	MINIMUM	MAXIMUM	MEAN	BASED ON	
	VALUE	VALUE	VALUE	OPERATING	TOTAL
				SCHEDULE	HOURS
WASTEBED 13 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.2	16.3	4.3	100.0	100.0
Vector Wind Direction (deg)	2	358	209	100.0	100.0
Scalar Wind Speed (mph)	1.0	17.3	4.8	100.0	100.0
Scalar Wind Direction (deg.)	2	359	208	100.0	100.0
Sigma Theta (deg.)	6.7	67.6	22.9	100.0	100.0
Vertical Wind Speed (mph)	-0.28	1.26	0.07	100.0	100.0
Sigma W (mph)	0.06	2.60	0.73	100.0	100.0
Sigma Phi (deg)	2.09	25.0	8.5	100.0	100.0
Temperature (deg-F)	52.4	87.6	70.4	100.0	100.0
2-Meter Level					
Temperature (deg-F)	50.6	88.6	70.0	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.23	5.32	0.46	100.0	100.0
Relative Humidity (percent)	35.6	99.4	77.2	100.0	100.0
Dew Point Temperature (deg-F)	44.5	74.5	61.5	100.0	100.0
Net Radiation (W/m ²)	-66.4	662.3	2762.6 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.22	29.91	29.59	100.0	100.0
Surface Level					
Precipitation (Rain in inches)	N	N	N (Total)	0.0	0.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Wastebed 13 Monitoring Site - 10-Meter Tower - August 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Aug 1 - Aug 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

4.15 Knots

DATE:

10/19/2010

PROJECT NO.:

445162-04300

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: September 30, 2010								
Subject: Submittal of Lakeshore/Willis Ave Meteorological Data for: AUGUST 2010									
Data: _____ Preliminary <u> X </u> Validated _____ Adjusted (list parameters)	Attached/Enclosed: _____ Preliminary Report _____ AIRS Diskette <u> X </u> Final Report _____ Client Data Disk <u> X </u> Data Summaries _____ Other (as noted)								
Program Operations/Data Collection Activities Summary: <i>No operational problems occurred at the Lakeshore monitoring site in August and monthly data recovery rates are 100 percent for all parameters.</i>									
Climatic Summary: AUGUST 2010 General Predominance for winds from: <u>due west</u> 10-meter level Primary Peak WD: <u>W</u> Max. Wind Speed : <u>24.0 mph</u> Secondary Peak WD: <u>WSW</u> Min. Wind Speed : <u>0.3 mph</u> 2-meter level Max. Temperature: <u>88.6 °F</u> Max. Dew Point Temp. <u>73.2 °F</u> Max. Relative Humidity <u>97%</u> Min. Temperature: <u>52.7 °F</u> Min. Dew Point Temp. <u>43.6 °F</u> Min. Relative Humidity <u>34%</u>									
<table style="width: 100%;"> <tr> <td style="width: 40%;">Cumulative-to-date Data Recovery Rates</td> <td style="width: 20%;">Period: January 1, 2010 through</td> <td style="width: 40%; text-align: right;">August 31, 2010</td> </tr> <tr> <td colspan="3" style="padding-top: 10px;"> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> 10-Meter Level 10-Meter Vector Wind Speed: <u>99.5</u> % 10-Meter Vector Wind Direction: <u>99.5</u> % 10-Meter Scalar Wind Speed: <u>99.5</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>99.9</u> % Sigma W: <u>99.9</u> % Sigma Phi: <u>99.5</u> % 10-Meter Temperature: <u>94.8</u> % </td> <td style="width: 50%; vertical-align: top;"> 2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>94.8</u> % Relative Humidity: <u>93.0</u> % Dew Point Temperature: <u>93.0</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> % </td> </tr> </table> </td> </tr> </table>		Cumulative-to-date Data Recovery Rates	Period: January 1, 2010 through	August 31, 2010	<table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> 10-Meter Level 10-Meter Vector Wind Speed: <u>99.5</u> % 10-Meter Vector Wind Direction: <u>99.5</u> % 10-Meter Scalar Wind Speed: <u>99.5</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>99.9</u> % Sigma W: <u>99.9</u> % Sigma Phi: <u>99.5</u> % 10-Meter Temperature: <u>94.8</u> % </td> <td style="width: 50%; vertical-align: top;"> 2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>94.8</u> % Relative Humidity: <u>93.0</u> % Dew Point Temperature: <u>93.0</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> % </td> </tr> </table>			10-Meter Level 10-Meter Vector Wind Speed: <u>99.5</u> % 10-Meter Vector Wind Direction: <u>99.5</u> % 10-Meter Scalar Wind Speed: <u>99.5</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>99.9</u> % Sigma W: <u>99.9</u> % Sigma Phi: <u>99.5</u> % 10-Meter Temperature: <u>94.8</u> %	2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>94.8</u> % Relative Humidity: <u>93.0</u> % Dew Point Temperature: <u>93.0</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> %
Cumulative-to-date Data Recovery Rates	Period: January 1, 2010 through	August 31, 2010							
<table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> 10-Meter Level 10-Meter Vector Wind Speed: <u>99.5</u> % 10-Meter Vector Wind Direction: <u>99.5</u> % 10-Meter Scalar Wind Speed: <u>99.5</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>99.9</u> % Sigma W: <u>99.9</u> % Sigma Phi: <u>99.5</u> % 10-Meter Temperature: <u>94.8</u> % </td> <td style="width: 50%; vertical-align: top;"> 2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>94.8</u> % Relative Humidity: <u>93.0</u> % Dew Point Temperature: <u>93.0</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> % </td> </tr> </table>			10-Meter Level 10-Meter Vector Wind Speed: <u>99.5</u> % 10-Meter Vector Wind Direction: <u>99.5</u> % 10-Meter Scalar Wind Speed: <u>99.5</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>99.9</u> % Sigma W: <u>99.9</u> % Sigma Phi: <u>99.5</u> % 10-Meter Temperature: <u>94.8</u> %	2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>94.8</u> % Relative Humidity: <u>93.0</u> % Dew Point Temperature: <u>93.0</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> %					
10-Meter Level 10-Meter Vector Wind Speed: <u>99.5</u> % 10-Meter Vector Wind Direction: <u>99.5</u> % 10-Meter Scalar Wind Speed: <u>99.5</u> % 10-Meter Scalar Wind Direction: <u>99.9</u> % 10-Meter Sigma Theta: <u>99.9</u> % 10-Meter Vertical Wind Speed: <u>99.9</u> % Sigma W: <u>99.9</u> % Sigma Phi: <u>99.5</u> % 10-Meter Temperature: <u>94.8</u> %	2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>94.8</u> % Relative Humidity: <u>93.0</u> % Dew Point Temperature: <u>93.0</u> % Solar Radiation: <u>100</u> % Barometric Pressure: <u>100</u> %								
Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons								

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: AUGUST 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M SOLAR RADIATION	SOLAR RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

PREPARED BY: **PARSONS**

BOSTON, MASS.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: AUGUST 2010

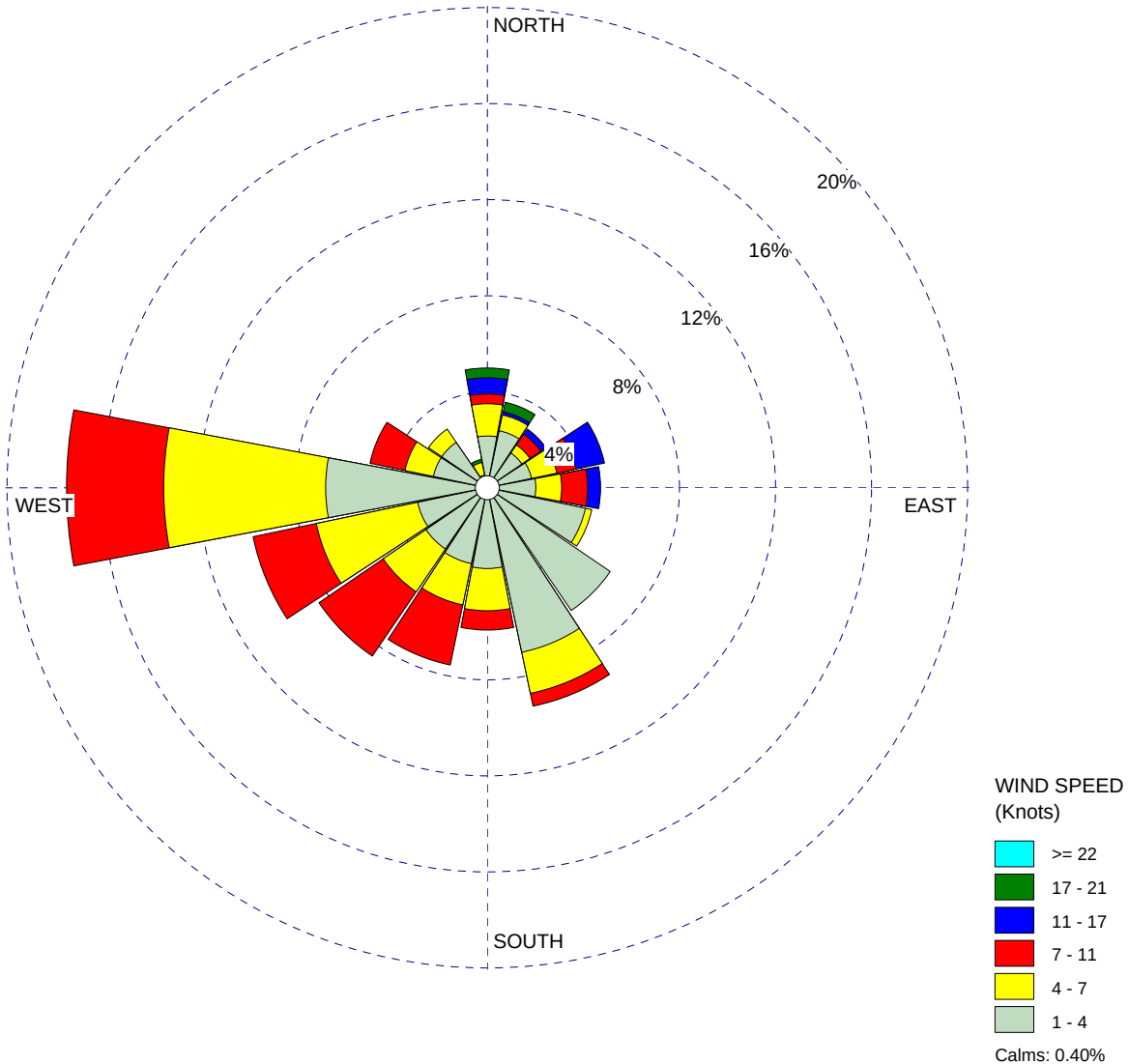
SITE / PARAMETER	MONTHLY	MONTHLY	MONTHLY	MONTHLY DATA RECOVERY RATES (%)	
	MINIMUM	MAXIMUM	MEAN	BASED ON	
	VALUE	VALUE	VALUE	OPERATING	TOTAL
				SCHEDULE	HOURS
LAKESHORE/WILLIS AVE 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.1	22.8	5.2	100.0	100.0
Vector Wind Direction (deg)	1	360	191	100.0	100.0
Scalar Wind Speed (mph)	0.3	24.0	5.6	100.0	100.0
Scalar Wind Direction (deg.)	1	359	191	100.0	100.0
Sigma Theta (deg.)	6.5	69.4	23.7	100.0	100.0
Vertical Wind Speed (mph)	-0.19	1.47	0.14	100.0	100.0
Sigma W (mph)	0.08	2.41	0.77	100.0	100.0
Sigma Phi (deg)	2.81	30.9	8.8	100.0	100.0
Temperature (deg-F)	53.7	88.2	71.8	100.0	100.0
2-Meter Level					
Temperature (deg-F)	52.7	88.6	71.7	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.34	2.86	0.04	100.0	100.0
Relative Humidity (percent)	34.1	96.9	70.0	100.0	100.0
Dew Point Temperature (deg-F)	43.6	73.2	60.5	100.0	100.0
Solar Radiation (W/m ²)	0.0	1037.0	5595.3 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.32	30.01	29.70	100.0	100.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Lakeshore/ Willis Ave Monitoring Site - 10-Meter Tower - August 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Aug 1 - Aug 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.40%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

4.89 Knots

DATE:

10/19/2010

PROJECT NO.:

445162-04300

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: SEPTEMBER 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M SOLAR RADIATION	SOLAR RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

PREPARED BY: **PARSONS**

BOSTON, MASS.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: SEPTEMBER 2010

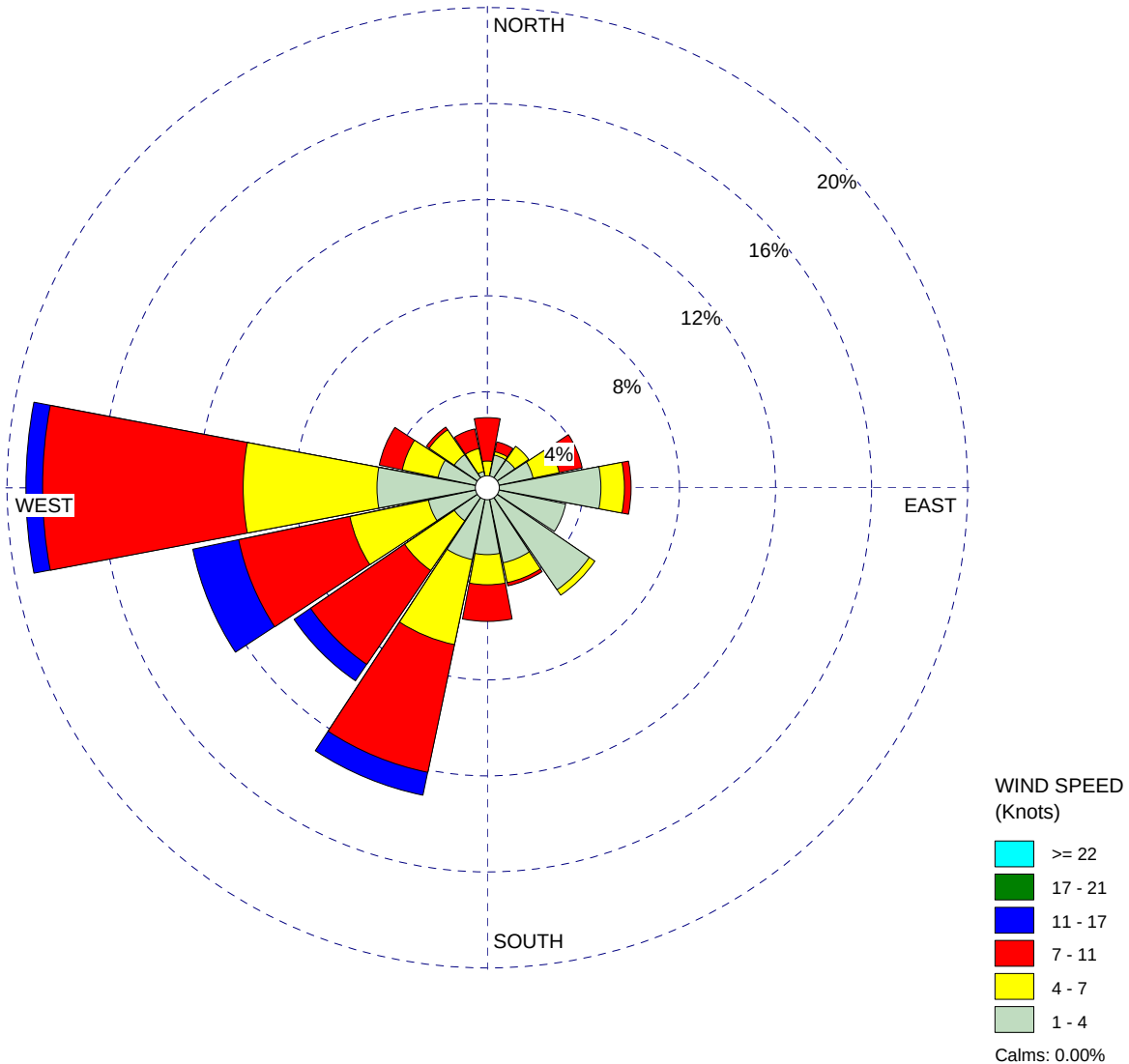
SITE / PARAMETER	MONTHLY	MONTHLY	MONTHLY	MONTHLY DATA RECOVERY RATES (%)	
	MINIMUM	MAXIMUM	MEAN	BASED ON	
	VALUE	VALUE	VALUE	OPERATING	TOTAL
				SCHEDULE	HOURS
LAKESHORE/WILLIS AVE 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.1	18.5	6.1	100.0	100.0
Vector Wind Direction (deg)	2	360	209	100.0	100.0
Scalar Wind Speed (mph)	0.6	19.2	6.5	100.0	100.0
Scalar Wind Direction (deg.)	1	359	208	100.0	100.0
Sigma Theta (deg.)	5.4	79.0	21.7	100.0	100.0
Vertical Wind Speed (mph)	-0.26	0.72	0.16	100.0	100.0
Sigma W (mph)	0.11	2.30	0.91	100.0	100.0
Sigma Phi (deg)	2.84	20.8	8.3	100.0	100.0
Temperature (deg-F)	44.5	90.4	63.8	100.0	100.0
2-Meter Level					
Temperature (deg-F)	43.2	90.5	63.7	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.57	3.03	0.10	100.0	100.0
Relative Humidity (percent)	29.7	97.9	72.2	100.0	100.0
Dew Point Temperature (deg-F)	37.3	71.3	53.6	100.0	100.0
Solar Radiation (W/m ²)	0.0	954.0	3832.0 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.25	29.95	29.66	100.0	100.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Lakeshore/Willis Ave Monitoring Site - 10-Meter Tower - September 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Sep 1 - Sep 30
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

720 hrs.

AVG. WIND SPEED:

5.68 Knots

DATE:

10/20/2010

PROJECT NO.:

445162-04300

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: October 20, 2010
Subject: Submittal of Wastebed 13 Meteorological Data for: SEPTEMBER 2010	
Data: _____ Preliminary <u> X </u> Validated _____ Adjusted (list parameters)	Attached/Enclosed: _____ Preliminary Report _____ AIRS Diskette <u> X </u> Final Report _____ Client Data Disk <u> X </u> Data Summaries _____ Other (as noted)
Program Operations/Data Collection Activities Summary: • <i>Precipitation collection resumed September 1. The previous month's outage was found to be caused by the bucket's magnet out of position resulting in a non-functioning tipping mechanism.</i> • <i>No operational problems occurred in September and monthly data recovery rates for all parameters are 100 percent.</i>	
Climatic Summary: SEPTEMBER 2010 General Predominance for winds from: <u>southwest through west-southwest</u> <u>10-meter level</u> Primary Peak WD: <u>SW</u> Max. Wind Speed : <u>18.6 mph</u> Secondary Peak WD: <u>WSW</u> Min. Wind Speed : <u>0.8 mph</u> <u>2-meter level</u> Max. Temperature: <u>89.6 °F</u> Max. Dew Point Temp. <u>72.6 °F</u> Max. Relative Humidity <u>100%</u> Min. Temperature: <u>41.6 °F</u> Min. Dew Point Temp. <u>37.1 °F</u> Min. Relative Humidity <u>33%</u>	
Cumulative-to-date Data Recovery Rates Period: January 1, 2010 through September 30, 2010	
<u>10-Meter Level</u> 10-Meter Vector Wind Speed: <u>99.7</u> % 10-Meter Vector Wind Direction: <u>99.7</u> % 10-Meter Scalar Wind Speed: <u>99.7</u> % 10-Meter Scalar Wind Direction: <u>99.8</u> % 10-Meter Sigma Theta: <u>99.8</u> % 10-Meter Vertical Wind Speed: <u>82.8</u> % Sigma W: <u>82.8</u> % Sigma Phi: <u>82.4</u> % 10-Meter Temperature: <u>99.9</u> %	<u>2-Meter Level</u> 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>99.9</u> % Relative Humidity: <u>99.5</u> % Dew Point Temperature: <u>99.5</u> % Net Radiation: <u>94.1</u> % Barometric Pressure: <u>100</u> % <u>Surface</u> Precipitation (Rain): <u>44.6</u> %
Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: SEPTEMBER 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M NET RADIATION	NET RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY
SFC PRECIPITATION (RAIN)	RAIN	INCHES OF WATER

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: SEPTEMBER 2010

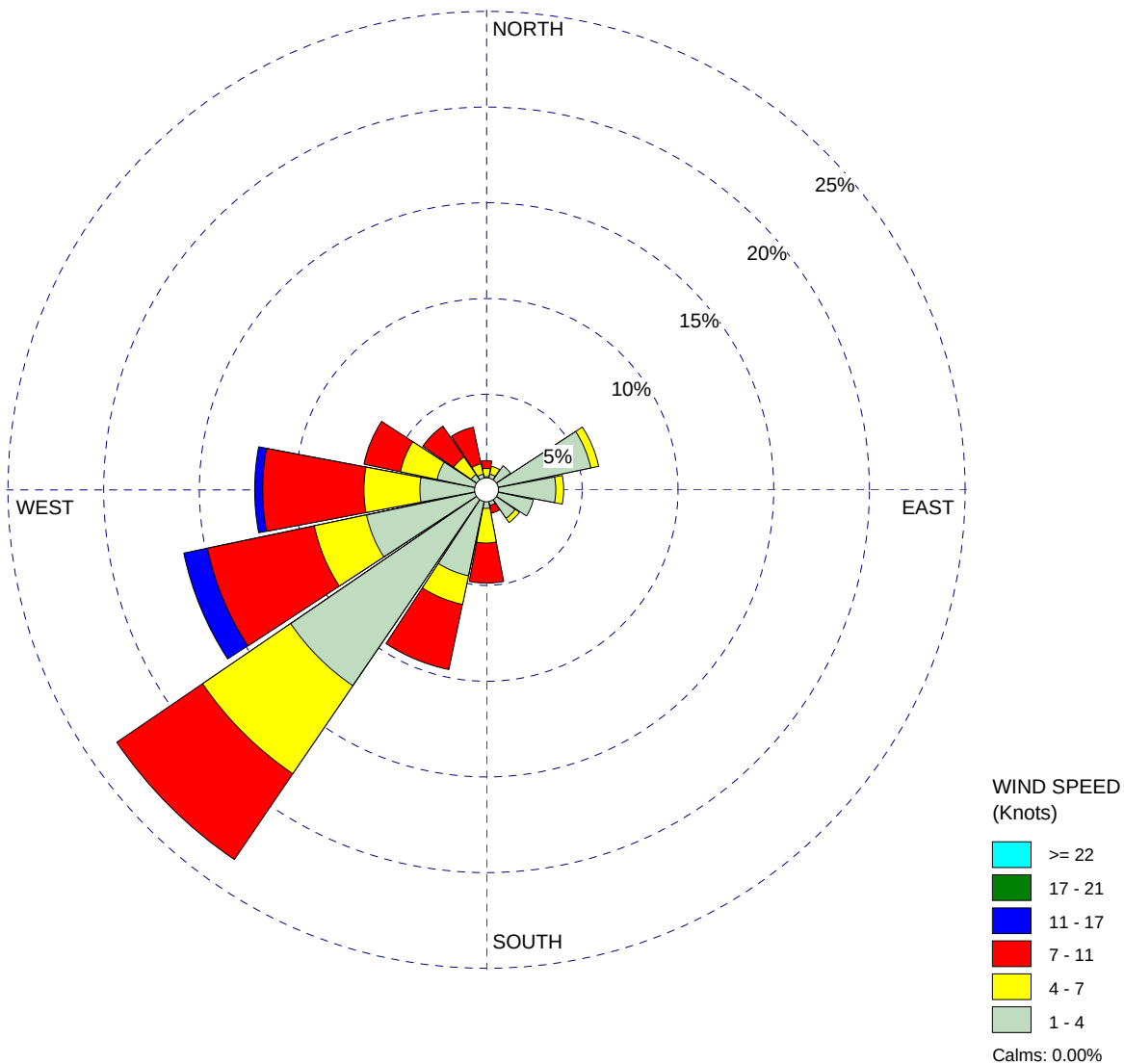
SITE / PARAMETER	MONTHLY	MONTHLY	MONTHLY	MONTHLY DATA RECOVERY RATES (%)	
	MINIMUM	MAXIMUM	MEAN	BASED ON	
	VALUE	VALUE	VALUE	OPERATING	TOTAL
				SCHEDULE	HOURS
WASTEBED 13 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.2	17.9	5.5	100.0	100.0
Vector Wind Direction (deg)	1	358	217	100.0	100.0
Scalar Wind Speed (mph)	0.8	18.6	5.9	100.0	100.0
Scalar Wind Direction (deg.)	8	360	217	100.0	100.0
Sigma Theta (deg.)	6.8	69.5	20.5	100.0	100.0
Vertical Wind Speed (mph)	-0.30	0.88	0.08	100.0	100.0
Sigma W (mph)	0.06	2.26	0.84	100.0	100.0
Sigma Phi (deg)	1.97	20.2	8.1	100.0	100.0
Temperature (deg-F)	45.6	89.2	63.1	100.0	100.0
2-Meter Level					
Temperature (deg-F)	41.6	89.6	62.1	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.02	6.74	0.93	100.0	100.0
Relative Humidity (percent)	32.5	99.9	78.4	100.0	100.0
Dew Point Temperature (deg-F)	37.1	72.6	54.3	100.0	100.0
Net Radiation (W/m ²)	-122.6	574.5	1542.7 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.15	29.83	29.55	100.0	100.0
Surface Level					
Precipitation (Rain in inches)	0.00	0.46	4.94 (Total)	100.0	100.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Wastebed 13 Monitoring Site - 10-Meter Tower - September 2010

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

2010
Sep 1 - Sep 30
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

720 hrs.

AVG. WIND SPEED:

5.12 Knots

DATE:

10/20/2010

PROJECT NO.:

445162-04300

Honeywell - Onondaga Lake
Quarterly, Annual, and Full Program Data Recovery Rates for the
Wastebed 13 Meteorological Monitoring Site

Wastebed 13 Monitoring Site

<u>Calendar Quarter</u>	Vector Wind Speed	Vector Wind Direction	Scalar Wind Speed	Scalar Wind Direction	Sigma Theta	Vertical Wind Speed	Sigma W	Sigma Phi	10-m Temperature	2-m Temperature	Delta- Temperature	Relative Humidity	Dew-Point Temperature	Net Radiation	Barometric Pressure	Precipitation
Jan 2006 - Mar 2006	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5
Apr 2006 - Jun 2006	99.9	99.9	99.9	99.9	99.9	99.8	99.8	99.8	100.0	99.9	99.9	100.0	99.9	100.0	100.0	100.0
Jul 2006 - Sep 2006	99.9	99.9	100.0	99.9	99.9	91.3	91.3	91.3	99.8	99.8	99.8	99.8	99.8	100.0	100.0	100.0
Oct 2006 - Dec 2006	98.4	98.4	98.4	99.9	99.9	98.3	98.3	96.6	88.8	99.9	88.8	99.9	99.9	100.0	100.0	100.0
Jan 2007 - Mar 2007	94.5	94.5	96.1	96.4	96.4	99.7	99.7	96.1	99.8	99.8	99.8	100.0	99.8	100.0	100.0	100.0
Apr 2007 - Jun 2007	99.9	99.9	100.0	100.0	100.0	100.0	99.9	99.9	99.9	79.1	79.0	100.0	79.0	100.0	100.0	100.0
Jul 2007 - Sep 2007	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0
Oct 2007 - Dec 2007	99.2	99.2	99.2	100.0	100.0	100.0	100.0	99.2	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0
Jan 2008 - Mar 2008	92.8	92.8	92.8	99.8	99.8	99.2	99.2	92.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr 2008 - Jun 2008	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0
Jul 2008 - Sep 2008	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0
Oct 2008 - Dec 2008	95.9	95.9	95.9	99.9	99.9	99.7	99.7	95.9	99.9	99.9	99.8	100.0	99.9	100.0	100.0	100.0
Jan 2009 - Mar 2009	97.0	97.0	97.0	100.0	100.0	100.0	100.0	97.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr 2009 - Jun 2009	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	99.9	100.0	100.0	100.0
Jul 2009 - Sep 2009	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.9	99.8	100.0	99.9	100.0	100.0	100.0
Oct 2009 - Dec 2009	99.7	99.7	99.7	99.9	99.9	99.7	99.7	99.7	99.9	99.9	99.9	100.0	99.9	100.0	100.0	100.0
Jan 2010 - Mar 2010	99.0	99.0	99.0	99.4	99.4	100.0	100.0	99.0	100.0	100.0	100.0	98.5	98.5	100.0	100.0	100.0
Apr 2010 - Jun 2010	100.0	100.0	100.0	100.0	100.0	70.7	70.7	70.7	100.0	100.0	100.0	100.0	100.0	82.4	100.0	0.0
Jul 2010 - Sep 2010	99.9	99.9	99.9	99.9	99.9	77.9	77.9	77.9	99.9	99.9	99.9	99.9	99.9	100.0	100.0	34.4

Honeywell - Onondaga Lake
Quarterly, Annual, and Full Program Data Recovery Rates for the
Wastebed 13 Meteorological Monitoring Site

Wastebed 13 Monitoring Site

Period	Vector Wind Speed	Vector Wind Direction	Scalar Wind Speed	Scalar Wind Direction	Sigma Theta	Vertical Wind Speed	Sigma W	Sigma Phi	10-m Temperature	2-m Temperature	Delta- Temperature	Relative Humidity	Dew-Point Temperature	Net Radiation	Barometric Pressure	Precipitation
Jan 2006 - Dec 2006 (Annual)	98.4	98.4	98.4	98.8	98.8	96.2	96.2	95.8	96.0	98.8	96.0	98.8	98.8	98.9	98.9	98.9
Jan 2007 - Dec 2007 (Annual)	98.4	98.4	98.8	99.1	99.1	99.9	99.9	98.8	99.9	94.7	94.7	100	94.7	100	100	100
Jan 2008 - Dec 2008 (Annual)	97.1	97.1	97.1	99.9	99.9	99.7	99.7	97.1	99.9	99.9	99.9	100	99.9	100	100	100
Jan 2009 - Dec 2009 (Annual)	99.1	99.1	99.1	99.9	99.9	99.9	99.9	99.1	99.9	99.9	99.9	100	99.9	100	100	100
Dec 2005 - Sep 2010 (Full Program)	98.4	98.4	98.5	99.4	99.4	96.4	96.4	95.3	99.1	98.6	98.0	99.6	98.5	98.5	99.7	90.7

To: Mr. Tom Drachenberg Parsons 301 Plainfield Road - Suite 350 Syracuse, NY 13212	Client: Honeywell Project: Onondaga Lake - Meteorological Monitoring Program Job No.: 445162-04300 Date: November 5, 2010
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Subject: Submittal of Wastebed 13 Meteorological Data for:	OCTOBER 2010
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Data: ☐ Preliminary ☒ Validated ☐ Adjusted (list parameters)	Attached/Enclosed: ☐ Preliminary Report ☐ AIRS Diskette ☒ Final Report ☐ Client Data Disk ☒ Data Summaries ☐ Other (as noted)
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Program Operations/Data Collection Activities Summary: • No operational problems occurred at the Wastebed 13 monitoring site in October and monthly data recovery rates for all parameters are 100 percent.

Climatic Summary:	OCTOBER 2010 General Predominance for winds from: <u>southwest through due west to northwest</u> 10-meter level Primary Peak WD: <u>SW</u> Secondary Peak WD: <u>W/SW</u> Max. Wind Speed : <u>23.5 mph</u> Min. Wind Speed : <u>1.0 mph</u> 2-meter level Max. Temperature: <u>72.8 °F</u> Min. Temperature: <u>33.5 °F</u> Max. Dew Point Temp. <u>62.1 °F</u> Min. Dew Point Temp. <u>26.2 °F</u> Max. Relative Humidity <u>100%</u> Min. Relative Humidity <u>26%</u>
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Cumulative-to-date Data Recovery Rates	Period: January 1, 2010 through October 31, 2010
10-Meter Level 10-Meter Vector Wind Speed: <u>99.7</u> % 10-Meter Vector Wind Direction: <u>99.7</u> % 10-Meter Scalar Wind Speed: <u>99.7</u> % 10-Meter Scalar Wind Direction: <u>99.8</u> % 10-Meter Sigma Theta: <u>99.8</u> % 10-Meter Vertical Wind Speed: <u>84.5</u> % Sigma W: <u>84.5</u> % Sigma Phi: <u>84.5</u> % 10-Meter Temperature: <u>99.9</u> %	2-Meter Level 2-Meter Temperature: <u>99.9</u> % Delta Temperature: <u>99.9</u> % Relative Humidity: <u>99.5</u> % Dew Point Temperature: <u>99.5</u> % Net Radiation: <u>94.7</u> % Barometric Pressure: <u>100</u> % Surface Precipitation (Rain): <u>50.0</u> %

Project Meteorologist: Steven Coughlin 	Distribution: T. Abrams - Parsons P. Petrone - Parsons G. Pacheco - Parsons
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HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: OCTOBER 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	---
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M NET RADIATION	NET RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY
SFC PRECIPITATION (RAIN)	RAIN	INCHES OF WATER

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
WASTEBED 13 MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: OCTOBER 2010

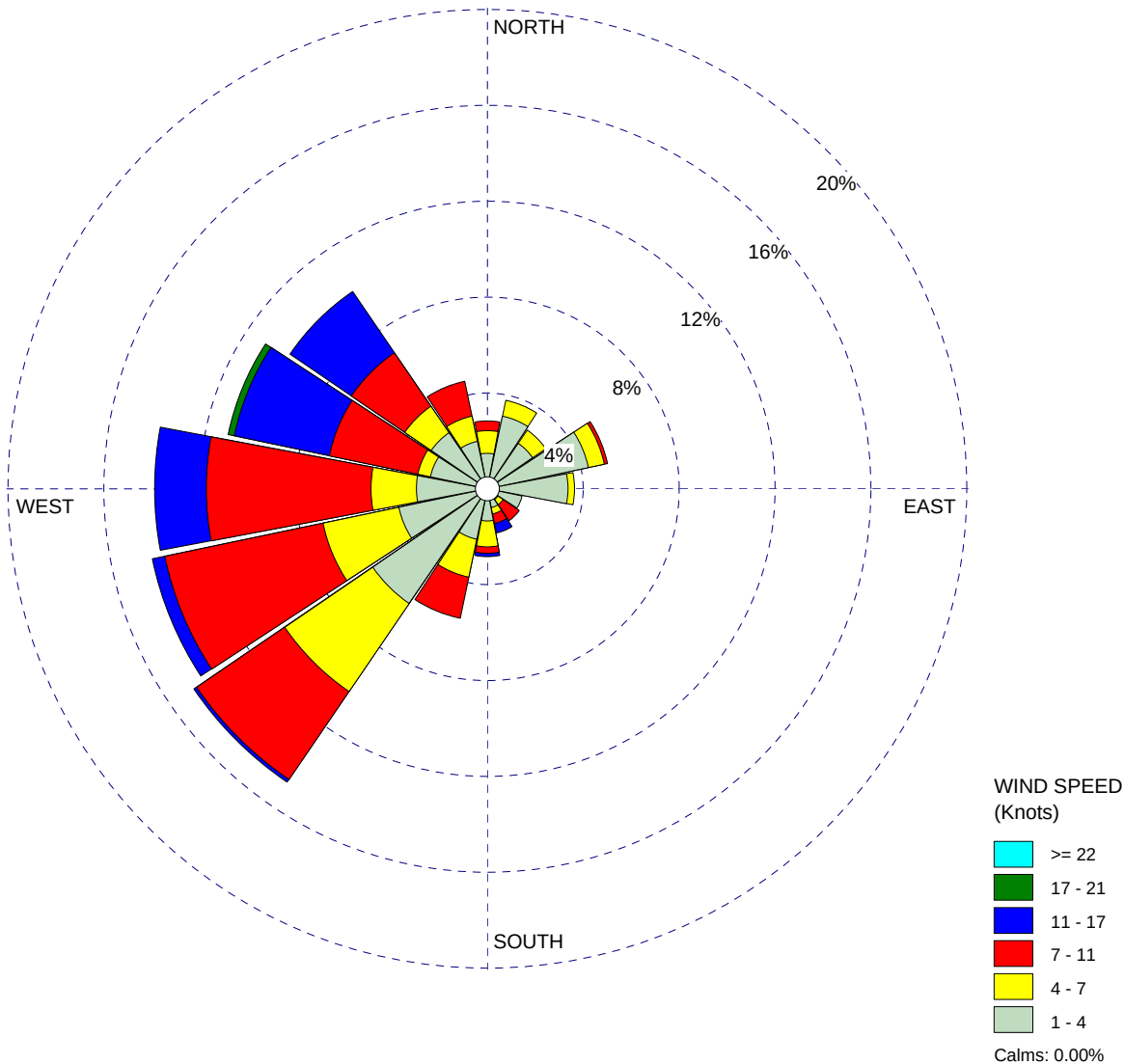
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%)	
				OPERATING SCHEDULE	TOTAL HOURS
WASTEBED 13 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.0	23.0	6.8	100.0	100.0
Vector Wind Direction (deg)	1	360	222	100.0	100.0
Scalar Wind Speed (mph)	1.0	23.5	7.2	100.0	100.0
Scalar Wind Direction (deg.)	1	359	221	100.0	100.0
Sigma Theta (deg.)	6.2	66.1	18.2	100.0	100.0
Vertical Wind Speed (mph)	-0.29	1.65	0.27	100.0	100.0
Sigma W (mph)	0.04	2.32	0.83	100.0	100.0
Sigma Phi (deg)	1.57	26.8	7.0	100.0	100.0
Temperature (deg-F)	34.3	74.7	51.4	100.0	100.0
2-Meter Level					
Temperature (deg-F)	33.5	72.8	50.4	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.13	5.30	0.94	100.0	100.0
Relative Humidity (percent)	26.2	100.0	77.0	100.0	100.0
Dew Point Temperature (deg-F)	26.2	62.1	42.4	100.0	100.0
Net Radiation (W/m ²)	-112.6	440.2	839.6 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.02	29.88	29.50	100.0	100.0
Surface Level					
Precipitation (Rain in inches)	0.00	0.14	3.86 (Total)	100.0	100.0

WIND ROSE PLOT:

**Honeywell Onondaga Lake - Meteorological Monitoring Program
Wastebed 13 Monitoring Site - 10-Meter Tower - October 2010**

DISPLAY:

**Wind Speed
Direction (blowing from)**



COMMENTS:

DATA PERIOD:

**2010
Oct 1 - Oct 31
00:00 - 23:00**

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

6.26 Knots

DATE:

11/1/2010

PROJECT NO.:

445162-04300

HONEYWELL - ONONDAGA LAKE – METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE – 10-METER TOWER

METEOROLOGICAL DATA SUMMARY FOR: OCTOBER 2010

PARAMETER IDENTIFICATION AND SITE DESCRIPTION

<u>PARAMETER</u>	<u>ABBREVIATION</u>	<u>UNITS OF MEASUREMENT</u>
10-M WIND SPEED (VECTOR AVERAGE)	VECTOR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (VECTOR AVERAGE)	VECTOR WIND DIR.	DEGREES FROM TRUE NORTH
10-M WIND SPEED (SCALAR AVERAGE)	SCALAR WIND SPEED	MILES PER HOUR
10-M WIND DIRECTION (SCALAR AVERAGE)	SCALAR WIND DIR.	DEGREES FROM TRUE NORTH
10-M STD. DEV. OF HORIZONTAL WIND DIRECTION	SIGMA THETA	DEGREES
10-M VERTICAL WIND SPEED	VERT WIND SPEED	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND SPEED	SIGMA W	MILES PER HOUR
10-M STD. DEV. OF VERTICAL WIND DIRECTION	SIGMA PHI	DEGREES
WIND PERSISTENCE FACTOR	WIND PERS.	--
10-METER TEMPERATURE	10-M TEMP.	DEGREES FAHRENHEIT
2-METER TEMPERATURE	2-M TEMP.	DEGREES FAHRENHEIT
DELTA TEMPERATURE	10-M – 2-M DELTA TEMP.	FAHRENHEIT DEGREES
2-M RELATIVE HUMIDITY	2M REL. HUM.	PERCENT
2-M DEW POINT TEMPERATURE	2-M DEW POINT TEMP.	DEGREES FAHRENHEIT
2-M SOLAR RADIATION	SOLAR RAD	WATTS PER SQUARE METER
2-M BAROMETRIC PRESSURE	BAR PRESS	INCHES OF MERCURY

THE FOLLOWING DATA CODES ARE USED IN THIS REPORT:

S SIGNIFIES MISSING DATA AS A RESULT OF A SCHEDULED OUTAGE.

N SIGNIFIES MISSING DATA AS A RESULT OF A NON-SCHEDULED OUTAGE.

A DASH (-) INDICATES INSUFFICIENT DATA TO CALCULATE THE VALUE.

ALL TIMES ARE LOCAL STANDARD TIME (LST) AND INDICATE HOUR STARTING TIMES.

THE DAILY AVERAGE WIND SPEED AND DIRECTION ARE COMPUTED AS THE VECTOR, OR RESULTANT WIND FOR THE DAY BASED ON HOURLY VALUES.

PREPARED BY: **PARSONS**

BOSTON, MASS.

HONEYWELL - ONONDAGA LAKE - METEOROLOGICAL MONITORING PROGRAM
LAKESHORE/WILLIS AVE MONITORING SITE - 10-METER TOWER

MONTHLY DATA COLLECTION SUMMARY

DATA COLLECTION SUMMARY FOR THE MONTH OF: OCTOBER 2010

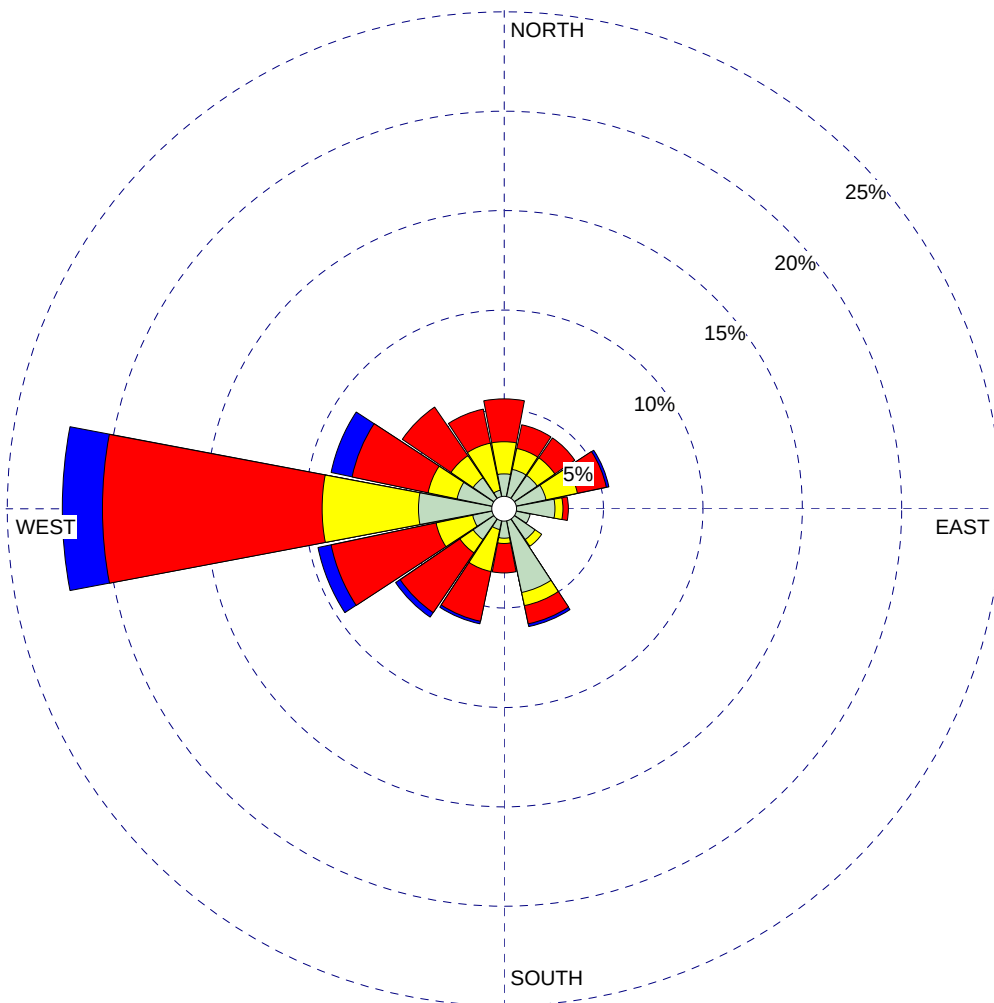
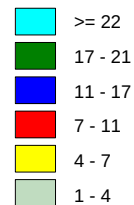
SITE / PARAMETER	MONTHLY MINIMUM VALUE	MONTHLY MAXIMUM VALUE	MONTHLY MEAN VALUE	MONTHLY DATA RECOVERY RATES (%) BASED ON	
				OPERATING SCHEDULE	TOTAL HOURS
LAKESHORE/WILLIS AVE 10-METER TOWER					
10-Meter Level					
Vector Wind Speed (mph)	0.4	18.3	6.7	100.0	100.0
Vector Wind Direction (deg)	1	360	211	100.0	100.0
Scalar Wind Speed (mph)	1.0	18.8	7.1	100.0	100.0
Scalar Wind Direction (deg.)	1	360	213	100.0	100.0
Sigma Theta (deg.)	5.5	77.0	19.2	100.0	100.0
Vertical Wind Speed (mph)	-0.36	0.75	0.20	100.0	100.0
Sigma W (mph)	0.11	2.67	0.92	100.0	100.0
Sigma Phi (deg)	2.78	16.4	7.5	100.0	100.0
Temperature (deg-F)	34.2	74.6	51.7	100.0	100.0
2-Meter Level					
Temperature (deg-F)	34.3	74.3	51.6	100.0	100.0
10-m - 2-m Delta Temp (F-deg)	-2.60	2.73	0.06	100.0	100.0
Relative Humidity (percent)	25.1	97.6	71.9	100.0	100.0
Dew Point Temperature (deg-F)	25.0	62.0	41.8	100.0	100.0
Solar Radiation (W/m ²)	0.0	794.3	2928.7 (Avg. Daily Total)	100.0	100.0
Barometric Pressure (in. Hg.)	29.12	30.00	29.61	100.0	100.0

WIND ROSE PLOT:

Honeywell Onondaga Lake - Meteorological Monitoring Program
Lakeshore/Willis Ave Monitoring Site - 10-Meter Tower - October 2010

DISPLAY:

Wind Speed
Direction (blowing from)

WIND SPEED
(Knots)

Calms: 0.00%

COMMENTS:

DATA PERIOD:

2010
Oct 1 - Oct 31
00:00 - 23:00

COMPANY NAME:

PARSONS

MODELER:

CALM WINDS:

0.00%

TOTAL COUNT:

744 hrs.

AVG. WIND SPEED:

6.22 Knots

DATE:

11/1/2010

PROJECT NO.:

445162-04300